

European statistics on accidents at work (ESAW)

Methodology

2001 Edition

Foreword

All Community political actions include a social and economic component to mark the Community's concern to improve working conditions and the health and safety of workers. Economic and social progress must go hand-in-hand.

For the past thirty years the Commission's policy on health and safety in the workplace has aimed to reduce accidents at work and occupational diseases to a minimum.

This Community action on health and safety at work has its legal basis in Article 137 (ex Article 118a) of the Treaty establishing the European Community. The Council has adopted about fifteen Directives, almost all of which have already been transposed into national law by the Member States.

However, for the Commission, the preparation of a large body of legislation and its transposition into national law in the Member States are the means and not the end. The ultimate aim is to reduce accidents at work and occupational diseases. It is to prevent the suffering of workers and their families, the problems relating to the quality of work, the social rehabilitation and the economic impact of all this - which has repercussions on society as a whole -.

For this reason, to monitor the effectiveness of existing legislative and non-legislative measures, the Framework Directive requires enterprises to keep a list of occupational accidents resulting in a worker being unfit for work for more than three days.

In 1990 work began at European level to harmonise the criteria and the methodologies used to record data on accidents at work. As a result of this comprehensive work carried out together with the Member States, this publication is the final methodology of the European Statistics of Accidents at Work, including the harmonised tools to analyse the causes and circumstances of accidents at work (data collection, classifications, codification rules). The results will permit better monitoring of the application of the Directives and, where necessary, the reshaping of these Directives to meet new requirements and the introduction of new policies at Community level.

This publication is addressed primarily to the national institutions responsible for recording and processing information on accidents at work, e.g. the statistical offices, insurance companies and mutual societies, and departments for the prevention of accidents and occupational diseases. More widely, it will be useful to technicians and experts working in the field and to businesses.

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Preface

Work on the project to harmonise European Statistics on Accidents at Work (ESAW) began in 1990 and is co-ordinated jointly by Unit E3 of Eurostat and Unit D/5 of the Directorate-General for Employment and Social Affairs (DG EMPL) in order to draw up a methodology for the collection of comparable data in the European Union.

The purpose of this work is to harmonise the criteria and methodologies to be applied when recording data on accidents at work. These have been developed in different stages in order to improve the techniques for monitoring the application of measures taken under Article 137 (ex Article 118a) of the Treaty with a view to encouraging improvements in the working environment and protecting the safety and health of workers.

The Framework Directive 89/391/EEC⁽¹⁾ on the introduction of measures to encourage improvements in the safety and health of workers at work did in fact introduce, in Article 9, paragraphs c) and d), the obligation for employers to keep a list of occupational accidents resulting in a worker being unfit for work for more than three days, and, in accordance with national laws and/or practices, to draw up reports on occupational accidents suffered by their workers.

In the same context, it should also be stressed that the Council, in its Resolutions of 21 December 1987⁽²⁾ and 27 March 1995⁽³⁾, specifically asked the Commission to submit proposals for harmonising statistics on accidents at work, and then called upon the Commission to endeavour to complete the work in progress in this field. The programme for safety, hygiene and health protection at work (1996-2000) also provides for the continued implementation of the ESAW project. This project does, finally, form an integral part of the framework programme for priority actions in the field of statistical information 1993-1997⁽⁴⁾. Similarly, the Council Decision of 22 December 1998 on the Community statistical programme 1998-2002⁽⁵⁾, which defines the main fields and objectives of European Community statistics, makes provision for compiling consistent series of data at European level in order to monitor health and safety at work and the effectiveness of regulations in this field.

Phases I and II of the ESAW project have been running since 1993⁽⁶⁾ and 1996⁽⁶⁾ respectively. They have been developed since 1990 by Commission (DG EMPL and EUROSTAT) together with the Member States. The ESAW Working Group was established in order to follow the work and give recommendations to the European Commission in developing this field of statistics. A Task Force with national experts has also been established in order to give technical advice in developing a methodology which takes into account - as far as possible - , the extant reporting procedures and methodologies in the various Member States.

The Phase I covers variables which seek to identify the economic activity of the employer, the occupation, age and sex of the victim, the nature of the injury and the part of the body injured, as well as the geographical location, date and time of the accident, whilst Phase II supplements these initial data with information on the size of the enterprise, the victim's nationality and employment status, as well as the consequences of the accident in terms of the number of days lost, permanent incapacity or death as a result of the accident.

All these variables provide information which makes it possible to identify the characteristics of the enterprise, the victim, the injury and its consequences, and the date and place of the accident. However, in order to foster a more active European policy for the prevention of accidents at work, Phase III of ESAW covers other harmonised variables and classifications on the causes and circumstances⁽⁷⁾ of accidents at work which will help establish the

⁽¹⁾ 89/391/EEC, OJ L 183 of 29.06.1989

⁽²⁾ 88/C 28/01, OJ C 28 of 03.02.1988

⁽³⁾ 95/C 168/01, OJ C 168 of 04.07.1995

⁽⁴⁾ 93/464/EEC, OJ L 219 of 28.08.1993

⁽⁵⁾ 99/126/EC, OJ L 42 of 16.02.1999

⁽⁶⁾ Reference year = data collected on accidents in this year.

⁽⁷⁾ On the basis of a project of European codification system of the causes and circumstances of accidents at work proposed by a Group of Member States (DWES of Denmark, HVBG of Germany, CNAMTS of France and INAIL of Italy) coordinated by EUROGIP (France), validated beforehand using a sample of over 6 000 actual accidents in different EU Member States (Belgium, Spain, Luxembourg, Portugal, Finland, Sweden and the UK).

situation and conditions prevailing at the time of the accident. The results of these analyses will provide useful information which will assist in the development of new and carefully targeted prevention policies.

The first reference year for Phase III of the project is 2001⁽⁶⁾.

It should be noted that the ESAW project has been given international recognition by the ILO Resolution on "Statistics on occupational injuries resulting from accidents at work"⁽⁸⁾ which adopted much of the European Commission's ESAW methodology. In particular, Phase III is both the methodological basis and the first actual attempt to use the supplementary information on the circumstances of accidents, the development of which is mentioned in the Resolution. It will harmonise data on this subject from the Member States of the European Union and any other countries which wish to use the system. This tool is, at the same time, close enough to the national systems already operating in full or in part in certain countries for its implementation to be highly successful in the national institutions providing the data (social security system, insurance sector, labour inspectorate). It could, if necessary, even be used by enterprises themselves.

This publication presents the results of the work on the methodology for the three phases of ESAW carried out since 1990 by the Commission services and experts in this field from relevant institutions (National Statistical Institutes, Labour and Social Affairs Ministries or Departments, Social Security Institutions) in the field of Occupational Health and Safety in the Member States. The tangible result is a full set of variables along with their classifications, explanatory notes and coding guides.

Whilst compiling this system, the designers never deviated from their goal of creating a tool for collecting information which would be useful for preventing accidents at work throughout Europe by ensuring there was maximum compatibility with the existing statistical systems in the Member States. A good deal of attention was therefore paid to these systems and to the proposals made by all the partners in the project. The general aim was to compile a methodology which was detailed enough to be effective but was not too complex, both as a whole and for each individual variable, so that this statistical system would be easy to implement. As well as being straightforward, it was also intended to be open and adaptable over time. These features of the system allow the individual Member States to carry out any refinements required through the addition of new digits at national level, the gradual introduction of the method by the different national institutions and, if necessary, a search for further information on the causes and circumstances of accidents at work, without ever deviating from the general structure of the project.

It should be also reminded that the Commission activities on accidents at work statistics have links with the Community Labour Force Survey (LFS). In particular the ESAW reference population to calculate incidence rates of accidents at work is based on LFS data. Additionally, to have a broader view on the situation, it has inserted an ad hoc module on Health and Safety at Work in the 1999 LFS - Commission Regulation (EC) No 1571/98 of the 20/07/1998⁽⁹⁾ -. Analyses of the results from this module will bring an important added value to the information already collected by ESAW : accidents with less than 4 days' absence, crossed-analysis with information on labour market, characteristics of jobs, working conditions or training.

The new Phase III on causes and circumstances is being in force progressively in the Member States from 2001 onwards, following national implementation schedules taking into consideration the adaptations needed in their national declaration and codification systems of accidents at work. Initial results for a first set of Member States are expected in 2003 on 2001 reference year⁽⁶⁾ data.

DG EMPL D-5 and EUROSTAT E-3
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⁽⁸⁾ Adopted by the 16th International Conference of Labour Statisticians, Geneva, 6-15 October 1998.

⁽⁹⁾ Commission Regulation (EC) No 1571/98 of the 20.07.1998 implementing the Council Regulation N°577/98 on the organisation of a labour force sample survey in the Community - OJ L 205 of 22.07.1998.

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Background and aims for the ESAW project

Background for ESAW project

The Framework Directive on Health and Safety in the Workplace⁽¹⁰⁾ requested the Commission to proceed with the harmonisation of data on accidents at work. It specified that “... *the employer shall keep a list of occupational accidents resulting in a worker being unfit for work for more than three working days*” and “*draw up, for the responsible authorities and in accordance with national laws and/or practices, reports on occupational accidents suffered by his workers ...*”.

On this basis, the ESAW project was launched in 1990, aiming at harmonised data on accidents at work for all accidents entailing more than three days' absence from work. A “Methodology for the Harmonisation of European Occupational Accident Statistics” was published in 1992 by Eurostat and DG Employment and social affairs⁽¹¹⁾. The ESAW project has been an integral part of the framework programme for priority actions in the field of statistical information 1993 to 1997⁽¹²⁾.

In addition the Council Resolution 95/C 168/01⁽¹³⁾ furthermore calls upon the Commission: “*to complete the work in progress on harmonising statistics on accidents at the workplace...*”. The Programme concerning Safety, Hygiene and Health at Work (1996-2000) also foresees the continuation of the implementation of this project.

Furthermore, the European Community Statistical Programme 1998-2002, which defines the main fields and objectives of the community statistics, foresees the establishment of consistent series of data on a European level in order to provide the means for the monitoring of health and safety at work and the efficiency of regulation in this field⁽¹⁴⁾.

Aims of the ESAW project

The aim of the ESAW project is “*to collect Union-wide comparable data on accidents at work and establish a database.*” Comparable data on work accidents are a prerequisite for monitoring trends in health and safety at work in the Union and for promoting accidents prevention both at Community level and in the individual Member States.

The goals are to provide data on high-risk groups and sectors and indicators on both the causes and the socio-economic costs of accidents at work. Consistent series of data should be established to provide the means for the monitoring of health and safety at work and the efficiency of regulation in this field.

It is also an aim of the ESAW project to develop a methodology which is as far as possible comparable with other international statistics and to participate in the co-ordination of such work. The ESAW methodology is in accordance with the ILO Resolution of 1998 concerning “Statistics of Occupational Injuries: resulting from Occupational Accidents”⁽¹⁵⁾.

(10) Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work, OJ L183, 29.06.1989. Hereinafter, Framework Directive (on health and safety at work).

(11) Office for Official Publications of the European Communities, Theme 3 Series E, ISBN 92-826-4100-7, Catalogue number CA-74-92-257-EN-C.

(12) Council Decision 93/464/EEC of 22 July 1993 on the framework programme for priority actions in the field of statistical information 1993 to 1997, OJ L219, 28.08.93.

(13) OJ C168 of 4.07.95, pp 1-2.

(14) Council Decision 99/126/EC on the Community Statistical Programme 1998-2002, OJ L42, 16.02.99.

(15) Adopted by the Sixteenth International Conference of Labour Statisticians, Geneva, 6-15 October 1998.

Basic concepts and definitions

ESAW Phase I, II and III data have been collected respectively from the *reference years* 1993, 1996 and 2001 onwards. The reference period is defined as the *year of notification* of the accident. All cases of accidents at work leading to an absence of more than three *calendar days*⁽¹⁶⁾ are included in the ESAW data. In practice it means that an accident at work is included in ESAW if the person is unfit for work for *more* than 3 days even if these days include Saturdays, Sundays or other days where the person is not usually working.

An *accident at work* is defined as "*a discrete occurrence in the course of work which leads to physical or mental harm*". This includes cases of acute poisoning and wilful acts of other persons, as well as accidents occurring during work but off the company's premises, even those caused by third parties. It excludes deliberate self-inflicted injuries, accidents on the way to and from work (commuting accidents, see Appendix F) and accidents having only a medical origin and occupational diseases⁽¹⁷⁾. The phrase "in the course of work" means whilst engaged in an occupational activity or during the time spent at work. This includes cases of road traffic accidents in the *course of work*.

A *fatal accident* is defined as an accident which leads to the death of a victim within one year of the accident.

Particulars concerning the definition of an accident at work

Inclusions

The following types of accidents are covered by the above definition of an accident at work (summary in Table 1).

Road (traffic) accidents and other transport accidents

The road traffic accidents in the course of work are included in the ESAW methodology. Road accidents concern not only persons whose occupational activity is exerted mainly on public highways, e.g., lorry or coach drivers, but also those occupational activities which frequently or occasionally imply journeys on public roads.

These occupational activities include, e.g., repairing, commercial activities or other service activities carried out at the premises of the customers. This includes also a car accident, say, of a manager who occasionally goes, in the course of work, from his office to an external meeting. Such an accident would still be considered as a work accident to be included in the ESAW methodology, even if the place belongs to his company or a client, another company or institution. Road traffic accidents as described above also include incidences in car parks and the internal carrier-ways at the premises of the enterprise.

The expression "*whilst engaged in an occupational activity or during the time spent at work*" should therefore be understood in broader terms. Thus, other types of *accidents on public highway or places* should also be included. This concerns, for example, slips on the pavement or falls on staircases, or even aggressions from other persons, provided that the victim is still in the course of work.

This will also apply to *accidents on board any means of transport*, e.g., underground train, tramway, train, boat, plane, etc. This includes also accidents in the arrival and starting points of any means of transport, e.g., stations, airports, ports, etc., provided that the victim is still in the course of work.

⁽¹⁶⁾ The Framework Directive (Article 9) speaks about *working days*. However, it has been decided for ESAW methodology to follow the most common practice in the Member States, which is to use *calendar days* in calculating the number of days with an absence from work.

⁽¹⁷⁾ The Commission has developed the European Occupational Diseases Statistics (EODS Phase I) implemented from 2001 reference year onwards (see part "Future Developments")

It should be noted that commuting accidents, i.e., road accidents during the journey between home and the workplace, are not included in the ESAW methodology⁽¹⁸⁾.

⁽¹⁸⁾ Nevertheless, an additional data collection on Commuting Accidents has also been set up using the same methodology as the ESAW project. The specification for this data collection, which only involve 8 Member States for the time being, is shown in Annex F.

Other accidents outside the company

Accidents that have occurred *within the premises of a company other than the one that employs the victim* should also be regarded as an accident at work. Such activities include all kind of meetings and services which takes place outside the premises of the company provided that the victim is still in the course of work. This includes also the following examples: Accidents that occur in the course of meetings or visits out of the company; accidents during the delivery of goods on customers' premises (company or private individual) or while carrying out other services such as repairing, maintenance, errands, etc. on clients' premises; more *permanent secondments* in another company, or during activities at home which are in the course of work; accidents caused by other work activities not related to the course of the victims work activities, etc. .

In summary, all the accidents corresponding to all risks the employed person is exposed to in the course of his/her work are included in the ESAW methodology. This applies not only to the specific risks he is exposed to in the premises of the employer, but also the risks outside the premises which he can be exposed to in the course of work, for example on public highways, means of transport or risks caused by third parties. This is irrespective of whether or not his employer can prevent or reduce partially, the level of these risks outside his own premises.

Table 1- Types of accidents included / excluded in the ESAW methodology

Type of accidents	Included YES / NO
Definition: "A discrete occurrence in the course of work which leads to a physical or mental harm".	
The phrase " <i>in the course of work</i> " means " <i>whilst engaged in an occupational activity or during the time spent at work</i> ".	
Acute poisoning	YES
willful acts of other persons	YES
Accidents in public places or means of transport during a journey in the course of work:	YES
Road traffic accidents in the course of work (public highways, car parks, internal ways inside the premises of the enterprise)	YES
Other accidents (slips, falls, aggressions, etc.) in a public place (pavement, staircases, etc.) or in the arrival and starting points (station, port, airport, etc.) of any mean of transport, during a journey in the course of work	YES
Accidents on board of any mean of transport used in the course of work (underground railway, tram, train, boat, plane, etc.)	YES
Accidents occurred within the premises of another company than that which employs the victim, or in a private individual, in the course of work	YES
Deliberate self-inflicted injuries	NO
Accidents on the way to and from work (commuting accidents see Appendix F)	NO
Accidents having only a medical origin in the course of work and occupational diseases	NO
Members of public, outside any occupational activity	NO

Exclusions

The following types of accidents are not covered by the above definition of an accident at work (summary in Table 1).

Members of the public

Accidents to *members of the public* are not included in the ESAW methodology. Even if such an accident is due to a work activity within a company it should not be regarded as an accident at work under the ESAW methodology. This includes accidents contracted by employed persons who are not at work and who carry out activities which are not in the course of their work, for example, visit to a shop, an administration, a bank, insurance, station, telecom, hospital, post office, port, airport, etc. Family members of an employee or employer present within the company who are victims of an accident are considered as members of the public and are excluded from the ESAW methodology. This applies also to children in, for example, the nursery in the company.

Accidents from strictly natural causes

Accidental injuries *from strictly natural causes* are also excluded from the ESAW methodology. This applies to, for example, cardiac or cerebral incidents, or any other sudden medical disorders, which have occurred during work, but having *a priori* no link with the occupational activity of the victim and the injury being only related to the medical disorder.

Nevertheless, such cases should only be excluded if there is no other work-related causal element identified. For example, if a bricklayer felt faint (medical cause) and fell down from scaffolding (work-related causal element), the accidental injury should be included in the ESAW methodology. This is the case, even if the fall would not have occurred without the discomfort of the worker, because the gravity of its consequences was sharply increased by the presence of the person on scaffolding, which is a purely work related causal element.

Accident at work with more than 3 days’ absence from work

The Framework Directive retained the concept of “absence from work of more than 3 working days”.

However, as a large number of Member States can not make a distinction between working days or not, because the work stops are prescribed in calendar days, the concept of "3 calendar days", i.e. more simply "3 days", was retained for ESAW.

The concept of "more" than 3 days of absence from work has been implemented in the following way in the ESAW methodology (summary in Table 2):

Only full working days of absence from work of the victim have to be considered *excluding* the day of the accident. Consequently, "more than 3 days" means "at least 4 days", which implies that only accidents with a *resumption of work not before the fifth day after the day of the accident or later* should be included.

Following on from this, the " number of days lost " has to be counted beginning with 4 days lost if the resumption of work takes place the fifth day following the day of the accident, 5 days lost if the resumption of work takes place the sixth day, etc. .

Table 2 - Concepts of “accidents with more than 3 days’ absence from work” and of numbers of counted “days lost” in the ESAW methodology

Resumption of work the:	same day of the accident	First to fourth days after the accident	fifth day after the accident	Sixth day after the accident / or beyond
Accident included in ESAW	NO	NO	YES	YES
Number of days lost	not included	not included	4	5 / or more

Fatal accident at work

The definition adopted by the ESAW project is that of “accidents at work leading to the death of the victim within a year (after the day) of the accident”. In practice the majority of the Member States send the cases of fatal accidents at work counted in their national statistics.

In fact, the majority of the accidental deaths occur either immediately at the time of the accident, or within a few days or a few weeks after the accident.

Variable characterisation

General introduction to the system

Three types of basic information are required to codify an accident properly:

- *Information to identify where the accident occurred, who was injured and when:*
i.e.: the economic activity of the employer; the victim's occupation, occupational status, sex, age and nationality; the geographic location and size of the enterprise's local unit; the date and time; the working environment, the workstation and the working process.
- *Information to show how the accident occurred, in what circumstances and how the injuries came about:*
i.e.: the event broken down into three sequences: the specific physical activity, the deviation, and the contact - mode of injury, and their respective associated material agents.
- *Information on the nature and seriousness of the injuries and the consequences of the accident:*
i.e.: the body part injured, the type of injury and the number of days lost.

ENTERPRISE

- economic activity
- size of enterprise
- geographic location, date and time

EXPOSURE

ORGANISATION

WORKING CONDITIONS

- working Environment

EMPLOYEE

- occupation
- age and sex
- nationality
- occupational status

WORKPLACE

- working Process
- workstation

SEQUENCE OF EVENTS

- specific physical activity and associated material agent
- deviation and associated material agent
- contact - mode of injury and associated material agent

VICTIM

- type of injury
- body part injured
- days lost

The methodology presented in the current publication aims to provide a detailed description of the characteristics of the victim, his/her enterprise and injury as well as a breakdown of the sequence of events leading to accident for the purpose of establishing a European-level prevention policy.

The variables included in the ESAW methodology are given in Table 3. The definition of each of the variables is provided below. The corresponding classifications and formats are specified in Appendix B. For the causation variables, guidelines for their use and examples in order to help coders are provided Appendix C (guidelines are also provided for the type of injury).

Variables

Table 3 - Record structure for the ESAW data

Variable	Number of characters			
	Phase III Data			Phase I and II Data
	Compulsory minimum	Optional ⁽¹⁾ additional	Total ⁽¹⁾	
Case number	11		11	11
Economic activity of the employer	2	2	4	2
Occupation of the victim	2		2	2
Age of victim	2		2	2
Sex of victim	1		1	1
Type of injury	3		3	3
Part of body injured	2		2	2
Geographical location	5		5	5
Date of the accident	8		8	8
Time of the accident	2		2	2
Size of enterprise	1		1	1
Nationality	1		1	1
Employment status	1	2	3	1
Days lost	3		3	3
Workstation	0	1	1	
Working environment ⁽²⁾	3 or 0 ⁽²⁾	0 or 3 ⁽²⁾	3	
Working process ⁽²⁾	2 or 0 ⁽²⁾	0 or 2 ⁽²⁾	2	
Specific physical activity ⁽²⁾	2 or 0 ⁽²⁾	0 or 2 ⁽²⁾	2	
Material agent of Specific physical activity – 2 positions (= 4 characters)	0	4	4	
Deviation	2		2	
Material agent of Deviation – 2 positions (= 4 characters) ⁽³⁾	4 or 0 ⁽³⁾	0 or 4 ⁽³⁾	4	
Contact – mode of injury	2		2	
Material agent of Contact - Mode of injury – 2 positions (= 4 characters) ⁽³⁾	4 or 0 ⁽³⁾	0 or 4 ⁽³⁾	4	
Weight ⁽⁴⁾	9 (3.6) ⁽⁴⁾		9	
Total number of characters ⁽⁵⁾	63 or 64 ^{(2) (5)}	18 or 17 ⁽²⁾	81 ⁽⁵⁾	44

⁽¹⁾ When the optional position(s) is(are) not used for a variable, the value '0', '00', '000' or '00.00', depending on the variable, should be indicated as corresponding code or part of the code.

⁽²⁾ It is compulsory to code at least 1 of the 3 variables « Working Environment », « Working Process » or « Specific Physical Activity » (depending on the choice, as « Working Environment » has 3 characters and the 2 others have 2 characters, the total number of characters actually used therefore varies by 1). The 2 remaining variables not used for the compulsory part are consequently optional.

⁽³⁾ It is compulsory to code at least 1 of the 2 variables « Material agent of the Deviation » or « Material agent of the Contact - Mode of injury ». The remaining variable not used for the compulsory part is consequently optional.

⁽⁴⁾ The weight has 9 characters, including 3 for the whole number and 6 for decimal places.

⁽⁵⁾ When only the minimum of 4 priority variables is used, of which one with 1 position (the others should obligatorily have 2 positions), the minimum total number of characters used is « 63 or 64 ». Nevertheless, the data file should always have a length of 81 digits including all variables.

Case Number

A unique case number must always be to identify each individual record submitted to Eurostat and to ensure that each record represents a separate accident at work, avoiding double counting. The case number is also necessary in order to answer any queries which involve the retrieval and correction of a single record in the course of data analysis. It is only used internally and is not available in any data disseminated by Eurostat. Each Member State determines the format for the case number. However, this number should not allow the identification of any person. Additionally, the chosen case number must be prefixed by the 4 digits of the year where the accident is notified to the authorities. It should be noted that the year of notification, which is also the reference period for the ESAW data, is not necessarily the same as the year when the accident occurred. For that reason, the first four digits of the case number represent the *reference year* for the collected data.

Economic Activity of the Employer

The term economic activity of the employer covers *the main "economic" activity* of the *local unit* of the enterprise of the victim. The main activity is defined here as the most important kind of activity in terms of *highest number of employees*. The local unit of an enterprise means the geographical location of a business, professional practice, farm, manufacturer, public corporation, etc., (see below). It is classified according to a detailed version (4-digit level) of the NACE Rev.1. However the fourth position with the value '0' or the third and fourth positions with the value '00' are accepted when only the code at the 3- or 2-digit level is known.

Occupation of the Victim

The victim's occupation *at the time of the accident* is classified according to a short version (2 digit level) of the ISCO-88 (COM).

Age of the Victim

Age should be represented by the age of the victim *at the time of the accident*. Values below 10 must be entered with a leading zero, i.e., 7 years must be entered as 07.

Sex of the Victim

Sex is a simple categorical variable.

Type of Injury

The variable type of injury describes the *physical consequences* for the victim e.g. bone fracture, wounds etc. The 3-digit version of the ESAW classification for 'Type of injury' should be used for encoding of information on this variable. The current classification is a new one used from the ESAW 1997 data onwards, in accordance with the ILO recommendation mentioned above.

Part of Body Injured

This variable describes the *part of the body injured*. The current 2-digit version of the classification of "part of body injured", introduced from the reference year 1995 onwards, should be used. It is on the whole in accordance with the ILO recommendation mentioned above. The classification allows only one choice, i.e. only one code can be chosen to describe the injured part(s) of the body. In cases where several parts of the body have been injured, the site which has been most seriously injured should be chosen e.g. an amputation precedes bone fracture, which precedes wounds etc. In other cases a code for *multiple sites* should be used at the appropriate level of the classification, e.g., broken hand *and* foot. In cases where larger parts of the body have been affected, e.g., injuries caused by burns or skalds, a code for multiple sites should be used as well.

Geographical Location of the Accident

The variable geographical location is considered to be the *territorial unit* where the accident has occurred. The specified level for the NUTS classification in Appendix B should be used (NUTS 95 version, including the 1998 revision). This classification describes the country in question and the defined regions in this country.

Date of the Accident

This variable describes the *date when the accident occurred*. This is a numeric variable which is defined as year, month and day (YYYYMMDD).

Time of the Accident

This variable describes the time of the day *when the accident occurred*. This is a numeric variable describing whole hours (HH), e.g. 2 p.m. gives 14 which covers the time from 2 p.m. to 2:59 p.m. .

Size of the Enterprise

The size of the enterprise is defined here as the *number of employees (full-time equivalent, see definition together with the classification in Appendix B) working at the local unit* of the enterprise of the victim. For a specification of the local unit please see below.

Nationality of the Victim

This variable is defined as the *country of citizenship*. If a person has more than one citizenship, the citizenship of the country where the person has notified the accident should be used. An aggregated format is used for this variable.

Employment Status of the Victim

This variable concerns the employment status (professional status) of the victim, for example employee, self-employed, family worker, etc. For the employees (1st digit = 3), when the information is known, it will be specified, in the 2nd digit if the job is a permanent one (contract of unlimited duration) or not (temporary of limited duration) and in the 3rd digit if it is full or part-time. Missing values can be accepted ('000'), as well as partly missing value for the 2nd and/or 3rd digits (300, 301, 302, 310, and 320).

The concept of permanency of the job to be taken into account is that of the Labour Force Survey (Column 45 « Permanency of the job ») :

« In the majority of Member States most jobs are based on written work contracts. However, in some countries such contracts exist only for specific cases (for example in the public sector, for apprentices, or for other persons undergoing some formal training within an enterprise). Taking account of these different institutional arrangements the notions « temporary job » and « work contract in limited duration » (likewise « permanent job » and « work contract in unlimited duration ») describe situations which under different institutional frameworks, can be regarded as similar.

A job may be regarded as temporary if it is understood by both employer and the employee that the termination of the job is determined by objective conditions such as reaching a certain date, completion of an assignment or return of another employee who has been temporarily replaced. In the case of a work contract of limited duration the condition for its termination is generally mentioned in the contract. Are also included in these groups persons with a seasonal job, persons engaged by an employment agency or business and hired out to a third party for the carrying out of a « work mission » (interim) and persons with specific training contracts.

If there exists no objective criterion for the termination of a job or work contract these should be regarded as permanent or of staff unlimited duration. »

For the concept of full-time/part-time, by coherence with the indications of the Labour Force Survey (LFS – Column 44 « full-time/part-time distinction ») and the European Community Household Panel (ECHP), it could be considered the only indicative threshold of 30 hours per week (e.g., 6 hours daily on 5 days or 7.5 hours daily on 4 days) as the limit between part-time and full-time. However, this threshold still remains flexible as some specific occupations as teachers can have full-time jobs with a very lower number of lecture hours and on the opposite some craft or trade occupations can have working times very higher than the average. When the information is taken from the declaration of the accident, it is in fact the signification of « full-time » and « part-time » proper to the enterprise that will be collected.

Days Lost

The variable days lost means the *number of calendar days* where the victim is *unfit for work* due to an accident at work. This number is provided using a 3-digit level format. When this information is only available using classes of days lost, 6 classes with codes A01 to A06 should be used. Nonetheless, the number of days lost will be considered to be in accordance with the ESAW methodology, which means that only cases of accidents at work where the person is unfit for work *more than three full calendar days* should be included. Specific codes should be

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used to define permanent incapacity (997) and fatal accident (998). In that case the days lost before the recognition of the permanent incapacity or death are not considered.

Definition of the Local unit of an enterprise

This definition has relevance for the variables “Economic Activity of the Employer” and “Size of the Enterprise”. If the following concept of “local unit of the enterprise” is not directly applicable in a country, the national definition should be used as a proxy.

The "local unit" to be considered is a *geographically identified location* where the job is mainly carried out or can said to be based. If a person works in more than one place (transport, construction, maintenance, surveillance, peripatetic work) or at home, the local unit is taken to be the place from where *instructions emanate* or from *where the work is organised*.

Normally, it consists of a single building, part of a building, or, at the most, a self-contained group of buildings. The local unit of the enterprise is therefore the group of employees of the establishment who are geographically located at the same site.

A geographically identified place must be interpreted on a strict basis: two units belonging to the same enterprise at different locations (*even if these local units are very close to each other*) must be regarded as two local units. However, a single local unit may be spread over several adjacent administrative areas. Moreover, the boundaries of the unit are determined by the boundaries of the site, which means for example that a public highway running through does not interrupt the continuity of the boundaries.

Workstation

This variable identifies the usual or in contrast occasional nature of the place/post occupied by the victim at the time of the accident. It does not take into account the permanency or not of the job (see variable Employment status above).

The concept of « usual workstation » should be understood in a restrictive sense, always inside the premises of the usual local unit of work : fixed workstation in a workshop, shop, office and more generally premises of the local unit of the employer.

The concept of « occasional workstation » is used in a broader sense and covers both:

- Jobs for which the workstation is « mobile » (truck driver, worker in the construction, fitter, repairer, policeman, watchman, street sweeper, etc.) ;
- Occasional situations for people usually working at a fixed workstation :
 - ✓ Occasional journey on behalf of the employer ;
 - ✓ Specific intervention on behalf of the employer outside the usual local unit and inside the premises of a client or another company (meeting, mission, business interview, installation or repair, etc.) ;
 - ✓ Temporary assignment in a fixed but different workstation or in a local unit different from the usual one, including workstations occupied during several days or weeks but which are not a definitive assignment workplace (temporary assignment as employee of an enterprise working inside the premises of another company or as person engaged by an employment agency or business, important maintenance activities at a client premises, teleworking, etc.).

The Working Environment

This is described by a noun.

It is the type of workplace, working area or location where the victim was present or working just before the accident.

This is the workplace, work premises or general environment where the accident happened.

The Working Process

This is described by a noun (but it is an action that could also be described by a verb).

It is the main type of work, task (general activity) being performed by the victim at the time of the accident.

This describes the main type of work being performed by the victim at the time of the accident. It is not the victim's occupation, nor his or her precise Specific Physical Activity at the moment of the accident. It is the description of

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the type of work and the task, in broad terms, undertaken by the victim during a period of time ending at the instant of the accident.

The Specific Physical Activity

This is described by a verb, however the one-part codes are formulated as generic nouns describing these actions.
The activity being performed by the victim just before the accident.

This is the victim's exact Specific Physical Activity at the instant of the accident, i.e. precisely what the victim was doing at the exact time of the accident. It covers only a short period of time.

The Material Agent of the Specific Physical Activity

This is described by a noun.

The principal Material Agent associated or linked with the victim's Specific Physical Activity just before the accident.

The Material Agent associated with the Specific Physical Activity describes the tool, object, or instrument being used by the victim when the accident happened. The Material Agent may or may not be implicated in the accident. However, if there are several Material Agents associated with the Specific Physical Activity, the Material Agent most closely linked to the accident or injury must be recorded.

The Deviation

This is described by a noun (but it is an action that could also be described by a verb).

The last event deviating from normality and leading to the accident.

This is the description of the abnormal event, i.e. the Deviation from the normal working process. The Deviation is the event that triggers the accident. If there is a chain of events, the last Deviation must be recorded (the Deviation closest in time to the injuring contact).

The Material Agent of the Deviation

This is described by a noun.

The principal Material Agent associated or linked with the deviant event.

The Material Agent associated with the Deviation describes the tool, object, or instrument involved in the abnormal event. If several Material Agents are associated with the (last) Deviation, the last Material Agent involved should be recorded, i.e. that closest in time to the injuring contact.

The Contact - Mode of injury

This is described by a noun (but it is an action that could also be described by a verb). It may also be called: the Mode of Injury.

The contact that injured the victim.

This describes how the victim was hurt (physical or mental trauma) by the Material Agent that caused the injury. If there are several Contacts -Modes of Injury, the one causing the most serious injury must be recorded.

The Material Agent of the Contact - Mode of injury

This is described by a noun.

The principal Material Agent associated or linked with the injuring contact.

The Material Agent associated with the Contact - Mode of Injury refers to the object, tool, or instrument with which the victim came into contact or the psychological mode of injury. If several Material Agents are associated with the injury, the Material Agent linked with the most serious injury must be recorded.

The Weight

A weighting procedure will be implemented in Phase III to solve the situation of Member States encoding the ESAW Phase III variables only for a national sample of accidents at work. The same variable could also be used to indicate reporting level. The weighting procedure will be defined in the course of the year 2001 with the Member States (see Appendix E).

Indicators and methods of standardisation of data

Incidence rates

The ESAW methodology considers 2 main types of indicators on accidents at work: the numbers of accidents and the incidence rates. Obviously, the numbers of accidents have to be related to the reference population of persons in employment (persons exposed to the risk of accident at work) in order to establish the incidence rates (frequency). They are mainly provided for the economic activities covered in the ESAW data by all Member States ("common branches", see Table 7 "ESAW 1998 data: Branches covered by the national reporting systems" and part "Reference population (based on the LFS)" below).

The *incidence rate* is defined as the number of accidents at work per 100 000 persons in employment. It can be calculated for Europe, a Member State, or any sub-population breakdown according to one or more of the variables above characterising the victim of the accident (economic activity, age, etc.). It can be established for all accidents or breakdowns according to one or more of the variables above characterising the accident (part of body injured, etc.). Separate incidence rates are calculated for fatal accidents and accidents leading to more than 3 days' absence.

Furthermore, an additional incidence rate is calculated for fatalities at the European level, which *excludes road traffic accidents*, in order to provide comparable incidence rates for all Member States. This is due to the fact that road traffic accidents in the course of work are not recorded as accidents at work in a few Member States. Fatalities caused by road traffic accidents represent an important share of the number of fatal accidents. For this reason, comparisons of national incidence rates for fatalities would introduce a serious bias without this adjustment of the rates. This applies also to accidents *on board of any means of transport* during a journey in the course of work, which are also excluded from this adjusted rate of fatalities.

It should be noted that only this adjusted incidence rate on fatalities is used for the breakdown by Member States

The standard formula is the following:

$$\text{Incidence rate} = \frac{\text{Number of accidents (fatal or non-fatal)}}{\text{Number of employed persons in the studied population}} \times 100\,000 .$$

Correction factors and standardisation methods

Correction

For the Member States where the accidents at work with more than 3 days' absence are only partly reported, reporting levels are estimated mainly by breakdowns by branches of economic activity for these Member States. On the basis of these reporting levels Eurostat correct the submitted data on the accidents and deduce from it an estimate of the number of accidents at work occurred.

Standardisation

It is a fact that the frequency of work accidents is much higher in some branches compared to others. For this reason the industrial structure of a country will influence its total frequency of work accidents depending on the share of high-risk sectors. For example, a country where high risk branches like agriculture, construction or transport represent a higher share of the total workforce compared to another Member State, but with the same frequency of accidents for each branch, the first Member States would have a higher total national incidence rate.

To correct for this effect a "*standardised*" number of accidents at work per 100 000 persons in employment is calculated per Member State by giving each branch the same weight at national level as in the European Union total ("*standardised*" *incidence rate*). This standardisation method is used in current ESAW publications on accidents at work.

It is considered to improve this standardisation method in the future. Depending on the reliability and coverage of the information provided by the Member States the following improvements could be implemented:

- standardisation of the industrial structure by sector (NACE sub-section or division) and not only by the aggregated NACE branches (section); indeed, the relative weight of the sectors inside the major branches also differ from one country to another while the risk levels vary distinctly between sectors;
- standardisation according to working time and therefore to the time of exposure to the risk (part-time work, short term contracts, legal length of work, etc.), which varies from one country to another;
- possibly, standardisation by age and sex.

Data collection and harmonisation

Reporting procedures in the Member States

Insurance and non-insurance based systems

Eurostat receives the ESAW data from the Member States' national registers or other national bodies responsible for the collection of data on accidents at work. The ESAW data are *occurrence-related* and based on *administrative sources* in the Member States. Compared to surveys the harmonisation prospects of ESAW data therefore depend on the operative reporting procedures, the possibility of modifying these or adapting their data to ESAW concepts and specifications.

Mainly, two types of reporting procedures can be identified in the various Member States of the European Union. The *insurance based systems*, which can be found in 10 Member States, have reporting procedures mainly based on the notification of the accidents to the insurer, public or private according to the case. On the other hand the reporting procedures of the five other Member States (Denmark, Ireland, the Netherlands, Sweden and the United Kingdom) are mainly based on the legal obligation of the employer to notify the accidents to the relevant national authorities, which is often the *National Labour Inspection Service*. Norway, which also provides data to Eurostat, belongs to the latter group. Switzerland that has an insurance based system, envisages to provide ESAW data in future.

In the insurance based systems, the supply or the refunding of care benefits and the payment of benefits in cash (daily subsistence allowances, rents where applicable, etc.) resulting from accidents at work, are conditioned in its report to the public or private insurer. Additionally, in a number of these countries, the benefits thus paid under the accidents at work insurance legislation are higher than in the case of non-occupational accidents. Thus, there is an *economic incentive* for the employer and the employee to notify an accident at work in the insurance-based systems. Due to these various factors, the reporting levels for accidents at work are in general very high in the insurance based systems and considered to be about 100 percent.

The five other Member States and Norway have in general a system of universal social security "coverage". In such systems the benefits provided to the victim of an accident at work are not depending on a preliminary reporting of the accident, except for the specific benefits paid for the most serious accidents (rents for permanent disability, etc.). Consequently, the economic incentive for notifying accidents at work is not very strong in the non-insurance based systems. Nevertheless, there is a legal obligation for the employer to notify an accident at work. In practice only a part of work accidents are actually reported and the systems based on the employers liability to notify work accidents to the authorities have only a medium reporting level usually ranging from 30 to 50 percent on average for all branches of economic activity taken together (see Table 9).

Evaluation of national reporting procedures

The initial evaluation of the data sources is a prerequisite for a correct interpretation of the data received from the various Member States. This is in particular important taking into account the differences in the national reporting procedures as mentioned above. A detailed evaluation is carried out by the way of an evaluation questionnaire. The national replies to this questionnaire are submitted to Eurostat together with the annual ESAW data.

The main issues covered by the evaluation questionnaire are the following:

- definition of an accident at work
- coverage of groups
- reporting levels

The *definition* of an accident at work, in particular the *categories* of fatal and non-fatal accidents reported, can vary slightly from country to country (Tables 4 and 5). For example, for some reporting procedures a fatal accident is only registered as fatal when the victim died within a certain time limit after the accidental injury. In some Member States all non-fatal accidents are covered irrespective of whether the victim was absent from work or not.

It is also asked whether certain *types* of accidents are included or excluded from the data submitted, for example, road traffic accidents (Table 8) or accidents to members of the public.

Another part of the questionnaire concerns the *groups covered* by the national data (by professional status, economic activity and occupational groups). This information is very important in order to establish an adequate reference population for the calculation of frequencies (Tables 6 and 7).

An estimation of the national *reporting levels* should also be provided to Eurostat by category of accident, economic activity, occupation, professional status and size of the enterprise (Table 9). Questions on the national concepts for the *local unit* of an enterprise are also covered by the questionnaire, but the results are not included in this publication.

The results of the evaluation of the current national reporting procedures are provided below.

ESAW harmonised data collection

Despite the differences in the national reporting procedures and coverage, all Member States **extract from their national data the informations in accordance with the ESAW methodology**, its definition of an accident at work, etc., to submit the ESAW data to Eurostat. In particular, they provide data only for cases with more than 3 days' absence, they exclude accidents having only a medical origin, etc.

Concerning the coverage of the economic sectors, differences still remain but Eurostat harmonises the analysis by considering the incidences only on 9 "common" branches (see Table 7). The same occurs for the calculation of national fatality incidences by Eurostat where road traffic accidents are excluded for all Member States.

Finally, concerning the Member States that have not an insurance based system, Eurostat estimates the number of accidents occurred from the numbers of cases reported and detailed reporting levels (up to date breakdown mainly by branch of economic activity) evaluated by the Member States and provided to Eurostat (see Table 9).

Definition of an accident at work

Non-fatal accidents

The definition of what constitutes a notifiable work accident ranges from any work accident, whether it results in an interruption of work or not, to a minimum absence of more than three days. As can be seen from Table 4 below all Member States cover accidents with more than 3 days' absence from work, which is also the definition for the ESAW project.

It is considered that accidents with *more* than 3 days' absence from work have a higher reporting level than accidents with less than 3 days' absence from work. Only accidents with more than 3 days' absence (resumption of work the fifth day or later after the day of the accident) are considered by the ESAW methodology.

Table 4 - Categories of non-fatal accidents at work reported in the European Union

Accidents are notifiable in case of:	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
No absence or resumption of work the same day of the accident ⁽³⁾	Y	N	Y ⁽¹⁾	Y	Y	Y	N	N	Y	N	Y	Y	N	Y	N	Y
Resumption of work the first, second or third day after the day of the accident ⁽³⁾	Y	Y	Y ⁽¹⁾	Y	Y	Y	N	N	Y	N	Y	Y	N	Y	N	Y
Resumption of work the fourth day after the day of the accident ⁽³⁾	Y	Y	Y ⁽¹⁾	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	Y
Resumption of work the fifth day or later after the day of the accident	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Other																(²)

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- (¹) D: The accidents with less than 4 days' absence are covered by the compensation system but are not included in the national statistics.
- (²) NL: Only "serious injuries" are reported.
- (³) Accidents without work absence or with a work absence of less than 4 days (resumption of work from the same day to the fourth day after the day of the accident) are not covered by the ESAW methodology and are not included by the Member States in the ESAW data.

Legend:

Y = Yes, reported;

N = No, not reported.

Fatal accidents

Fatal accidents should in principle be notified in all Member States. However, some countries only register accidents as fatal if the victim died within a certain time limit after the accidental injury. The notification of an accident as fatal ranges from registration procedures where the accident is registered as fatal in the statistics when the victim died the *same day* (the Netherlands) or within 30 days after the accident (Germany) to cases *where no time limits are laid down* (B, EL, F, I, L, A, S and NO). For the other Member States the time limit is within 1 year – E : 1,5 year - after the date of the accident (Table 5).

Table 5 - Categories of fatal accidents at work reported in the European Union

Accidents are registered as fatal when the victim died:	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
Within a year after the day of the accident	Y	Y	Y ⁽¹⁾	Y	Y ⁽²⁾	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
At any time after the day of the accident	Y	N	Y ⁽¹⁾	Y	N	Y	N	Y	Y	N	Y	N	N	Y	N	Y
After a prior recognition of permanent disability	Y	N	Y ⁽¹⁾	-	Y	N ⁽³⁾	Y ⁽⁴⁾	Y	Y	N	-	Y ⁽⁴⁾	N	Y	Y ⁽⁴⁾	N
Other			(¹)							(⁵)						

(¹) D: Only those within 30 days after the day of the accident are included in the national statistics and ESAW data.

(²) E: Fatalities are only compensated and thus included in the statistical data if the victim died within 18 months after the day of the accident.

(³) F: The deaths due to an accident at work but occurred after the recognition of a permanent disability are covered by the insurance if they are due to the occupational injury, but they are not included as fatal accidents in the statistics.

(⁴) IRL, P & UK: The deaths due to an accident at work but occurred after the recognition of a permanent disability are included in the statistics only if they occur within a year after the day of the accident.

(⁵) NL: Only "sudden deaths" are registered.

Legend: Y = Yes, reported; N = No, not reported.

Groups covered by the national reporting systems

All groups or sectors should in principle be covered by national legislation or other statutory arrangements that require cases of accidents at work to be notified to the authorities, or to a private or public insurance body in accordance with the law. However, not all data are compiled for statistical purposes. Either the data are kept in a format that does not allow for statistical analyses or the data files are not for the moment available for the ESAW project. For this reason the term *coverage* in the following should be understood as *the coverage of the accidents data that actually have been sent to Eurostat* in accordance with the ESAW methodology.

Coverage of self-employed and family workers

The coverage of groups varies from one Member States to another. Self-employed and family members are not covered by some national reporting systems. In particular the agricultural sector is affected by the lack of coverage of the self-employed. Furthermore, the coverage of the data for some Member States, which have a large group of self-employed as, for example, Greece, is affected by the exclusion of this group from the reporting and registration procedures. In Table 6 the groups covered by the national reporting systems by professional status are presented.

Table 6 - Professional status covered by the national reporting systems⁽¹⁾

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
Employees	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ⁽²⁾	Y	Y	Y	Y	Y ⁽³⁾	Y
Self-employed	N	Y	P	N	P ⁽⁴⁾	N	N	Y	Y	N	Y	N	P	Y	Y ⁽³⁾	P ⁽⁴⁾
Family workers	N	Y	P	N	P ⁽⁴⁾	N	Y	Y	Y	N	P ⁽⁴⁾	N	N	Y	Y ⁽³⁾	P ⁽⁴⁾

(¹) The coverage by economic branches and sectors is indicated in Table 7.

(²) NL: 1994 data.

(³) UK: Except Northern Ireland.

(⁴) E, A & NO: Family workers are only covered in agriculture & forestry - NACE A - (also for self-employed and in fishing – NACE B - in Spain and for construction in Norway).

DATA COLLECTION AND HARMONISATION

Legend: Y = Yes, covered; N = No, not covered; P = Partly covered.

Sectors

In general the private sector is covered by all national reporting systems. However, some important sectors are not covered by all Member States. Particularly parts of the Public Sector (in particular Public Administration), Mining and Quarrying and parts of the Transport, Storage and Communication branch are not or only partly covered by the national reporting systems. This includes also Education and Health and Social Work as these branches are partly public in most countries. Some high-risk groups such as off-shore miners or police and firebrigades are not covered by all countries.

Table 7 - Branches covered by the national reporting systems

	B	DK	D	EL	E	F	IRL	I	L	NL ⁽¹⁾	A	P	FIN	S	UK ⁽²⁾	NO
Private Sector In particular NACE branches A, D, E, F, G, H, I - except sectors below -, J and K ⁽⁴⁾	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Branches including Public Sector (except public transports)																
Public Administration (NACE section L)	N	Y	Y	N	P	P	Y	Y	Y	P	Y	N	Y	Y	Y	Y
Of which police and firebrigades (NACE classes 75.24 and 75.25)	N	Y	Y	N	Y	P	Y	N	Y	Y	Y	N	Y	Y	Y	Y
Education (NACE section M)	N	Y	Y	N	P	P	Y	Y	Y	P	Y	P	Y	Y	Y	Y
Health and Social Work (NACE section N)	Y	Y	Y	P	Y	P	Y	Y	Y	P	Y	P	Y	Y	Y	Y
Transport, Storage and Communication (NACE section I)																
Maritime Transport (NACE group 61.1)	Y	N	Y	N	Y	N	Y	N	Y	Y	Y	Y	Y	Y	N	N
Air Transport ⁽⁵⁾ (NACE division 62)	Y	P	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	P	P
Transport via Railways (NACE group 60.1)	N	Y	Y	N	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Post & Telecommunications (NACE division 64)	N	Y	Y	N	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mining and Quarrying (NACE section C)																
Off shore	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N
Others	Y	Y	Y	Y	Y	P	Y	Y	Y	N	Y	Y	Y	Y	N	Y

⁽¹⁾ NL: 1994 data.

⁽²⁾ UK: Except Northern Ireland.

⁽³⁾ EL: Electricity & Gas supply (NACE groups 40.1 and 40.2) not covered.

⁽⁴⁾ The 9 NACE branches A, D, E, F, G, H, I, J and K (see Appendix B - classification NACE) are covered by the data of all Member States. For that reason the main ESAW indicators (incidence rates, etc.) are provided for this field so-called "9 common branches".

⁽⁵⁾ DK, UK & NO: Working on aircraft crew in flight not covered.

Legend: Y = Yes, covered; N = No, not covered; P = Partly covered.

Coverage of accidents outside the premises of the enterprise (including road traffic accidents)

Ireland and United Kingdom are not in a position to provide data on road traffic and transport accidents in the course of work. The lack of coverage for this type of accidents has a significant impact on the national numbers of fatalities and for this reason Eurostat makes an adjustment for this in the official statistics. Additionally some other national specificities exist for accidents having only a medical origin or accidents occurred in public places or within the premises of another company (at a customer's, business interview, temporary assignment, etc.).

Table 8 - Coverage of accidents outside the premises of the enterprise in the course of work

Accidents in the course of work	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
Road traffic	Y	Y	Y	Y	Y	Y	N ⁽¹⁾	Y	Y	Y	Y	Y	Y	Y	N ⁽²⁾	Y
Other means of transport	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	N	Y
Other public places	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y
Premises of another company	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Only medical origin	Y	N	N	N	Y	Y	N	N	N	N	N	N	N	N	N	N

(¹) IRL: Covered by the system but no data is available.

(²) UK: Road traffic accidents excluded, except truck loading/unloading operations.

Legend: Y = Yes, covered; N = No, not covered.

National reporting levels

As indicated above, the reporting levels of accidents at work with more than 3 days' absence are in some countries or sectors lower than 100%. The table below shows the differences in reporting levels for the national ESAW 1998 data. As explained previously, Eurostat corrects the submitted data on accidents on the basis of the reporting levels and deduces from it an estimate of the number of accidents at work *occurred*. For the mainly insurance based systems the reporting level is considered to be very close to 100%, i.e., all accidents to persons covered by the statistics are considered to be reported.

For the reporting systems which are mainly based on a legal obligation to notify, only a part of the accidents is reported. In this case estimates of the reporting levels are provided by the Member States, based either on an evaluation of the reporting procedures or on the basis of other data sources, e.g., surveys. In the table below only the mean value for the main sectors is provided for each of those Member States which have not 100% reporting. Member States have provided more detailed information which is used for the estimates of the total number of accidents published by Eurostat.

TABLE 9 - ESAW 1998 data: National reporting levels for accidents at work with more than 3 days' absence from work

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
100% reporting level for all sectors	Y	N	Y	N	Y	Y	N	P ⁽¹⁾	Y	N ⁽²⁾	Y ⁽³⁾	Y	Y	N	N	N ⁽⁴⁾
Average reporting levels for those countries which have not 100 percent reporting ⁽⁵⁾ :		46		39			38			⁽²⁾				52	43	⁽⁴⁾

(¹) I: The reporting level is less than 100 % only for the craft professions.

(²) NL: Data on non-fatal accidents available only for 1994 reference year.

(³) A: Except agriculture for which the reporting level is less than 30%.

(⁴) NO: between 25 to 100%.

(⁵) The reporting level for each sector is provided to Eurostat on the basis of national evaluations. The level presented in the current table is the average on the 9 main branches.

Legend: Y = Yes; N = No; P = Partly.

Reference population (based on LFS)

A reference population for the ESAW data is established in order to calculate incidence rates for accidents at work. The reference population is established from the data of the Labour Force Survey (LFS) and corresponds to the national coverage of the ESAW data in each country. The advantages of using the European Labour Force Survey are the comparability of this source and the possibility for establishing more detailed information on the national labour forces. However, this source does not provide information on employment in full-time equivalents. This is a problem for countries with a high share of part-time work and particularly for women. Also the LFS only covers persons aged 15 years or more, which makes it difficult to establish incidence rates for accidents occurred among children and young persons.

Reference year

The reference year used for the extraction of the reference population from the LFS is the same as the reference year of the ESAW data.

Establishment of filters

To calculate appropriate incidence rates, the reference population of persons in employment should cover the same field as the ESAW data on accidents. For that purpose, Eurostat establishes filters annually on the basis of the answers from the Member States to the questions of the Evaluation Questionnaire on the coverage of the data (by professional status, economic activity, occupational groups).

Estimated reference population for 1998

The population of persons covered by the ESAW data, established from the LFS, was in 1998 more than 136 million persons in employment, which represented about 90% of the total European workforce.

Nevertheless, the population included in the ESAW data of the different Member States does not cover the same economic activities or groups of workers (see previous section on coverage). Only 9 branches of activities were covered by the ESAW 1998 data of all the 15 Member States and Norway: agriculture, hunting and forestry - manufacturing - Electricity, gas and water supply - construction - wholesale and retail trade and repairs - hotels and restaurants - transport and communication - financial intermediation - real estate, renting and business activities (NACE sections A, D, E, F, G, H, I, J and K). However, the coverage is not yet complete for agriculture and transport: non-wage earners (the self-employed, family workers etc.) in agriculture and rail, sea and air transport are not covered everywhere. The ESAW incidence rates are then only calculated on these 9 branches where a European frequency can be considered. The total number of persons in employment covered by ESAW in these 9 "common branches" to all Member States and concerned by the calculated incidence rates, was in 1998 96,5 million, about 70% of the total coverage of the ESAW data.

Future developments

Improvement of data quality

Eurostat continues to identify and evaluate the various problems that currently still limit the comparability of the ESAW data between Member States. However, it should first be recalled that the importance and the added value of the ESAW statistics is to provide aggregated results at a European level and not to focus on the comparisons of the results of the Member States. Obviously the quality of these aggregated figures can only be satisfactory if the provided national data are sufficiently comparable. Some of the principal problems that still persist are provided below on:

- coverage
- reporting levels
- inclusion/exclusion of specific types of accidents.

These three types of difficulties are all covered by the ESAW Evaluation Questionnaire which forms part of the ongoing process of improving the quality of the data.

The problems in focus are in particular the coverage of all groups in scope of the ESAW project, and to find an appropriate solution to the problem of underreporting of accidents at work even if they are covered by the employers legal obligation to notify them to the authorities. To this end it should be noted that the employer - pursuant to the Framework Directive, Article 9 "various obligations on employers", items 1 c) and d), has to :

- keep a list of occupational accidents resulting in a worker being unfit for work for more than 3 working days ;
- draw up, for the responsible authorities and in accordance with national laws and/or practices, reports on occupational accidents suffered by its workers ”.

Coverage

Those Member States which have not full coverage of all employed groups should continue their efforts to cover, as far as possible, all economic sectors, all types of professional status and occupation. In particular the efforts should be concentrated on the coverage of the mining industries, fishing and the public or private services as well as on the self-employed workers. However, the 1998 ESAW data already covered 90% of European workers.

Reporting levels

As explained in part "Data collection - Reporting procedures in the Member States" above, in the Member States having a non-insurance based system, the reporting levels are lower than 100%. These Member States carry out national evaluations in general based on recognised methods such as Labour Force Surveys or other surveys providing information on accidents at work. Nevertheless, difficulties and important bias remain. Moreover, it seems in view of the first analysis carried out, that these biases rather lead to an overvaluation of the reporting levels than the opposite. Finally the lack of homogeneity between the different methods does not guarantee the comparability of the resulting reporting levels and thus the comparability of the corrected ESAW data.

Accordingly, the Commission recommends highly that the Member States concerned, in greater details than now, evaluate the methods currently used in order to provide a more accurate evaluation of the reporting levels. In the absence of exact methods in the short-term, a better study of the biases induced, would allow for the appropriate corrections *a posteriori* to the reporting levels obtained. Preferably a quantitative approach to these biases should be made in order to estimate their magnitude.

In the future Eurostat would prefer to have more accurate breakdowns of the reporting levels for the various occupations and professional status.

In the long term, the aim for these Member States should be to have, as in the insurance based system, reporting levels of about 100%. The full declaration of all accidents at work with more than 3 days' absence is the main way to avoid bias due to the current evaluations of reporting levels.

Furthermore, the LFS data (ad hoc module) provide information on accidents at work for some sectors or groups not covered by the current ESAW data. This approach will thus provide a more complete picture of the number of accidents at work in the European Union and give an important correction factor for the ESAW data collected by national administrative procedures.

Inclusion/exclusion of specific types of accidents

Fatal *road traffic accidents* in the course of work make up an important share of all fatal accidents. As previously mentioned there is not full coverage of these fatalities in all Member States, even if they should in principle be included in national statistics. Comparable incidence rates for fatalities are established by omitting fatalities caused by road traffic accidents. However, in the long term Eurostat aims to produce incidence rates including these accidents, but it would imply changes in the reporting procedures in some Member States in order to collect the appropriate information.

Development of new indicators

Eurostat, together with DG Employment and social affairs and Member States, continue to identify and develop new statistical tools required by the political needs in the area of Occupational Health and Safety strategies.

In addition to the incidence rates that are the main current indicators from ESAW, the Phase II data already allow a first approach of the socio-economic costs of the accidents at work with the variable "days lost" (including also permanent incapacity and fatalities). Global indicators including also days lost due to work-related health problems other than injuries would be developed in near future, in particular including data from the ad hoc module on accidents at work and occupational diseases in the 1999 Labour Force Survey⁽¹⁹⁾.

Moreover, first pilot collections of data on the direct costs of the accidents at work for the insurance system have been carried out in 1998 and 2000. These data covered either medical costs, sick leaves costs and permanent incapacity benefits (as well as compensation rents for fatal accidents).

In future, studies on the indirect costs for enterprises (damage to material, products, etc.) will be developed.

More generally, works are being developed to integrate other aspects of the quality of work and well-being of workers. As a first step the Phase I of the European Occupational Diseases Statistics (EODS), developed by Eurostat with the same partners as for ESAW, have been adopted by the EODS Working Group in September 2000 and is implemented from 2001 reference year⁽²⁰⁾.

⁽¹⁹⁾ To have a broader view on Health and Safety at work, the Commission Regulation (EC) No 1571/98 of the 20/07/1998 established an ad hoc module on Health and Safety at Work inserted in the 1999 Labour Force Survey (LFS), as a complementary data source to ESAW. This module brings an important added value to the information already collected by the ESAW project. In particular it includes data on accidents at work with less than 4 days' absence as well as on other work-related health problems (Illness(es), disability(ies) or other physical or psychic health problem(s), apart from accidental injuries, caused or made worse by the work) suffered by the person during the past 12 months. Additionally, the LFS data enable Eurostat to link information on the accidents with information on the situation of the victims on the labour market, the characteristics of their job as well as their working conditions or training.

⁽²⁰⁾ Eurostat Working Papers - Population and social conditions 3/2000/E/n°19 - "European Occupational Diseases Statistics (EODS) – Phase I methodology".

Appendix A: Implementation of ESAW Phase III from 2001 reference year onwards

This appendix constitutes the description of the characteristics of the implementation of the Phase III of the ESAW project from the 2001 reference year onwards, as decided by the ESAW Working Group at its meeting on 16/10/2000, taking into consideration the recommendations from the ESAW Task Force.

In order to help Member States during the implementation steps, the Commission has supported the development by some national Institutions involved of various tools. A "HELPER"⁽²¹⁾ software is now available for the codification of Phase III variables (assisted search of codes from the description of the accident report). Works are also being carried out to develop training tools and to provide proposals for the appropriate collection of data in declaration forms.

After this implementation time and a first « cruising speed » period, it will be necessary to do a first evaluation of this implementation and of the first data provided, as recommended by the Task Force. This first period of use of Phase 3 could be a 5 years period (2001-2005), after which the first evaluation will take place and some improvements, if there are, will be developed on the basis of its conclusions.

Choice of the variables

Variables on the causes and the circumstances

ESAW Phase III includes clearly 3 levels or sequences :

- The circumstances just before the accident, with 4 variables : Workstation (optional), Working Environment, Working Process and Specific Physical Activity ;
- The Deviation, last « deviant event from normality » leading to the accident, occurring in the framework of the circumstances related at the previous level ;
- The Contact – Mode of Injury, which is the action that actually injures as a consequence of the Deviation related at the previous level.

Each level is independent from the others and is one of the 3 necessary parts of the description. Therefore there is no consistency if there is not at least 1 element available at each one of the 3 levels. Without that, the description of the occurrence of the accident is not complete, one sequence is missing.

Moreover, the system links to each of the 3 levels a Material Agent associated to each corresponding action :

- The Material Agent associated to the Specific Physical Activity ;
- The Material Agent associated to the Deviation ;
- The Material Agent associated to the Contact – Mode of Injury.

There is a comprehensive added value of the 3 separated Material Agents. In some cases the « material agent » is the same for each of the 3 levels, but for other accidents there are actually 3 different agents and it is necessary to know them to describe fully the accident. In any circumstances, even for the accidents where the agent is 3 times the same, there is actually at least 1 Material Agent. Even for these « simple » cases it is in fact necessary to consider the knowledge of 1 Material Agent. In a wider sense, the knowledge of at least 1 Material Agent, preferably « close to the injury », i.e. associated either to the Contact or to the Deviation, forms the minimum under which the description of the sequences of the accident is meaningless.

Consequently, the ESAW Working Group at its meeting on 16/10/2000 adopted the following priorities, with an obligatory minimum of 4 variables according to the choices indicated below and the use as often as possible of a higher number of variables according to the modalities also defined below.

⁽²¹⁾ The "HELPER" has been developed by the INAIL (Italy) together with a group of Member States (Spain, France and Portugal) and the collaboration of HSE (UK) for the English version.

Priority variables

A minimum set of 4 priority variables should be selected by each Member State according to the following rules :

- Either Working Environment or Working Process or Specific Physical Activity (1 variable among the 3) ;
- Deviation ;
- Contact - Mode of Injury ;
- Either Material Agent of the Deviation or Material Agent of the Contact - Mode of Injury (1 variable among the 2).

For at least 3 of the priority variables selected by each Member State, all the digits of each classification have to be considered as from the adoption of the system (2 positions with a total of 2 digits, except 3 digits for the Working environment and 2 positions with 2 digits each one, i.e., 4 digits for the Material Agents). If necessary, for only one of the 4 variables, a codification at only one position is accepted in a first time. For the Material Agents the detailed classification at 3- or 4-position (6 or 8 digits) presented in Appendix D can be used at the national level but only the 2 first positions are used for the ESAW data submitted to Eurostat.

Intermediary option

- 4 variables compulsorily according to the priority and the modalities (numbers of positions) above ;
- 1 to 3 other variable(s), of which as a priority (5th variable) either the second Material agent of the Deviation or the Contact – Mode of Injury, or a second variable among Working Environment, Working Process and Specific Physical Activity.

Additional optional variable Workstation

The ILO Resolution concerning « Statistics of occupational injuries: resulting from occupational accidents »⁽²²⁾ proposed a complementary variable (and not as a substitute) to the ESAW variable « Working environment ». This additional variable is close to the concepts of place and of work at the time of the accident. It identifies the « usual » or in contrast « occasional » nature of the place/post occupied at the time of the accident.

This concept is related to the development of new forms and to the greater flexibility of work, such as subcontracting, company having employees working inside the premises of another company, workers on temporary secondment, persons engaged by an employment agency or business, teleworking, etc. . The name proposed for this variable is « Workstation ».

Therefore the ESAW Working Group at its meeting on 16/10/2000 decided to introduce this variable, called « Workstation » in ESAW, in Phase III in an optional way only for the Member States wishing so (missing value '0' for the other countries). For this variable, the statistical burden for the respondent, in general the company, will be very weak, even in small enterprises, because it is by nature a well-known information for the employer.

According to the advice of the ESAW Task Force, the concept of « usual » is considered in a restrictive sense : fixed workstation in a workshop, shop, office and more generally usual « local unit » of work (premises of the local unit of the employer). On the opposite, the concept of « occasional » is used in a broad sense and covers both jobs with a « mobile » workstation, situations really occasional for people usually working at a fixed workstation and temporary assignments. (See Appendix C – Classification guidelines)

Inclusion of the whole set of 9 variables

Use of the whole set of 9 variables with 2 positions each (1 position for Workstation). This is the most convenient method for prevention purposes and for providing the maximum of information for the needs of the European Commission, insofar as the Member States can realise this. This maximum inclusion of the 9 variables could be considered as a mid term aim for as much Member States as possible, although taking into consideration the first evaluation of Phase III after the first period of use (2001 – 2005), and the modifications involved by the conclusions of this evaluation.

(22) Adopted by the 16th International Conference of Labour Statisticians – Geneva – October 1998, hereinafter « ILO Resolution ».

Particulars concerning the variable Deviation and its Material Agents

The system retained the concept of « last » deviation and of « last » associated material agent, « closest in time to the injury contact » (when several agents are involved in the deviation). This rule complies with a double need: 1) the homogeneity of the coding by all the codifiers, and therefore the need for an « objective » definition (contrary to the « subjective » concept of deviation « most useful to be known for prevention »); 2) the maximisation of the information obtained by coding, the « last » elements being more frequently described in the declarations of the accidents at work, which are a « photograph » and not a survey on the accident. Certainly this rule is not « in theory » the best for prevention, because the « last » deviating event and the « last » associated object are not always the elements on which one must carry out preventive actions to limit the occurrence of these accidents. Nevertheless, in practice, in numerous Member States this rule is the one which allows the best collection of information within the framework of the reporting system of the accidents at work, and therefore actually constitutes the best possible « input » for prevention.

Many countries adopted this point of view. However, for the few Member States having more detailed information on each accident and codifiers who can encode it precisely, the concept of deviation and associated agent the « most useful for prevention » can be envisaged. In order to allow the best possible use of the methodology of Phase III by each Member State, it is therefore proposed to the countries which would be in the latter case to have the possibility of using a definition of the deviation (and its associated material agent) slightly different from that of ESAW Phase III. Within the framework of the evaluation of this Phase envisaged at the end of the period 2001-2005, the experiences gained according to both definitions (Phase III i.e. « the last » on the one hand, « the most useful for prevention » on the other hand) could then be discussed so to improve thereafter, if necessary, the concepts of « Deviation » and of « Material Agent of the Deviation » in ESAW.

Optional improvements for variables of Phases I and II

In Phase III, the variables of Phases I and II are of course preserved. Moreover, two optional developments were adopted by the ESAW Working Group at its meeting on 16/10/2000, one concerning the variable « Economic activity of the employer », the other relating to the variable « Employment status ».

Economic activity of the employer

This variable corresponds to the NACE Rev1 code of the main economic activity of the local unit of the victim's enterprise (« main » = highest number of employees occupied in this economic activity). In ESAW Phases I and II, the NACE Rev1 code is used at the 2-digit division level. However, from the beginning of the ESAW project it has been foreseen, in the long term, a detailed codification of the economic activity at the 4-digit NACE Rev1 level. Moreover, the current limit of 2 digits raises difficulties to identify important economic activities, for which DG Employment and social affairs and other users of Eurostat data want to obtain information on the accidents at work in Europe, because these activities are identified only at the 3- or 4-digit level (respectively groups and classes). For example the branches of agriculture or construction correspond only to one 2-digit code, respectively divisions 01 and 45. Therefore to distinguish the sectors inside these branches, for example the growing of crops from farming of animals or the building of complete constructions and civil engineering from building installation, one must use a more detailed level. Similarly all the land transport correspond to the NACE division 60 and the distinction between transport via railways and road-transport is only done at the 3-digit group level (respectively 60.1 and 60.2). Another example, the Fishing Committee of the European Parliament wants to have data available for this sector. These data are still often not included in the current ESAW data but additionally they are identified at the 4 digits class level (05.01 Fishing). Finally, during a joint UN-ECE/Eurostat/ILO Seminar on the « Measurement of the Quality of Employment »⁽²³⁾, it has been wished to have statistics on accidents at work available at the 4-digit class level of NACE.

Consequently, at its meeting on 16/10/2000, the ESAW Working Group decided to consider in ESAW Phase III the variable « Economic activity of the Employer » according to the 4-position NACE Rev1. Only the 2 first positions, corresponding to the divisions already used in Phases I and II, are compulsory. The 3rd and/or 4th positions are available in an optional way for the Member States that can and wish to communicate this information to Eurostat, as some national systems already use the 4 positions. The last 2 positions or the last one will remain with the value '(0)0' for the other countries. A complete 4-position NACE classification is provided in Appendix D.

⁽²³⁾ Geneva, May 2000.

Employment status

The ILO Resolution refers, for its variable equivalent to the ESAW variable « Employment status », to the International Classification of Status of Employment⁽²⁴⁾ – ICSE-93 – that allows to break down the category « employee » (code '3' of the ESAW variable). The ICSE states indeed that « among the employees, countries may need and be able to distinguish the 'employees with stable contracts' ».

Consequently, in ESAW this means the collection of simple informations on the « stability » (or in contrast « precariousness ») of the employment of the victim of the accident, i.e., the distinction of the jobs with « permanent » work contracts (contracts of unlimited duration) from the other work contracts (« temporary » jobs - contracts of limited duration). Additionally, the « full-time » jobs and the « part-time » jobs are also distinguished. Moreover, this last information will also help to take better into account the duration of working time and therefore of exposure to the risk for the calculation of the incidence of the accidents. The disparities in this field are indeed far from being negligible between the Member States of the Union and part-time work tends to develop.

Concerning the definition of the concepts of « full-time » and « part-time », the Labour Force Survey (LFS) informs that if there are important « variations in working hours between Member States and between branches of industry », « part-time will hardly ever exceed 35 hours while full-time work will usually start at about 30 hours ». The European Community Household Panel (ECHP) also uses this limit of 30 hours per week. Consequently, ESAW Phase III uses an only indicative threshold of 30 hours per week (e.g., 6 hours daily on 5 days or 7.5 hours daily on 4 days) as the limit between part-time and full-time. However, this threshold still remains flexible as some specific occupations as teachers can have full-time jobs with a very lower number of lecture hours and on the opposite some craft or trade occupations can have working times higher than the average. When the information is taken from the declaration of the accident, it is in fact the signification of « full-time » and « part-time » proper to the enterprise that will be collected.

For this variable, the statistical burden for the respondent, in general the company, will be very weak, even in small enterprises, because by nature, as for the workstation, this is a well-known information for the employer.

Consequently, at its meeting on 16/10/2000 the ESAW Working Group decided to distinguish in Phase III these various sub-categories inside the category « employee » of the ESAW variable Employment status, in an optional way only for the Member States wishing it. This information is provided by a 2nd and a 3rd position in the code of this variable. These digits will remain with the value '00' (or one of the two digits with '0' when only the other digit is specified) for the other countries (moreover, they are with the same value '00' for the workers other than employees).

⁽²⁴⁾ Adopted by the 15th International Conference of Labour Statisticians – Geneva 1993.

Appendix B: Classifications and formats used for ESAW

This appendix provides the classifications and formats which should be used for submission of data and for publications. The classifications used are coherent with the 1998 ILO Resolution on "Statistics of Occupational Injuries: resulting from Occupational Accidents".

Classifications

The following classifications used for the description of the accident are classifications defined by the ESAW methodology and other classifications as the NUTS, NACE and ISCO classifications.

VARIABLE:	CLASSIFICATION:	Format:
Case Number	Number	Numeric
		No. of characters 11

This format is composed of the last 4 digits in the year figure followed by 7 characters for the possible numbering of the case. Each case number should be unique, and should be numbered in succession for convenience. This allows the possibility of numbering up to 9.999.999 cases.

VARIABLE:	CLASSIFICATION:	FORMAT:
Economic Activity of the Employer	NACE [NACE, Rev 1, level 2]	Numeric - No. of characters 2
		<u>NOTE: the 4-digit classification is provided in Appendix D</u>

Code	Label
' _ '	Economic activity unknown
Section A	Agriculture, hunting and forestry
01	Agriculture, hunting and related service activities
02	Forestry, logging and related service activities
Section B	Fishing
05	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing
Section C	Mining and quarrying
10	Mining of coal and lignite; extraction of peat
11	Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction excluding surveying
12	Mining of uranium and thorium ores
13	Mining of metal ores
14	Other mining and quarrying
Section D	Manufacturing
15	Manufacture of food products and beverages
16	Manufacture of tobacco products
17	Manufacture of textiles
18	Manufacture of wearing apparel; dressing and dyeing of fur
19	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
20	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials

- 21 Manufacture of pulp, paper and paper products
- 22 Publishing, printing and reproduction of recorded media

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

23	Manufacture of coke, refined petroleum products and nuclear fuel
24	Manufacture of chemicals and chemical products
25	Manufacture of rubber and plastic products
26	Manufacture of other non-metallic mineral products
27	Manufacture of basic metals
28	Manufacture of fabricated metal products, except machinery and equipment
29	Manufacture of machinery and equipment n.e.c.
30	Manufacture of electrical and optical equipment
31	Manufacture of electrical machinery and apparatus n.e.c.
32	Manufacture of radio, television and communication equipment and apparatus
33	Manufacture of medical, precision and optical instruments, watches and clocks
34	Manufacture of motor vehicles, trailers and semi-trailers
35	Manufacture of other transport equipment
36	Manufacture of furniture; manufacturing n.e.c.
37	Recycling

Section E Electricity, gas and water supply

40	Electricity, gas, steam and hot water supply
41	Collection, purification and distribution of water

Section F Construction

45	Construction
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Section G Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods

50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles
52	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods

Section H Hotels and restaurants

55	Hotels and restaurants
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Section I Transport, storage and communication

60	Land transport; transport via pipelines
61	Water transport
62	Air transport
63	Supporting and auxiliary transport activities; activities of travel agencies
64	Post and telecommunications

Section J Financial intermediation

65	Financial intermediation, except insurance and pension funding
66	Insurance and pension funding, except compulsory social security
67	Activities auxiliary to financial intermediation

Section K Real estate, renting and business activities

70	Real estate activities
71	Renting of machinery and equipment without operator and of personal and house
72	Computer and related activities
73	Research and development
74	Other business activities

Section L Public administration and defence; compulsory social security

75	Public administration and defence; compulsory social security
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Section M Education

80	Education
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Section N Health and social work

85 Health and social work

Section O Other community, social and personal service activities

90 Sewage and refuse disposal, sanitation and similar activities

91 Activities of membership organisations n.e.c.

92 Recreational, cultural and sporting activities

93 Other service activities

Section P Private households with employed persons

95 Private households with employed persons

Section Q Extra-territorial organisations and bodies

99 Extra-territorial organisations and bodies.

VARIABLE:	CLASSIFICATION:	FORMAT:
Occupation of the Victim	International Standard Classification of Occupation [ISCO 88 (COM), level 2]	Numeric No. of characters 2

Code	Label
' _ '	Occupation not elsewhere mentioned or unknown
10	Legislators, senior officials and managers without specification
11	Legislators and senior officials
12	Corporate managers
13	General managers
20	Professionals without specification
21	Physical, mathematical and engineering science professionals
22	Life science and health professionals
23	Teaching professionals
24	Other professionals
30	Technicians and associate professionals without specification
31	Physical and engineering science associate professionals
32	Life science and health associate professionals
33	Teaching associate professionals
34	Other associate professionals
40	Clerks without specification
41	Office clerks
42	Customer service clerks
50	Service workers and shop and market sales workers without specification
51	Personal and protective services workers
52	Models, salespersons and demonstrators
60	Skilled agricultural and fishery workers without specification
61	Skilled agricultural and fishery workers

70	Craft and related trades workers without specification
71	Extraction and building trades workers
72	Metal, machinery and related trades workers
73	Precision, handicraft, printing and related trades workers
74	Other craft and related trades workers
80	Plant and machine operators and assemblers without specification
81	Stationary-plant and related operators
82	Machine operators and assemblers
83	Drivers and mobile-plant operators
90	Elementary occupations without specification
91	Sales and services elementary occupations
92	Agricultural, fishery and related labourers
93	Labourers in mining, construction, manufacturing and transport
00	Armed forces without specification
01	Armed forces

VARIABLE:	CLASSIFICATION:	FORMAT:
Age of the Victim	Number of years	Numeric - Age format No. of characters 2

The age of the victim at the time of the accident should be recorded in years. A numerical value should be entered in the range from '00' to '90' years (inclusive), except for the two codes 98 and 99. Ages below 10 must be entered with a leading zero to comply with the field width of 2 digits.

Code	label
00	Less than 1 year
01	1 year old
02	2 years
...	..etc.
10	10 years
...	..etc.
90	90 years
98	Above 90 years of age
99	Age unknown

VARIABLE:	CLASSIFICATION:	FORMAT:
Sex of the Victim	Categorical	Numeric No. of characters 1

Code	Label
1	Man
2	Woman
9	Sex unknown

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

VARIABLE:	CLASSIFICATION:	FORMAT:
Type of Injury	ESAW classification system for Type of Injury	Numeric No. of characters 3

Code	label
000	Type of injury unknown or unspecified
010	Wounds and superficial injuries
011	Superficial injuries
012	Open wounds
019	Other types of wounds and superficial injuries
020	Bone fractures
021	Closed fractures
022	Open fractures
029	Other types of bone fractures
030	Dislocations, sprains and strains
031	Dislocations and subluxations
032	Sprains and strains
039	Other types of dislocations, sprains and strains
040	Traumatic amputations (Loss of body parts)
050	Concussion and internal injuries
051	Concussion and intracranial injuries
052	Internal injuries
059	Other types of concussion and internal injuries
060	Burns, scalds and frostbites
061	Burns and scalds (thermal)
062	Chemical burns (corrosions)
063	Frostbites
069	Other types of burns, scalds and frostbites
070	Poisonings and infections
071	Acute poisonings
072	Acute infections
079	Other types of poisonings and infections
080	Drowning and asphyxiation
081	Asphyxiation
082	Drowning and non-fatal submersions
089	Other types of drowning and asphyxiation
090	Effects of sound, vibration and pressure
091	Acute hearing losses
092	Effects of pressure (barotrauma)
099	Other effects of sound, vibration and pressure
100	Effects of temperature extremes, light and radiation
101	Heat and sunstroke
102	Effects of radiation (non-thermal)
103	Effects of reduced temperature
109	Other effects of temperature extremes, light and radiation
110	Shock
111	Shocks after aggression and threats
112	Traumatic shocks
119	Other types of shocks
120	Multiple injuries

999 Other specified injuries not included under other headings

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

VARIABLE:	CLASSIFICATION:	FORMAT:
Part of Body Injured	ESAW classification system for Part of Body Injured	Numeric No. of characters 2

Code	Label
00	Part of body injured, not specified
10	Head, not further specified
11	Head (Caput), brain and cranial nerves and vessels
12	Facial area
13	Eye(s)
14	Ear(s)
15	Teeth
18	Head, multiple sites affected
19	Head, other parts not mentioned above
20	Neck, inclusive spine and vertebra in the neck
21	Neck, inclusive spine and vertebra in the neck
29	Neck, other parts not mentioned above
30	Back, including spine and vertebra in the back
31	Back, including spine and vertebra in the back
39	Back, other parts not mentioned above
40	Torso and organs, not further specified
41	Rib cage, ribs including joints and shoulder blades
42	Chest area including organs
43	Pelvic and abdominal area including organs
48	Torso, multiple sites affected
49	Torso, other parts not mentioned above
50	Upper Extremities, not further specified
51	Shoulder and shoulder joints
52	Arm, including elbow
53	Hand
54	Finger(s)
55	Wrist
58	Upper extremities, multiple sites affected
59	Upper extremities, other parts not mentioned above
60	Lower Extremities, not further specified
61	Hip and hip joint
62	Leg, including knee
63	Ankle
64	Foot
65	Toe(s)
68	Lower extremities, multiple sites affected
69	Lower Extremities, other parts not mentioned above
70	Whole body and multiple sites, not further specified
71	Whole body (Systemic effects)
78	Multiple sites of the body affected

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

VARIABLE:	CLASSIFICATION:	FORMAT:
Geographical Location of the Accident	“Nomenclature of Territorial Units for Statistics” NUTS	Alphanumeric No. of characters 5

The NUTS Classification (Nomenclature of Territorial Units for Statistics) is to be applied at the level specified below. It is the last NUTS version revised in 1998 with modifications at the levels used here by ESAW for Finland, Sweden and the UK, as well as the new “pseudo-NUTS” for Norway.

Belgium: NUTS 1

BE000	BELGIQUE-BELGIË unspecified or unknown
BE100	REG. BRUXELLES-CAP. / BRUSSELS HFDST. GEW.
BE200	VLAAMS GEWEST
BE300	RÉGION WALLONNE

Denmark: NUTS 5

DK000	"DANMARK", unspecified or unknown
DK001	KØBENHAVN OG FREDERIKSBERG KOMMUNER
DK002	KØBENHAVNS AMT
DK003	FREDERIKSBORG AMT
DK004	ROSKILDE AMT
DK005	VESTSJÆLLANDS AMT
DK006	STORSTRØMS AMT
DK007	BORNHOLMS AMT
DK008	FYNS AMT
DK009	SØNDERJYLLANDS AMT
DK00A	RIBE AMT
DK00B	VEJLE AMT
DK00C	RINGKØBING AMT
DK00D	ÅRHUS AMT
DK00E	VIBORG AMT
DK00F	NORDJYLLANDS AMT

Germany NUTS 1

DE000	DEUTSCHLAND, unspecified or unknown
DE100	BADEN-WÜRTTEMBERG
DE200	BAYERN
DE300	BERLIN
DE400	BRANDENBURG
DE500	BREMEN
DE600	HAMBURG
DE700	HESSEN
DE800	MECKLENBURG-VORPOMMERN
DE900	NIEDERSACHSEN
DEA00	NORDRHEIN-WESTFALEN
DEB00	RHEINLAND-PFALZ
DEC00	SAARLAND
DED00	SACHSEN
DEE00	SACHSEN-ANHALT
DEF00	SCHLESWIG-HOLSTEIN
DEG00	THÜRINGEN

Greece: NUTS 1

GR000	ELLADA, unspecified or unknown
GR100	VOREIA ELLADA
GR200	KENTRIKI ELLADA
GR300	ATTIKI
GR400	NISIA AIGAIYOU, KRITI

Spain: NUTS 1

ES000	ESPAÑA, unspecified or unknown
ES100	NOROESTE
ES200	NORESTE
ES300	COMUNIDAD DE MADRID
ES400	CENTRO (E)
ES500	ESTE
ES600	SUR
ES700	CANARIAS

France: NUTS 1

FR000	FRANCE, unspecified or unknown
FR100	ÎLE DE FRANCE
FR200	BASSIN PARISIEN
FR300	NORD - PAS-DE-CALAIS
FR400	EST
FR500	OUEST
FR600	SUD-OUEST
FR700	CENTRE-EST
FR800	MÉDITERRANÉE
FR900	DÉPARTEMENTS D'OUTRE-MER

Ireland: NUTS 5

IE000	IRELAND, unspecified or unknown
IE001	BORDER
IE002	DUBLIN
IE003	MID-EAST
IE004	MIDLAND
IE005	MID-WEST
IE006	SOUTH-EAST (IRL)
IE007	SOUTH-WEST (IRL)
IE008	WEST

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

Italy: NUTS 2

IT000	ITALIA, unspecified or unknown
IT100	NORD OVEST
IT110	PIEMONTE
IT120	VALLE D'AOSTA
IT130	LIGURIA
IT200	LOMBARDIA
IT300	NORD EST
IT310	TRENTINO-ALTO ADIGE
IT320	VENETO
IT330	FRIULI-VENEZIA GIULIA
IT400	EMILIA-ROMAGNA
IT500	CENTRO (I)
IT510	TOSCANA
IT520	UMBRIA
IT530	MARCHE
IT600	LAZIO
IT700	ABRUZZO-MOLISE
IT710	ABRUZZO
IT720	MOLISE
IT800	CAMPANIA
IT900	SUD
IT910	PUGLIA
IT920	BASILICATA
IT930	CALABRIA
ITA00	SICILIA
ITB00	SARDEGNA

Luxembourg (Grand-Duché): NUTS1

LU000	LUXEMBOURG (GRAND-DUCHÉ)
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Netherlands NUTS 2

NL000	NEDERLAND, unspecified or unknown
NL100	NOORD-NEDERLAND
NL110	GRONINGEN
NL120	FRIESLAND
NL130	DRENTHE
NL200	OOST-NEDERLAND
NL210	OVERIJSSSEL
NL220	GELDERLAND
NL230	FLEVOLAND
NL300	WEST-NEDERLAND
NL310	UTRECHT
NL320	NOORD-HOLLAND
NL330	ZUID-HOLLAND
NL340	ZEELAND
NL400	ZUID-NEDERLAND
NL410	NOORD-BRABANT
NL420	LIMBURG (NL)

Austria: NUTS 2

AT000	ÖSTERREICH, unspecified or unknown
AT100	OSTÖSTERREICH
AT110	BURGENLAND
AT120	NIEDERÖSTERREICH
AT200	SÜDÖSTERREICH
AT210	KÄRNTEN
AT220	STEIERMARK
AT300	WESTÖSTERREICH
AT310	OBERÖSTERREICH
AT320	SALZBURG
AT330	TIROL
AT340	VORARLBERG

Portugal: NUTS 2

PT000	PORTUGAL, unspecified or unknown
PT100	CONTINENTE
PT110	NORTE
PT120	CENTRO (P)
PT130	LISBOA E VALE DO TEJO
PT140	ALENTEJO
PT150	ALGARVE
PT200	AÇORES
PT300	MADEIRA

Finland: NUTS 2 (modified in 1998)

FI000	SUOMI/FINLAND, unspecified or unknown
FI100	MANNER-SUOMI
FI130	ITÄ-SUOMI
FI140	VÄLI-SUOMI
FI150	POHJOIS-SUOMI
FI160	UUSIMAA (SUURALUE)
FI170	ETELÄ-SUOMI
FI200	ÅLAND

Sweden: NUTS 2 (modified in 1998)

SE000	SVERIGE, unspecified or unknown
SE010	STOCKHOLM
SE020	ÖSTRA MELLANSVERIGE
SE040	SYDSVERIGE
SE060	NORRA MELLANSVERIGE
SE070	MELLERSTA NORRLAND
SE080	ÖVRE NORRLAND
SE090	SMÅLAND MED ÖARNA
SE0A0	VÄSTSVRIGE

United Kingdom NUTS 2 (modified in 1998):

UK000	UNITED KINGDOM, unspecified or unknown
UKC00	NORTH EAST
UKC10	TEES VALLEY & DURHAM
UKC20	NORTHUMBERLAND AND TYNE & WEAR
UKD00	NORTH WEST (INC MERSEYSIDE)
UKD10	CUMBRIA
UKD20	CHESHIRE
UKD30	GREATER MANCHESTER
UKD40	LANCASHIRE
UKD50	MERSEYSIDE
UKE00	YORKSHIRE & THE HUMBER
UKE10	EAST RIDING & NORTH LINCOLNSHIRE
UKE20	NORTH YORKSHIRE
UKE30	SOUTH YORKSHIRE
UKE40	WEST YORKSHIRE
UKF00	EAST MIDLANDS
UKF10	DERBYSHIRE & NOTTINGHAMSHIRE
UKF20	LEICESTERSHIRE, RUTLAND & NORTHAMPTONSHIRE
UKF30	LINCOLNSHIRE
UKG00	WEST MIDLANDS
UKG10	HEREFORDSHIRE, WORCESTERSHIRE & WARKS
UKG20	SHROPSHIRE & STAFFORDSHIRE
UKG30	WEST MIDLANDS
UKH00	EASTERN
UKH10	EAST ANGLIA
UKH20	BEDFORDSHIRE, HERTFORDSHIRE
UKH30	ESSEX
UKI00	LONDON
UKI10	INNER LONDON
UKI20	OUTER LONDON
UKJ00	SOUTH EAST
UKJ10	BERKSHIRE, BUCKS & OXFORDSHIRE
UKJ20	SURREY, EAST & WEST SUSSEX
UKJ30	HAMPSHIRE & ISLE OF WIGHT
UKJ40	KENT
UKK00	SOUTH WEST
UKK10	GLOUCESTERSHIRE, WILTSHIRE & NORTH SOMERSET
UKK20	DORSET & SOMERSET
UKK30	CORNWALL & ISLES OF SCILLY
UKK40	DEVON
UKL00	WALES
UKL10	WEST WALES & THE VALLEYS
UKL20	EAST WALES
UKM00	SCOTLAND
UKM10	NORTH EASTERN SCOTLAND
UKM20	EASTERN SCOTLAND
UKM30	SOUTH WESTERN SCOTLAND
UKM30	HIGHLANDS & ISLANDS
UKN00	NORTHERN IRELAND

Norway: Regions (New version from the Eurostat pseudo-NUTS classification for EFTA countries)

NO000	NORWAY, unspecified or unknown
NO010	OSLO OG AKERHUS
NO020	HEDMARK OG OPPLAND
NO030	SØR-ØSTLANDET
NO040	AGDER OG ROGALAND
NO050	VESTLANDET
NO060	TRØNDELAG
NO070	NORD-NORGE

VARIABLE:	CLASSIFICATION:	FORMAT:
Date of the Accident	Date	Numeric - 'YYYYMMDD'
		No. of characters 8

The date on which the accident took place is recorded using the 8-digit format 'YYYYMMDD', where 'YYYY' is the year, 'MM' refers to the month of the year, and 'DD' refers to the day of the month, e.g. 31 March 2001 would be coded as '20010331'. If the year is unknown 'YYYY' must be coded '0000', if the month is unknown 'MM' must be coded '00' and if the day is unknown 'DD' must be coded '00'.

VARIABLE:	CLASSIFICATION:	FORMAT:
Time of the Accident	Hour	Numeric - 'HH'
		No. of characters 2

The time of the accident is coded using the two digits of the 'HH' format which is defined as the following time interval:

Code	Label
00	00:00 to 00:59
01	01:00 to 01:59
02	02:00 to 02:59
.....	etc., to
23	23:00 to 23:59
99	Time of accident unknown

VARIABLE:	CLASSIFICATION:	FORMAT:
Size of the Enterprise	Recommendation on SMEs Numeric	Numeric - Size classes
		No. of characters 1

Code	Label:	Specifications
0	0 employees	Self-employed without employees
1	1-9 employees	full-time equivalent*
2	10-49 employees	full-time equivalent*
3	50-249 employees	full-time equivalent*
4	250-499 employees	full-time equivalent*
5	500 employees or more	full-time equivalent*
9	Unknown size	full-time equivalent*

* A full-time equivalent worker is defined in relation to the national average annual number of working hours for a full-time worker in the branch of economic activity of the local unit of the enterprise. The full-time equivalent number of employees of the local unit is the sum of the annual working hours of all its employees divided by the national average

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

annual number of working hours in its branch. It is rounded to the nearest integer number, except values > 0 and < 1 (self-employed, etc., employing a person only part-time or even a few hours per month or year) that should always be rounded to 1.

VARIABLE: Nationality of the Victim	CLASSIFICATION: LFS (Eurostat) definition	FORMAT: Numeric No. of characters 1
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Code	Label
0	Nationality unknown
1	National
2	Non-national from EU
3	Non-national outside EU

VARIABLE: Employment Status of the Victim	CLASSIFICATION: LFS (Eurostat) definition From ICSE-93	FORMAT: Numeric No. of characters 3
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Code	Label	Remarks
000	Employment status unknown	
100	Self-employed	Please notice that the code « 200 » IS NOT USED to be coherent with the LFS classification that have the 2 codes « 1 » and « 2 » for the self-employed persons (with or without employees) and have the employees in code « 3 » and the family workers in code « 4 ».
300	Employee, with a job permanent/temporary (unlimited/limited duration) and full-time/part-time not specified	
301	Employee, with a job permanent/temporary (unlimited/limited duration) not specified - full-time	Optional
302	Employee, with a job permanent/temporary (unlimited/limited duration) not specified - part-time	Optional
310	Employee with a permanent job (contract of unlimited duration) - full-time/part-time not specified	Optional
311	Employee with a permanent job (contract of unlimited duration) - full-time	Optional
312	Employee with a permanent job (contract of unlimited duration) - part-time	Optional
320	Employee with a temporary job (contract of limited duration) - full-time/part-time not specified	Optional
321	Employee with a temporary job (contract of limited duration) - full-time	Optional
322	Employee with a temporary job (contract of limited duration) - part-time	Optional
400	Family worker	Family workers are persons who help another member of the family to run an agricultural holding or other business, provided they are not considered as employees.

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500	Trainee / Apprentice
900	Other employment status

VARIABLE:	CLASSIFICATION:	FORMAT:
Days Lost	ESAW classification system	Alphanumeric No. of characters 3

The *number of days lost* due to an accident at work is provided using a 3-digit format in the range from 4 to 182 days (inclusive) for cases with less than 6 months' absence. A format for size bands for days lost (A01 - A06) has been provided as well in case a Member State can not provide the exact value. Finally, four additional code values are used for absences of 6 months or more and permanent incapacities, fatalities, others and unspecified cases. Furthermore, Please notice, that ESAW data include all accidents at work where the person is unfit for work for more than 3 full days even these days include Saturdays, Sundays, Bank holidays or other days where the person is not usually working. Only *whole days* should be entered in the ESAW data. In the ESAW methodology, it is considered that the person was unfit for work for *more* than 3 days when he/she was off work at least 4 full days beginning the day after the accident. That means that for the first value "004" the resumption of work took place the fifth day after the day of the accident. The remaining values correspond to the same definition, e.g. the value "009" would correspond to a resumption of work the tenth day after the day of the accident, etc. .

Code	Label
000	Number of days lost unknown
004 - 182	Number of whole days lost in numerical (less than 6 months' absence)
A01	4 - 6 days lost
A02	7 - 13 days lost
A03	14 - 20 days lost
A04	At least 21 days but less than 1 month lost
A05	At least 1 month but less than 3 months lost
A06	At least 3 months but less than 6 months lost
997	Permanent incapacity (to work) or 183 or more days lost (6 months' absence or more).
998	Fatal accident
999	Not elsewhere mentioned

Classifications for the causes and circumstances

The following classifications have been developed for ESAW Phase III on the causes and circumstances of the accidents at work. The guidelines and codification examples are provided in Appendix C for proper use by coders.

VARIABLE:	CLASSIFICATION:	FORMAT:
Workstation	ESAW classification system (according to ILO Resolution)	Numeric No. of characters 1

Code	Label
0	Not specified
1	Usual workstation or within the usual local unit of work
2	Occasional or mobile workstation or in a journey on behalf of the employer
9	Other workstation

VARIABLE:	CLASSIFICATION:	FORMAT:
Working Environment	ESAW classification system	Numeric No. of characters 2 positions on 3 digits

Code	Label
000	No information
010	Industrial site - Not specified
011	Production area, factory, workshop
012	Maintenance area, repair workshop
013	Area used principally for storage, loading, unloading
019	Other group 010 type Working Environments not listed above
020	Construction site, construction, opencast quarry, opencast mine - Not specified
021	Construction site - building being constructed
022	Construction site - building being demolished, repaired, maintained
023	Opencast quarry, opencast mine, excavation, trench (including opencast mines and working quarries)
024	Construction site - underground
025	Construction site - on / over water
026	Construction site - in a high-pressure environment
029	Other group 020 type Working Environments not listed above
030	Farming, breeding, fish farming, forest zone - Not specified
031	Breeding area
032	Farming area - ground crop
033	Farming area - tree or bush crop
034	Forestry zone
035	Fish farming zone, fishing, aquaculture (not on a vessel)
036	Garden, park, botanical garden, zoological garden
039	Other group 030 type Working Environments not listed above
040	Tertiary activity area, office, amusement area, miscellaneous - Not specified
041	Office, meeting room, library etc.
042	Teaching establishment, school, secondary school, college, university, crèche, day nursery
043	Small or large sales area (including street commerce)
044	Restaurant, recreational area, temporary accommodation (including museums, auditoriums, stadiums, fairs etc.)
049	Other group 040 type Working Environments not listed above
050	Health establishment - Not specified
051	Health establishment, private hospital, hospital, nursing home

059 Other group 050 type Working Environments not listed above

060	Public area - Not specified
061	Area permanently open to public thoroughfare – (highways, byways, parking areas, station or airport waiting rooms etc.)
062	Means of transport - by land or rail – private or public (all kinds: train, bus, car etc.)
063	Zone attached to public places but with access restricted to authorised personnel: railway line, airport apron, motorway hard shoulder
069	Other group 060 type Working Environments not listed above
070	In the home - Not specified
071	Private home
072	Communal parts of a building, annexes, private family garden
079	Other group 070 type Working Environments not listed above
080	Sports area - Not specified
081	Indoor sports area – sports hall, gymnasium, indoor swimming pool
082	Outdoor sports area – sports ground, outdoor swimming pool, skiing piste
089	Other group 080 type Working Environments not listed above
090	In the air, elevated, excluding construction sites - Not specified
091	Elevated – on a fixed level (roof, terrace, etc.)
092	Elevated – mast, pylon, suspended platform
093	In the air - aboard aircraft
099	Other group 090 type Working Environments not listed above, excluding construction sites
100	Underground, excluding construction sites - Not specified
101	Underground – tunnel (road, train, tube)
102	Underground – mine
103	Underground - drains/sewers
109	Other group 100 type Working Environments not listed above, excluding construction sites
110	On /over water, excluding construction sites - Not specified
111	Sea or ocean – aboard all types of vessels, platforms, ships, boats, barges
112	Lake, river, harbour – aboard all types of vessels, platforms, ships, boats, barges
119	Other group 110 type Working Environments not listed above, excluding construction sites
120	In high pressure environments, excluding construction sites - Not specified
121	In a high pressure environment – underwater (e.g. diving)
122	In a high pressure environment - chamber
129	Other group 120 type Working Environments not listed above, excluding construction site
999	Other Working Environments not listed in the classification

VARIABLE:	CLASSIFICATION:	FORMAT:
Working Process	ESAW classification system	Numeric
		No. of characters 2

The “Working Process” variable describes the basic type of work (the broad, general task) being performed by the victim at the time of the accident. The Working Process, i.e. the main task being performed at the time and location of the accident, need not necessarily be linked with the victim's Specific Physical Activity at the moment the accident occurs. The Working Process presupposes a certain duration.

Code	Label
00	No information
10	Production, manufacturing, processing, storing - All types - Not specified
11	Production, manufacturing, processing – all types
12	Storing - all types

19 Other group 10 type Working Processes not listed above

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

20	Excavation, Construction, Repair, Demolition - Not specified
21	Excavation
22	New construction - building
23	New construction - civil engineering, infrastructures, roads, bridges, dams, ports
24	Remodelling, repairing, extending, building maintenance - all types of constructions
25	Demolition - all types of construction
29	Other group 20 type Working Processes not listed above
30	Agricultural type work, forestry, horticulture, fish farming, work with live animals - Not specified
31	Agricultural type work - working the land
32	Agricultural type work- with vegetables, horticultural
33	Agricultural type work - with live animals
34	Forestry type work
35	Fish farming, fishing
39	Other group 30 type Working Processes not listed above
40	Service provided to enterprise and/or to the general public; intellectual activity - Not specified
41	Service, care, assistance, to the general public
42	Intellectual work - teaching, training, data processing, office work, organising, managing
43	Commercial activity - buying, selling and associated services
49	Other group 40 type Working Processes not listed above
50	Other work related to tasks coded under 10, 20, 30 and 40 - Not specified
51	Setting up, preparation, installation, mounting, disassembling, dismantling
52	Maintenance, repair, tuning, adjustment
53	Cleaning working areas, machines - industrial or manual
54	Waste management, disposal, waste treatment of all kinds
55	Monitoring, inspection of manufacturing procedures, working areas, means of transport, equipment - with or without monitoring equipment
59	Other group 50 type Working Processes not listed above
60	Movement, sport, artistic activity - Not specified
61	Movement, including aboard means of transport
62	Sport, artistic activity
69	Other group 60 type Working Processes not listed above
99	Other Working Processes not listed in the above classification

VARIABLE:	CLASSIFICATION:	FORMAT:
Specific Physical Activity	ESAW classification system	Numeric
		No. of characters 2

Code	Label
00	No information
10	Operating machine - Not specified
11	Starting the machine, stopping the machine
12	Feeding the machine, unloading the machine
13	Monitoring the machine, operating or driving the machine,
19	Other group 10 type Specific Physical Activities not listed above
20	Working with hand-held tools - Not specified
21	Working with hand-held tools - manual
22	Working with hand-held tools - motorised
29	Other group 20 type Specific Physical Activities not listed above

- 30 Driving/being on board a means of transport or handling equipment - Not specified**
 31 Driving a means of transport or handling equipment - mobile and motorised
 32 Driving a means of transport or handling equipment - mobile and non-motorised
 33 Being a passenger on board a means of transport
 39 Other group 30 type Specific Physical Activities not listed above
- 40 Handling of objects - Not specified**
 41 Manually taking hold of, grasping, seizing, holding, placing - on a horizontal level
 42 Tying, binding, tearing off, undoing, squeezing, unscrewing, screwing, turning
 43 Fastening, hanging up, raising, putting up - on a vertical level
 44 Throwing, flinging away
 45 Opening, closing (box, package, parcel)
 46 Pouring, pouring into, filling up, watering, spraying, emptying, baling out
 47 Opening (a drawer), pushing (a warehouse/office /cupboard door)
 49 Other group 40 type Specific Physical Activities not listed above
- 50 Carrying by hand - Not specified**
 51 Carrying vertically - lifting, raising, lowering an object
 52 Carrying horizontally - pulling, pushing, rolling an object
 53 Transporting a load - carried by a person
 59 Other group 50 type Specific Physical Activities not listed above
- 60 Movement - Not specified**
 61 Walking, running, going up, going down, etc.
 62 Getting in or out
 63 Jumping, hopping, etc.
 64 Crawling, climbing, etc.
 65 Getting up, sitting down
 66 Swimming, diving
 67 Movements on the spot
 69 Other group 60 type Specific Physical Activities not listed above
- 70 Presence - Not specified**
- 99 Other Specific Physical Activities not listed in this classification**

VARIABLE:	CLASSIFICATION:	FORMAT:
Deviation	ESAW classification system	Numeric No. of characters 2

Code	Label
00	No information
10	Deviation due to electrical problems, explosion, fire - Not specified
11	Electrical problem due to equipment failure - leading to indirect contact
12	Electrical problem - leading to direct contact
13	Explosion
14	Fire, flare up
19	Other group 10 type Deviations not listed above
20	Deviation by overflow, overturn, leak, flow, vaporisation, emission - Not specified
21	Solid state - overflowing, overturning
22	Liquid state - leaking, oozing, flowing, splashing, spraying
23	Gaseous state - vaporisation, aerosol formation, gas formation
24	Pulverulent material - smoke generation, dust/particles in suspension/emission of
29	Other group 20 type Deviations not listed above

- 30 Breakage, bursting, splitting, slipping, fall, collapse of Material Agent - Not specified**
- 31 Breakage of material - at joint, at seams
- 32 Breakage, bursting - causing splinters (wood, glass, metal, stone, plastic, others)
- 33 Slip, fall, collapse of Material Agent - from above (falling on the victim)
- 34 Slip, fall, collapse of Material Agent - from below (dragging the victim down)
- 35 Slip, fall, collapse of Material Agent - on the same level
- 39 Other group 30 type Deviations not listed above
- 40 Loss of control (total or partial) of machine, means of transport or handling equipment, hand-held tool, object, animal - Not specified**
- 41 Loss of control (total or partial) - of machine (including unwanted start-up) or of the material being worked by the machine
- 42 Loss of control (total or partial) - of means of transport or handling equipment, (motorised or not)
- 43 Loss of control (total or partial) - of hand-held tool (motorised or not) or of the material being worked by the tool
- 44 Loss of control (total or partial) - of object (being carried, moved, handled, etc.)
- 45 Loss of control (total or partial) - of animal
- 49 Other group 40 type Deviations not listed above
- 50 Slipping - Stumbling and falling - Fall of persons - Not specified**
- 51 Fall of person - to a lower level
- 52 Slipping - Stumbling and falling - Fall of person - on the same level
- 59 Other group 50 type Deviations not listed above
- 60 Body movement without any physical stress (generally leading to an external injury) - Not specified**
- 61 Walking on a sharp object
- 62 Kneeling on, sitting on, leaning against
- 63 Being caught or carried away, by something or by momentum
- 64 Uncoordinated movements, spurious or untimely actions
- 69 Other group 60 type Deviations not listed above
- 70 Body movement under or with physical stress (generally leading to an internal injury) - Not specified**
- 71 Lifting, carrying, standing up
- 72 Pushing, pulling
- 73 Putting down, bending down
- 74 Twisting, turning
- 75 Treading badly, twisting leg or ankle, slipping without falling
- 79 Other group 70 type Deviations not listed above
- 80 Shock, fright, violence, aggression, threat, presence - Not specified**
- 81 Shock, fright
- 82 Violence, aggression, threat - between company employees subjected to the employer's authority
- 83 Violence, aggression, threat - from people external to the company towards victims performing their duties (bank hold-up, bus drivers, etc.)
- 84 Aggression, jostle - by animal
- 85 Presence of the victim or of a third person in itself creating a danger for oneself and possibly others
- 89 Other group 80 type Deviations not listed above
- 99 Other Deviations not listed above in this classification.**
-

VARIABLE:	CLASSIFICATION:	FORMAT:
Contact - Mode of injury	ESAW classification system	Numeric
		No. of characters 2

Code	Label
00	No information
10	Contact with electrical voltage, temperature, hazardous substances - Not specified
11	Indirect contact with a welding arc, spark, lightning (passive)
12	Direct contact with electricity, receipt of electrical charge in the body
13	Contact with naked flame or a hot or burning object or environment
14	Contact with a cold or frozen object or environment
15	Contact with hazardous substances - through nose, mouth via inhalation
16	Contact with hazardous substances - on/through skin or eyes
17	Contact with hazardous substances - through the digestive system by swallowing or eating
19	Other group 10 type Contacts -Modes of Injury not listed above
20	Drowned, buried, enveloped - Not specified
21	Drowned in liquid
22	Buried under solid
23	Enveloped in, surrounded by gas or airborne particles
29	Other group 20 type Contacts -Modes of Injury not listed above
30	Horizontal or vertical impact with or against a stationary object (the victim is in motion) - Not specified
31	Vertical motion, crash on or against (resulting from a fall)
32	Horizontal motion, crash on or against
39	Other group 30 type Contacts -Modes of Injury not listed above
40	Struck by object in motion, collision with - Not specified
41	Struck - by flying object
42	Struck - by falling object
43	Struck - by swinging object
44	Struck - by rotating, moving, transported object, including vehicles
45	Collision with an object, including vehicles - collision with a person (the victim is moving)
49	Other group 40 type Contacts -Modes of Injury not listed above
50	Contact with sharp, pointed, rough, coarse Material Agent - Not specified
51	Contact with sharp Material Agent (knife, blade etc.)
52	Contact with pointed Material Agent (nail, sharp tool etc.)
53	Contact with hard or rough Material Agent
59	Other group 50 type Contacts -Modes of Injury not listed above
60	Trapped, crushed, etc. - Not specified
61	Trapped, crushed - in
62	Trapped, crushed - under
63	Trapped, crushed - between
64	Limb, hand or finger torn or cut off
69	Other group 60 type Contacts -Modes of Injury not listed above
70	Physical or mental stress - Not specified
71	Physical stress - on the musculoskeletal system
72	Physical stress - due to radiation, noise, light or pressure
73	Mental stress or shock
79	Other group 70 type Contacts -Modes of Injury not listed above
80	Bite, kick, etc. (animal or human) - Not specified
81	Bite
82	Sting from insect or fish
83	Blow, kick, head butt, strangulation
89	Other group 80 type Contacts -Modes of Injury not listed above

99 Other Contacts - Modes of Injury not listed in this classification

VARIABLE: Material Agent	CLASSIFICATION: ESAW classification system	FORMAT: Numeric No. of characters 2 positions with 2 digits = 4 digits
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Classification structure (1-position codes)

Code	Label
00.00	No material agent or no information
01.00	Buildings, structures, surfaces - at ground level (indoor or outdoor, fixed or mobile, temporary or not) - not specified
02.00	Buildings, structures, surfaces - above ground level (indoor or outdoor) - not specified
03.00	Buildings, structures, surfaces - below ground level (indoor or outdoor) - not specified
04.00	Systems for the supply and distribution of materials, pipe networks - not specified
05.00	Motors, systems for energy transmission and storage - not specified
06.00	Hand tools, not powered - not specified
07.00	Hand-held or hand-guided tools, mechanical - not specified
08.00	Hand tools - without specification of power source - not specified
09.00	Machines and equipment - portable or mobile - not specified
10.00	Machines and equipment - fixed - not specified
11.00	Conveying, transport and storage systems - not specified
12.00	Land vehicles - not specified
13.00	Other transport vehicles- not specified
14.00	Materials, objects, products, machine components, debris, dust - not specified
15.00	Chemical, explosive, radioactive, biological substances - not specified
16.00	Safety devices and equipment - not specified
17.00	Office equipment, personal equipment, sports equipment, weapons, domestic appliances - not specified
18.00	Living organisms and human-beings - not specified
19.00	Bulk waste - not specified
20.00	Physical phenomena and natural elements - not specified
99.00	Other material agents not listed in this classification

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

Material agents (2-position codes) :

Code	Label
00.00	No material agent or no information
00.01	No material agent
00.02	No information
00.99	Other known group 00 situation not listed above
01.00	Buildings, structures, surfaces - at ground level (indoor or outdoor, fixed or mobile, temporary or not) - not specified
01.01	Building components, structural components - doors, walls, partitions etc. and intentional obstacles (windows, etc.)
01.02	Surfaces at ground level - ground and floors (indoor or outdoor, farmland, sports fields, slippery floors, cluttered floors, plank with nails in)
01.03	Surfaces at ground level - floating
01.99	Other known buildings, structures and surfaces, - at same level, in group 01 but not listed above
02.00	Buildings, structures, surfaces - above ground level (indoor or outdoor) - not specified
02.01	Parts of building, above ground level - fixed (roofs, terraces, doors and windows, stairs, quays)
02.02	Structures, surfaces, above ground level - fixed (including gangways, fixed ladders, pylons)
02.03	Structures, surfaces, above ground level - mobile (including scaffolding, mobile ladders, cradles, elevating platforms)
02.04	Structures, surfaces, above ground level - temporary (including temporary scaffolding, harnesses, swings)
02.05	Structures, surfaces, above ground level - floating (including drilling platforms, scaffolding on barges)
02.99	Other known buildings, structures, surfaces - above ground level, in group 02 but not listed above
03.00	Buildings, structures, surfaces - below ground level (indoor or outdoor) - not specified
03.01	Excavations, trenches, wells, pits, escarpments, garage pits
03.02	Underground areas, tunnels
03.03	Underwater environments
03.99	Other known buildings, structures, surfaces - below ground level, in group 03 but not listed above
04.00	Systems for the supply and distribution of materials, pipe networks - not specified
04.01	Systems for the supply and distribution of materials, pipe networks - fixed - for gas, air, liquids, solids - including hoppers
04.02	Systems for the supply and distribution of materials, pipe networks - mobile
04.03	Sewers, drains
04.99	Other known systems for the supply and distribution of materials, pipe networks, in group 04 but not listed above
05.00	Motors, systems for energy transmission and storage - not specified
05.01	Motors, power generators (thermal, electric, radiation)
05.02	Systems for energy transmission and storage (mechanical, pneumatic, hydraulic, electric, including batteries and accumulators)
05.99	Other known motors, systems for energy transmission and storage, in group 05 but not listed above

06.00 Hand tools, not powered - not specified

- 06.01 Hand tools, not powered - for sawing
- 06.02 Hand tools, not powered - for cutting, separating (including scissors, shears, secateurs)
- 06.03 Hand tools, not powered - for carving, slotting, chiselling, trimming, clipping, shearing
- 06.04 Hand tools, not powered - for scraping, polishing, buffing
- 06.05 Hand tools, not powered - for drilling, turning, screwing
- 06.06 Hand tools, not powered - for nailing, riveting stapling
- 06.07 Hand tools, not powered - for sewing, knitting
- 06.08 Hand tools, not powered - for welding, gluing
- 06.09 Hand tools, not powered - for extracting materials and working the ground (including farming tools)
- 06.10 Hand tools, not powered - for waxing, lubricating, washing, cleaning
- 06.11 Hand tools, not powered - for painting
- 06.12 Hand tools, not powered - for holding in place, grasping
- 06.13 Hand tools, not powered - for kitchen work (except knives)
- 06.14 Hand tools, not powered - for medical and surgical work - sharp, cutting
- 06.15 Hand tools, not powered - for medical and surgical work - non-cutting, others
- 06.99 Other known hand tools, not powered, in group 06 but not listed above

07.00 Hand-held or hand-guided tools, mechanical - not specified

- 07.01 Mechanical hand tools - for sawing
- 07.02 Mechanical hand tools - for cutting, separating (including scissors, shears, secateurs)
- 07.03 Mechanical hand tools - for carving, slotting, chiselling, (hedge cutting see 09.02) trimming, clipping, shearing
- 07.04 Mechanical hand tools - for scraping, polishing, buffing (including disc cutters)
- 07.05 Mechanical hand tools - for drilling, turning, screwing
- 07.06 Mechanical hand tools - for nailing, riveting, stapling
- 07.07 Mechanical hand tools - for sewing, knitting
- 07.08 Mechanical hand tools - for welding, gluing
- 07.09 Mechanical hand tools - for extracting materials and working the ground (including farming tools, concrete breakers)
- 07.10 Mechanical hand tools - for waxing, lubricating, washing, cleaning (including high-pressure vacuum cleaner)
- 07.11 Mechanical hand tools - for painting
- 07.12 Mechanical hand tools - for holding in place, grasping
- 07.13 Mechanical hand tools - for kitchen work (except knives)
- 07.14 Mechanical hand tools - for heating (including driers, flame guns, irons)
- 07.15 Mechanical hand tools - for medical and surgical work - sharp, cutting
- 07.16 Mechanical hand tools - for medical and surgical work - non-cutting, others
- 07.17 Pneumatic guns (without specification of tool)
- 07.99 Other known hand-held or hand-guided mechanical tools, in group 07 but not listed above

08.00 Hand tools - without specification of power source - not specified

- 08.01 Hand tools, without specification of power source - for sawing
- 08.02 Hand tools, without specification of power source - for cutting, separating (including scissors, shears, secateurs)
- 08.03 Hand tools, without specification of power source - for carving, slotting, chiselling, trimming, clipping, shearing
- 08.04 Hand tools, without specification of power source - for scraping, polishing, buffing
- 08.05 Hand tools, without specification of power source - for drilling, turning, screwing
- 08.06 Hand tools, without specification of power source - for nailing, riveting stapling
- 08.07 Hand tools, without specification of power source - for sewing, knitting
- 08.08 Hand tools, without specification of power source - for welding, gluing
- 08.09 Hand tools, without specification of power source - for extracting materials and working the ground (including farming tools)
- 08.10 Hand tools, without specification of power source - for waxing, lubricating, washing, cleaning
- 08.11 Hand tools, without specification of power source - for painting
- 08.12 Hand tools, without specification of power source - for holding in place, grasping
- 08.13 Hand tools, without specification of power source - for kitchen work (except knives)
- 08.14 Hand tools, without specification of power source - for medical and surgical work - sharp, cutting
- 08.15 Hand tools, without specification of power source - for medical and surgical work - non-cutting, others
- 08.99 Other known hand tools, without specification of power source, in group 08 but not listed above

09.00 Machines and equipment - portable or mobile - not specified

- 09.01 Portable or mobile machines - for extracting materials or working the ground - mines, quarries and plant for building and civil engineering works
- 09.02 Portable or mobile machines - for working the ground, farming
- 09.03 Portable or mobile machines (not for working the ground) - for construction sites
- 09.04 Mobile floor cleaning machines
- 09.99 Other known portable or mobile machines and equipment in group 09 but not listed above

10.00 Machines and equipment - fixed - not specified

- 10.01 Fixed machines for extracting materials or working the ground
- 10.02 Machines for preparing materials, crushing, pulverising, filtering, separating, mixing, blending
- 10.03 Machines for processing materials - chemical processes (reactive, fermenting processes)
- 10.04 Machines for processing materials - hot processes (ovens, driers, kilns)
- 10.05 Machines for processing materials - cold processes (production of cold)
- 10.06 Machines for processing materials - other processes
- 10.07 Forming machines - by pressing, crushing
- 10.08 Forming machines - by calendering, rolling, cylinder presses (including paper presses)
- 10.09 Forming machines - by injection, extrusion, blowing, spinning, moulding, melting, casting
- 10.10 Machine tools - for planing, milling, surface treatment, grinding, polishing, turning, drilling
- 10.11 Machine tools - for sawing
- 10.12 Machine tools - for cutting, splitting, clipping (including die cutters, shearing machines, clippers, oxygen cutting equipment)
- 10.13 Machines for surface treatment - cleaning, washing, drying, painting, printing

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

- 10.14 Machines for surface treatment - galvanising, electrolytic surface treatment
- 10.15 Assembling machines (welding, gluing, nailing, screwing, riveting, spinning, wiring, sewing, stapling)
- 10.16 Packing machines, wrapping machines (filling, labelling, closing...)
- 10.17 Other machines for specific industries (miscellaneous monitoring and testing machines)
- 10.18 Specific machines used in farming which are not included with the above machines
- 10.99 Other known fixed machines and equipment in group 10 but not listed above

- 11.00 Conveying, transport and storage systems - not specified**
- 11.01 Fixed conveyors, continuous handling equipment and systems - belts, escalators, cableways, conveyors, etc.)
- 11.02 Elevators, lifts - hoists, bucket elevators, jacks, etc.
- 11.03 Fixed cranes, mobile cranes, vehicle-mounted cranes, overhead travelling cranes, hoisting devices with suspended load
- 11.04 Mobile handling devices, handling trucks (powered or not) - barrows, pallet trucks, etc.
- 11.05 Lifting equipment, securing, gripping and miscellaneous handling devices (including slings, hooks, ropes...)
- 11.06 Storage systems, packaging equipment, containers (silos, tanks) - fixed - tanks, vats, containers, etc.
- 11.07 Storage systems, packaging equipment, containers - mobile
- 11.08 Storage accessories, shelving, pallet racks, pallets
- 11.09 Miscellaneous packaging, small and medium-sized, mobile (skips, miscellaneous containers, bottles, crates, extinguishers...)
- 11.99 Other known conveying, transport and storage systems in group 11 but not listed above

- 12.00 Land vehicles - not specified**
- 12.01 Vehicles - heavy: lorries, buses, coaches (passenger transport)
- 12.02 Vehicles - light: goods or passengers
- 12.03 Vehicles - two or three wheels, powered or not
- 12.04 Other land vehicles: skis, roller-skates
- 12.99 Other known land vehicles in group 12 but not listed above

- 13.00 Other transport vehicles - not specified**
- 13.01 Vehicles - on rails, including suspended monorails: goods
- 13.02 Vehicles - on rails, including suspended monorails: passengers
- 13.03 Vehicles - nautical: goods
- 13.04 Vehicles - nautical: passengers
- 13.05 Vehicles - nautical: fishing
- 13.06 Vehicles - aerial: goods
- 13.07 Vehicles - aerial: passenger
- 13.99 Other known transport vehicles in group 13 but not listed above

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

- 14.00 Materials, objects, products, machine or vehicle components, debris, dust - not specified**
- 14.01 Building materials - large and small: prefabricated shells, formwork, girders, beams, bricks, tiles, etc.
- 14.02 Machine components, vehicle components: chassis, crankcase, levers, wheels, etc.
- 14.03 Machined parts or components, machine tools (including fragments and chips from these material agents)
- 14.04 Joining devices: nuts, bolts, screws, nails, etc.
- 14.05 Particles, dust, splinters, fragments, splashes, shards, other debris
- 14.06 Farm products (including seeds, straw, other farm products)
- 14.07 Products for use in farming and breeding (including fertilisers, animal feeds)
- 14.08 Stored products - including objects and packaging in storage areas
- 14.09 Stored products - in rolls, coils
- 14.10 Loads - transported by a mechanical handling or conveying device
- 14.11 Loads - suspended from a hoisting device, a crane
- 14.12 Loads - handled by hand
- 14.99 Other known materials, objects, products, machine components in group 14 but not listed above

- 15.00 Chemical, explosive, radioactive, biological substances - not specified**
- 15.01 Substances - caustic, corrosive (solid, liquid or gaseous)
- 15.02 Substances - harmful, toxic (solid, liquid or gaseous)
- 15.03 Substances - flammables (solid, liquid or gaseous)
- 15.04 Substances - explosive, reactive (solid, liquid or gaseous)
- 15.05 Gases, vapours with no specific effects (inert for life forms, suffocating)
- 15.06 Substances - radioactive
- 15.07 Substances - biological
- 15.08 Substances, materials - with no specific risk (water, inert materials...)
- 15.99 Other known chemical, explosive, radioactive, biological substances in group 15 but not listed above

- 16.00 Safety devices and equipment - not specified**
- 16.01 Safety devices - on machines
- 16.02 Protective devices - individual
- 16.03 Emergency devices and equipment
- 16.99 Other known safety devices and equipment in group 16 but not listed above

APPENDIX B: CLASSIFICATIONS AND FORMATS USED FOR ESAW

- 17.00 Office equipment, personal equipment, sports equipment, weapons, domestic appliances - not specified**
- 17.01 Furniture
- 17.02 Equipment - computer, office automation, reprographic, communications
- 17.03 Equipment - for teaching, writing, drawing - including typewriters, stamping machines, enlargers, time-recorders
- 17.04 Items and equipment for sports and games
- 17.05 Weapons
- 17.06 Personal items, clothing
- 17.07 Musical instruments
- 17.08 Domestic-type equipment, tools, objects, linen (professional use)
- 17.99 Other known office equipment, personal equipment, sports equipment, weapons in group 17 but not listed above

- 18.00 Living organisms and human-beings - not specified**
- 18.01 Trees, plants, crops
- 18.02 Animals - domestic and for breeding
- 18.03 Animals – wild animals, insects, snakes
- 18.04 Micro-organisms
- 18.05 Infectious viral agents
- 18.06 Humans
- 18.99 Other known living organisms and human-beings in group 18 but not listed above

- 19.00 Bulk waste - not specified**
- 19.01 Bulk waste - from raw materials, products, materials, objects
- 19.02 Bulk waste - from chemicals
- 19.03 Bulk waste - from biological substances, plants, animals
- 19.99 Other known bulk waste in group 19 but not listed above

- 20.00 Physical phenomena and natural elements - not specified**
- 20.01 Physical phenomena - noise, natural radiation, light, light arcs, pressurisation, depressurisation, pressure
- 20.02 Natural and atmospheric elements (including stretches of water, mud, rain, hail, snow, ice, wind, etc.)
- 20.03 Natural disasters (including floods, volcanic eruptions, earthquakes, tidal waves, fire, conflagration)
- 20.99 Other known physical phenomena and elements in group 20 but not listed above

- 99.00 Other material agents not listed in this classification**

Aggregated formats

The formats below are used for the age and date variables in publications. For the other variables, some tables in publications present aggregated data at the first position level, including at the classification structure 1-position level presented above for the material agents.

VARIABLE: Age of the Victim	CLASSIFICATION: Age classes	FORMAT: Numeric – Age classes format No. of characters 2
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The age format is defined with the following intervals.

Code	Label
<18	0-17 years
18-24	18-24 years
25-34	25-34 years
35-44	35-44 years
45-54	45-54 years
55-64	55-64 years
>64	65 years or more
99	Age unknown

VARIABLE: Date of the Accident	CLASSIFICATION: Month (date)	FORMAT: Numeric - Month format No. of characters 2
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Code	Label: Month of accident	Reference to classification 'YYYYMMDD' Date intervals
00	Date of accident unknown	
01	January	[1.1 - 31.1]
02	February	[1.2 - 29.2]
03	March	[1.3 - 31.3]
04	April	[1.4 - 30.4]
05	May	[1.5 - 31.5]
06	June	[1.6 - 30.6]
07	July	[1.7 - 31.7]
08	August	[1.8 - 31.8]
09	September	[1.9 - 30.9]
10	October	[1.10 - 31.10]
11	November	[1.11 - 30.11]
12	December	[1.12 - 31.12]

Appendix C: Classifications guidelines

Type of Injury

General coding principle: In case of multiple injuries suffered in one accident where one of the injuries is obviously more severe than the others, then this accident should be classified in the group corresponding to the nature of the more obviously severe injury. Only in cases where the victim has contracted two or more types of injuries and one of them cannot be said to be more serious than the other(s) the code 120 “multiple injuries” should be used.

The table below indicates the inclusions and exclusions for each code. Cross-references to the ICD10 classification of diseases and injuries of WHO are also included.

Moreover, the classification used is, as far as possible, in accordance with the ILO classification of the type of injury from the ILO Resolution on “Statistics on occupational injuries resulting from accidents at work”⁽⁸⁾. However, some minor differences still exist and. Consequently, a conversion between the ESAW codes and the ILO codes is provided in the table below.

Code	Label	Includes	Excludes	ICD-10 reference	ILO code
000	Unknown injury	Missing information			10
010	Wounds and superficial injuries				1
011	Superficial injuries	Contusion, bruise, haematoma, abrasions, scratches, blisters, bites of non-venomous insects, superficial wounds; also includes scalp wounds and superficial injuries to foreign bodies entering the eye, ear etc.	Bites of venomous animals (code 071)	S00, S10, S20, S30, S40, S50, S60, S70, S80, S90, T00, T15-T19	1.01
012	Open wounds	Lacerations, open wounds, cuts, contusions with wounds, as well as loss of nails; wounds involving injury to muscles, tendons and nerves	Traumatic amputations, enucleations; avulsion of the eye (code 040); compound fractures (code 022); burns with open wounds (code 061); superficial injuries (code 011)	S01, S11, S21, S31, S41, S51, S61, S71, S81, S91, T01	1.02
019	Other types of wounds and superficial injuries				-
020	Bone Fractures				2
021	Closed fractures	Simple fractures; fractures with injuries to articulations (dislocations, etc.); fractures with internal or nerve injuries		S020, S120, S220, S320, S420, S520, S620, S720, S820, S920, T020, S080, T100, T120 (0=closed fracture)	2.01
022	Open fractures	Fractures with injuries to soft parts of the body (compound fractures)		S021, S121, S221, S321, S421, S521, S621, S721, S821, S921, T021, S081,	2.02

T101, T121
(1=open fracture)

029	Other types of bone fractures				2.03
030	Dislocations, sprains and strains	All acute musculo-skeletal problems due to overexertion of muscles, tendons, ligaments and joints			3
031	Dislocations	Subluxations and displacement of bones at the joints	Fracture dislocation (code 021)	(S03, S13, S23, S33, S43, S53, S63, S73, S83, S93, T03, T11.2, T13.2, T14.3)	3.01
032	Sprains and strains	Overexertion leading to ruptures, tears and lacerations of muscles, tendons, ligaments (and joints) as well as hernias due to overexertion	Any displacements of the bones at the joints should be coded in 031; if it is associated with an open wound it should be coded in group 012	(S03, S13, S16, S23, S29.0, S33, S39.0, S43, S46, S53, S56, S63, S66, S73, S76, S83, S86, S93, S96, T03, T06.4, T09.5, T11.2, T11.5, T13.2, T13.5, T14.3, T14.6, T73.3)	3.02
039	Other types of dislocations sprains and strains				-
040	Traumatic amputations (Loss of body parts)	Amputations and crushing injuries, enucleations including traumatic avulsion of the eye and loss of ear(s)		S07, S08, S17, S18, S28, S38, S47, S48, S57, S58, S77, S78, S87, S88, S97, S98, T04, T05	4
050	Concussions and internal injuries	All internal injuries without fracture, i.e. all internal contusions, haemorrhages, lacerations, ruptures to the brain and internal organs	Open wounds (code 012) and those injuries involving fracture (codes in group 020)		5
051	Concussions	Intra-cranial injuries		S06	(5)
052	Internal injuries	Injury of intra-thoracic, intra-abdominal organs and pelvic organs		S15-S16, S25-S27, S35-S37, S45-S46, S55-S56, S65-S66, S75-S76, S85-S86, S95-S96	(5)
059	Other types of concussion and internal injuries				-
060	Burns, scalds and frostbites				6
061	Burns, scalds (thermal)	Burns from hot objects or open fire; scalds; friction burns; radiation burns (infrared); sunburns; effects of lightning; burns due to electric current, burns with open wound	Radiation effects other than burns (code 102)	(T20-T32, T95) T75.4, L55	6.01, 6.03
062	Chemical burns	Chemical burns (external	Burns due to	(T20-T32, T95)	6.02

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(corrosions)

burns only)

swallowing a corrosive
or caustic substance
(code 071)

063	Frostbites	Effects of reduced temperature (frostbite); partial-thickness skin loss, frostbite with dead tissue (necrosis)	Abnormal low body temperature (Hypothermia) and other effects of excessive cold (code 103)	T33-T35, (T95)	6.04
069	Other types of burns, scalds and frostbite				-
070	Poisonings and infections				7
071	Acute poisonings	The acute effects of the injection, ingestion, absorption or inhalation of toxic, corrosive or caustic substances; bites of venomous animals; asphyxiation by carbon monoxide or other toxic gases	External chemical burns (code 062); anaphylactic shock code 119	T36-T65, T96, T97	7.01
072	Acute Infections	Infection by virus, bacteria and other infectious agents		A00 - B99	7.02
079	Other types of poisonings and infections				-
080	Drownings and asphyxiations				(8)
081	Asphyxiations	Asphyxiation or suffocation by compression, constriction or strangulation; also includes asphyxiation by suppression or reduction of oxygen in the surrounding atmosphere and asphyxiation by foreign bodies in the respiratory tract	Asphyxiation by carbon monoxide or other toxic gases (code 071)	T17, T71	8.05
082	Drownings or non-fatal submersions		Asphyxiation as defined in 081; buried under materials or other non-liquid masses, e.g., snow, soil etc.	T75.1	8.08
089	Other types of drowning and asphyxiation				-
090	Effects of sound, vibration and pressure				(8)
091	Acute hearing losses	Partial or total loss of hearing		(H83.3)	(8.09)
092	Effects of pressure	Effects caused by pressure and water pressure (barotrauma)		T70	8.04
099	Other acute effects of sound, vibration and pressure	Sound trauma, pneumatic hammer syndrome etc.		(H83.3), T75.2	(8.09)

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100	Effects of temperature extremes, light and radiation				(8)
101	Heats and sunstrokes	The effects of excessive natural heat and insolation (heatstrokes, sunstrokes) or man-made heat	Shock caused by lightning (code 112); sun burns (code 061)	T67	8.02
102	Effects of radiation (non-thermal)	Effects caused by X-rays, radioactive substances, ultraviolet rays, ionising radiation, welder's eyes		(T66)	8.01
103	Effects of reduced temperature	Accidental hypothermia and other effects of reduced temperature	Frostbite code 063	T68-T69	8.03
109	Other effects of temperature extremes, light and radiation				-
110	Shocks				(8)
111	Shocks after aggressions and threats	Shock after aggression and threats by persons; e.g. shock after bank hold-up, aggression from customers and clients; "social conflicts"	Anaphylactic shock code 119; shock after traumatic injuries code 112	(F43.0), (T74)	8.06
112	Traumatic shocks	Electrical shock, shock caused by lightning, shock immediate or delayed following injury	Anaphylactic shock code 119; aggression and threats from persons code 111; cases with no direct physical injuries	(T75.0), T75.4, T79.4	8.07, 8.10
119	Other types of shock	Aggressions from animals with no direct physical injury to the victim; natural disasters and other events not directly caused by human beings and causing no direct physical injury to the victim; anaphylactic shock		(F43.0),(T78.0, T78.2)	-
120	Multiple injuries	This group is restricted to cases where two or more <i>equally serious</i> types of injuries are contracted by the victim.			-
999	Other specified injuries not included under other headings	This group should only be used to classify injuries which are not included under other headings: injury of nerves and spinal cord; injury to blood vessels; foreign bodies entering through a natural orifice; etc.		(S09), S19, S29, S39, S49, S59, S69, S79, S89, S99, T07-T14, T73, T75, T78, T79-T94, T98 S04, S14, S24, S34, S44, S54, S64, S74, S84, S94; T15-T19; T69; T75.3; (T78)	8.19

General comments about the variables on the causes and circumstances

The organisation of the variables

The variables introduced in Phase III on the causes and circumstances of the accidents at work will supply additional information to identify where, and especially how, accidents occur, with the aim of establishing a prevention policy.

The variables Workstation, Working Environment and Working Process describe the circumstances in which the accidents occurred. The various stages of the event are registered using three pairs of variables. Accidents often consist of a chain of events, however there is often a tendency for investigators to focus on the exact moment at which the injury occurred. With a view to prevention, a description of the moment when something abnormal occurred is just as important as the description of what the victim was doing at the time of the accident, if not more so.

The three pairs of variables are the following:

- i) Specific Physical Activity and the associated Material Agent
- ii) Deviation and the associated Material Agent
- iii) Contact - Mode of injury and the associated Material Agent.

Each pair combines an action (a noun, but could also be described with a verb) and an object. This system ensures extremely flexible and precise codification thanks to the numerous combinations possible, without the need for huge classification systems. At each of the three levels, a Material Agent is coded, using a single Material Agent nomenclature. This does not mean that the same Material Agent has to be coded three times. In the majority of cases different Material Agents will be coded, which does require the various Material Agents involved in the sequence of events to be identified. However, the aim of improving accident prevention justifies this additional work.

i) The “Specific Physical Activity” and its associated Material Agent describe what the victim was doing when the accident happened. This activity is very precise and different from the “Working Process”, which gives a broader description of the work being carried out.

Example: while *cleaning* (Working Process 53) the victim was *going up* (Specific Physical Activity 61) some *stairs* (Material Agent 02.01),

Example: while manufacturing a piece of furniture (Working Process 11), the victim used his or her hands to lift (Specific Physical Activity 51) a piece of wood (Material Agent 14.11).

ii) The “Deviation” and its associated Material Agent describe the abnormal event leading to the accident. The deviant event does not describe the root cause of the accident, nor the responsibilities. It should merely describe the abnormal event or the last link in a chain of abnormal events.

Example: the victim *fell* (Deviation 51) on some *stairs* (associated Material Agent 02.01),

Example: the victim *loses control* (Deviation 43) of a *hand-held screwdriver* (associated Material Agent 07.05).

iii) The “Contact - Mode of Injury” and its associated Material Agent describe how the victim came into contact with the Material Agent that caused the injury. It describes precisely how the victim was injured.

Example: the victim *falls and hits* (Contact - Mode of injury 31) the *floor* (Material Agent 01.02),

Example: the victim was *hit* (Contact - Mode of injury 42) by a *falling screwdriver* (Material Agent 07.05).

Details concerning the use of codes 00 or 99

The use of code 00 or 000 means “not known”, i.e. the accident report does not give information allowing the accident to be coded. In each classification, the first line (code 00 or 000) reads “No information”.

Code 99 or 999, on the other hand, means that the information is available, but the list does not contain an appropriate code. In each list, the last line (code 99 or 999) reads “Other [name of variable] not listed in the classification”.

Similarly, for groups 10, 20, 30 (or 010, 020, 030 etc.) the code ending in “0” means that the information available is sufficient to be able to choose a group, but not detailed enough to go any further. Codes 19, 29, 39 (or 019, 029, 039 etc.) mean that precise information is available, but there is no corresponding code in the list. For example, for the Working Environment variable, we understand on reading the accident report that the accident took place within an

industrial enterprise. If there are no further details the code "010 Industrial site - Not specified" will be used. If, however, on reading the accident report, it is possible to identify more precisely the type of industrial site involved but the type of site is not included in the list, the code used will be "019 Other group 010 type Working Environments not listed above".

Specific aspects concerning the Material Agent

There are cases in which the Material Agent is the same for the three variables with which it is associated, but it can also vary in each case (three different Agents). For each variable, it is necessary to record the most relevant Agent, i.e. that which allows the accident circumstances to be reconstructed most completely, most accurately and in the manner which is most useful in terms of future prevention. Against this general background, it is also necessary to comply with the rules in the guidelines for using the variables: the Material Agent coded for the Specific Physical Activity must be that most closely linked to the accident or injury, the Agent for the Deviation must be that closest in time to the injuring contact, and the Material Agent of the Contact - Mode of Injury must be that linked with the most serious injury. A more "specific" Agent in accordance with these criteria is generally more useful in terms of understanding and preventing than a more general one.

In some cases there is no Material Agent to be recorded or coded. For example, a shop assistant is standing up and turns to serve a customer, but the movement causes an internal injury and leaves her unable to move. This is a case of injury without external cause. The victim has hurt herself without any contact or lifting of loads. It is therefore a movement by the victim (Specific Physical Activity - "Movements on the spot" - Code 67, the result of which is expressed in the form of a Deviation ("Twisting, turning" - Code 74) leading to a Contact - Mode of Injury ("Physical stress - on the musculoskeletal system" - Code 71). For none of these three variables is there a Material Agent, and code 00.01 "No material agent" must be entered for each of the three Agents.

It is also possible for the Specific Physical Activity, Deviation or Contact - Mode of Injury to take place with the involvement or use of a Material Agent, but the accident report does not include any information allowing the Material Agent to be identified or coded. In this case the code 00.00 "No material agent or no information" is used. However, an open wound requires use of code 00.02 "No information", as a Material Agent must have been involved.

Finally, for Member States that want to encode the Material agents with more detail, an optional 4-position (8 digits) classification is presented in Appendix D (although, only the 2-position classification is used by Eurostat).

The Workstation

The concept of « usual » workstation is considered in a restrictive sense : fixed workstation in a workshop, shop, office and more generally usual « local unit » of work (premises of the local unit of the employer).

On the opposite, the concept of « occasional » is used in a broad sense and cover both jobs with a « mobile » workstation such as truck drivers, workers in the construction, fitters, repairers, policemen, watchmen, street sweepers, etc., and situations really occasional for people usually working at a fixed workstation : temporary assignment in a fixed but different workstation and even more in a local unit different from the usual one, specific intervention outside the usual local unit and inside the premises of a client or another company (meeting, mission, business interview, etc.) including the travel time between the enterprise and the place of the intervention. Similarly, the temporary assignments as employee of an enterprise working inside the premises of another company or as person engaged by an employment agency or business, as well as teleworking, are systematically considered as « occasional » workstations.

The Working Environment

Reminder of the definition

This is the general environment, workplace or work premises where the accident took place. It describes the geographical environment where, at the time of the accident, the victim was located, i.e. working, visiting or simply present (in the context of work).

Approach

The type of activity undertaken by the victim should not be taken into consideration, with the exception of construction sites (codes 020-029). In the latter case, the primary use of the place is irrelevant; what is important is the construction activity. For example: repairs in a dance hall are coded 021. But light maintenance work in a sales area is coded 043 for the Working Environment and 52 for the Working Process (see below). To give a further example, operations such as replacing a bulb in a store or working on a supermarket fridge (e.g. repairing it or

refilling it with refrigerant) will be coded as Working Environment 043; however, when replacing the electric wiring or removing asbestos in these same sales locations, the Working Environment will be coded 021.

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Entrances, corridors, stairs and other communal parts and annexes of the places described below are considered to be integral parts of those places and are coded the same way. The corridor in a hospital is coded 051 and stairs in a factory are coded 011.

The working environment classification is organised into broad divisions.

010-019 Industrial site

These are places primarily used to manufacture products of all kinds (code 011). Food processing plants including farm products and, broadly speaking, all areas where goods and objects are produced should be coded 011. The 010 group includes maintenance and repair areas - in the sense of workshops for repairing engines, machines or aircraft (012). There is no restriction regarding the size of the Material Agent being repaired, so long as the area can be clearly identified as a maintenance area (as opposed to a production area). By extension, code 012 includes industrial laundries. This code group also includes storage and loading/unloading areas (code 013).

020-029 Construction site, construction, opencast quarry or opencast mine

Construction sites for buildings and civil engineering. A distinction is made between new sites (021) and other sites (renovation, maintenance, etc., code 022). This group also includes opencast mines and working quarries (023), underground surfaces (024), and surfaces on or over water (025) when they are locations for construction sites or civil engineering. Underwater sites (ocean, sea, lake) are coded 026.

030-039 Farming, breeding, fish farming, forest zone

Sites mainly devoted to agriculture, forestry, fish farming, inside or in the open air, e.g. stables (031), greenhouses, cornfields (032), vineyards and orchards (033), tree nurseries (034), gardens (036).

040-049 Tertiary activity area, office, amusement area, miscellaneous

Places primarily used for tertiary, intellectual or service activities. Offices of central or government administrative departments are coded 041. Hairdressing salons and launderettes are coded 043. Code 044 covers artistic creation premises, including broadcasting and film studios. Police and fire stations and the like are coded 049.

050-059 Healthcare establishments

Establishments - whether medical or not - including old people's homes and crèches, sanatoria, health farms and thalassotherapy establishments.

060-069 Public areas

Public areas are those open to public thoroughfare. Corridors, stairs and parking areas are coded 061 only if they are open to the general public and cannot be classified under some other more specific Working Environment code.

Land transport (road, rail), whether public or private, is coded in this group (code 062) if the location of the accident can be considered as being "on" or "inside" the means of transport (but not on the infrastructure for the means of transport, see code 063 below). However, should the accident occur in a tunnel, the Working Environment should be coded 101. Accidents on board aircraft or seagoing or inland waterway vessels should be coded 093, 111 and 112 respectively.

Finally, certain public areas can include zones with restricted access, which come under code 063. For example, a maintenance operation on a railway track (which is not underground) is coded 063. Delivering supplies to an aircraft on the apron is coded 063. Changing a bulb on a railway station lighting column is elevated work coded 092, and cleaning a station concourse is coded 062, but cleaning the track ballast is coded 063.

070-079 In the home

This code applies to accidents in a private home (071) - be it the victim's or someone else's (this covers people working at home as well as those, such as plumbers and painters, who work in their clients' private homes).

080-089 Sports areas

These codes cover sports fields and gyms, and distinguish between indoor and outdoor sports. They include all outdoor sports grounds (skiing pistes, racing circuits, velodromes, etc.) and all halls where indoor sports are played.

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Sites with exceptional conditions - 090-099 in the air or at high elevations - excluding construction sites - 100-109 underground - excluding construction sites - 110-119 on/over water - excluding construction sites

These codes are used wherever the work situation makes them appropriate, excluding construction sites (which should be classified under group 020). The 090 group is mostly used, with the exception of aircraft, in cases where there is danger of falling.

120-129 High-pressure environments - excluding construction sites

This is where the victim is in a high-pressure environment: caissons, diving etc.

General comments

In certain cases several codes may appear appropriate. The following examples explain how to proceed in such cases:

- 1 a sports hall in a teaching establishment,
- 2 a workshop in a technical secondary school,
- 3 a library in a hospital,
- 4 a storage area in a factory,
- 5a normal maintenance work on underground railway tracks,
- 5b construction of a railway tunnel or a sewer,
- 6 building renovation works in a public library,
- 7 hypermarket goods reception area

The codes to be selected is the one most appropriate to the location:

- | | | |
|----|--|------|
| 1 | is coded sports hall | 081, |
| 2 | is coded workshop | 011, |
| 3 | is coded library | 041, |
| 4 | is coded storage area | 013, |
| 5 | a is coded underground | 101, |
| 5b | is coded underground construction site | 023, |
| 6 | is coded construction site | 021, |
| 7 | is coded storage, loading, unloading | 013. |

Taking training as an example, a classroom in a high school is coded 042, as is a training room in a factory or a drama school based in a theatre, while apprentice training on a machine in a workshop is coded 011.

Shipyards on land (for construction or repair) are coded 011/012, but the same activity at sea is coded 111.

The code chosen must be that of the place most closely associated with the effective risk at the time of the accident. For example, when someone going to work on an underground railway slips in one of the passages, the working environment is coded 061; when a billsticker falls from his ladder in the same passage, the code is also 061. However, if a roadsweeper were knocked down by a car while sweeping the pavement of a road tunnel, the working environment code would be 101.

The same logic must be applied to generic words which can describe several different places. A teaching laboratory is coded 042, and a medical laboratory 059. A supermarket laboratory (meat preparation) is coded 011, as is a factory laboratory.

It is possible for there to be several accident victims on one site, each of them with a different working environment coding.

Example: a crane on a bridge construction site topples over and some parts fall on to the public highway: "construction site" (021) would be used for the crane operator, but "means of transport" (062) would be used for a motorist crashing into the crane parts that fell into the road.

The Working Process

Reminder of the definition

This is the general activity or task being performed by the victim at the time of the accident. It is not the victim's occupation or precise Specific Physical Activity at the moment of the accident. It is a description of the type of work, in broad terms, i.e. the task that was being undertaken by the victim over a certain period of time ending at the instant of the accident.

Approach

Economic activity is broken down into various tasks with common characteristics. Each task corresponds to a large grouping of different work activities and tasks at a lower level. Another way of understanding the Working Process concept is to consider the manufacture of a product through the various stages from design to production. Manufacturing a product involves a successive chain of events, and each of these stages is classified under a different Working Process code. Breaking down this chain of events is independent of the size of the product, the quantity produced and whether or not it is a physical product.

The same worker can of course perform different tasks during the working day, and it is these tasks, in broad terms, that are coded under this heading. The Working Process describes a task that is performed for some period of time. The Specific Physical Activity is far more precise and can be isolated from the chain of events leading to the accident. In each case, the pair of variables for the Working Process and the Specific Physical Activity must be adapted to properly describe the accident. The Specific Physical Activity gives added precision to the initial description of the accident provided by the Working Process code.

However, if the Specific Physical Activity is an isolated action at the moment of the accident, the Working Process must not be too broad. It is not the economic activity of the company or the victim's occupation, as indicated previously, and it is also necessary to clearly separate tasks of different natures. For example, just because a worker has spent all morning cleaning a machine, the Working Process should not be coded as cleaning (53) if this worker has an accident on his way to the works canteen during the lunch break. When the accident occurred the worker was involved in movement (61), and this has nothing to do with his occupation or the economic activity of his company, or the company whose premises he was on when the accident occurred. On the other side of the coin, an office cleaner who twists an ankle walking along the corridor between two offices should be regarded as performing a cleaning task (53) rather than movement at the time of the accident.

10-19 Production, manufacturing, processing, storing - all types

Code 10 covers industrial activity as well as the processing of agricultural products, irrespective of the size of the undertaking or workshop. All tasks leading directly to an object, a product or its storage are classified under this coding. For example: processing delicatessen and cured-meat products on an industrial or artisanal scale is coded 10, but pig breeding is coded 33. All types of storage work, including loading and unloading operations inherent to storage work, are coded separately under 12.

20-29 Excavation, construction, maintenance, demolition

Codes 20-29 cover excavating, constructing buildings, whether permanent or temporary, and repair and maintenance work to buildings and public works. All excavation and earth levelling is coded 21. All new construction work involving houses, blocks of flats, hangars, storage buildings, covered markets etc. (any construction that is closed or has a roof) should be coded 22. Constructing bridges, dams and roads and digging tunnels and canals are coded 23. These are open installations that are not usually inhabited or frequented by people.

Let us take as an example the construction of a new airport. The excavation/earthmoving work is coded 21, the construction of the terminal and hangars is coded 22, laying the tarmac and runways is coded 23, and renovating the old terminal to convert it into a museum is coded 24. Repainting a wall or ceiling is not machine, tool or equipment maintenance (code 52), but is classified as building maintenance, code 24. Code 24 also covers major renovation work on, for example, museums, high-rise buildings, private houses and structures. Code 25 covers all demolition of buildings and structures. Codes 24 and 25 cover all types of renovation and demolition respectively, in contrast to the distinctions made by codes 22 and 23.

30-39 Agricultural type work, forestry, horticulture, fish farming and work with live animals

Code 31 covers all work on the land: ploughing, manuring, etc. Code 32 covers all agricultural work involving crops (planting, growing or harvesting fruit, wheat or flowers). Code 33 covers work involving live animals (e.g. care, breeding). Forestry is coded 34, while all fishing activities, whether industrial or small-scale, and the production and processing of sea, lake or river products are coded 35.

40-49 Providing services to enterprises and/or to the general public - intellectual work

All activities that do not produce a tangible, physical object are coded in the 40 group. For example: writing software is coded 42, producing it in the form of CD-ROMs or floppy discs is coded 10, and marketing it is coded 43.

50-59 Other work related to tasks coded under 10, 20, 30 and 40

Codes 50 cover all the ancillary tasks to activities coded in 10, 20, 30 and 40. The guideline for this category is that the task does not lead directly to an object or product. For example, installing a carburettor in an engine on a factory production line is coded 11, but changing a carburettor during garage repair work is coded 52, even if the carburettor and engine are identical, because the victim is performing a different task. In the first example, coded under the 10 group, it is a repetitive industrial process, while in the latter example, coded 52, it is a one-off job performed on what could be termed an artisanal scale. A distinction must therefore be made between "production" activities proper, which can be "industrial" (group 10 codes), "construction" (group 20 codes), "agricultural" (group 30 codes, or "service" (group 40 codes). The following examples will help to make this clear.

Preparing a construction site for a new building is coded 51, but subsequent excavation or levelling work is coded 21. Setting up a crane on the site is then coded 51, but maintaining or repairing the crane on-site is coded 52. The construction work proper mainly comes under code 22, given the nature of the construction, or even other codes 20-29. At the end of the construction work, the company workforce clears the site (code 53) and loads the skips (code 54). The various construction activities and tasks are thus broken down into sub-groups, each of which is a Working Process.

Work linked to computer maintenance includes re-cabling of premises (code 24), as well as selling (code 43) and installation (code 51) of new computer equipment, and standard maintenance on existing computer equipment (code 52).

The day's activity in a restaurant starts with a number of preparatory tasks, such as receipt of produce and initial preparation in the kitchen (cleaning, cutting, etc.) and preparation of the dining room (laying of tables, etc.), coded 51. Work involved in receiving customers at lunch time or in the evening, as well as table service and preparation of dishes in the kitchen are coded 41. Finally, at the end of the meal, cleaning the dining room and kitchen and washing up come under code 53.

Furthermore, maintenance, repairs, regulating, etc. must not be confused with the concept of supervision. In practice, maintenance can begin with an inspection or check, but if the victim touches, carries or handles the Material Agent, code 52 must be used. Code 55 is used when the victim monitors and inspects the Material Agent without touching, carrying or handling it.

60-69 Movement, sport and artistic activity

Code 61 applies to people who are not engaged in codes 10-59 or 62-69 type tasks and are moving on foot, and to drivers and passengers on board a means of transport.

The Specific Physical Activity

Reminder of the definition

The classification for the Specific Physical Activity is designed to describe the victim's activity immediately before the accident. It records the victim's deliberate and purposeful action immediately before the accident. Example: what was the victim doing? Working with a hand-held electric drill.

Approach

The classification for the Specific Physical Activity is as follows:

Code	Label	With work tools	With work-related objects
10	Operating machinery	+	+
20	Work with hand-held tools	+	+
30	Driving or being on board handling equipment or a means of transport	+	+
40	Handling objects	-	+
50	Carrying by hand	-	+
60	Movement	-	-
70	Presence	-	-

This table illustrates the following cases:

Codes 10 - 39 concern activities where the victim uses a work tool and workpieces.

Codes 40 - 59 concern activities where the victim handles or transports an object without using any kind of handling or transport equipment or tool.

Codes 60 - 70 concern activities where there is no use of tools and no handling or transporting of any object. The victim's Specific Physical Activity is his or her own movements.

Distinction between tool and machine - fixed machine and mobile machine

A tool is a manufactured object used to work a material and perform a task. It may or may not be powered (agents 06-08). It can be carried by a single person by hand or on his body without having to roll or pull it along the ground. A machine is a manufactured object, generally complex, used to transform energy in such a way as to act on a material or perform a task. The concept of machine is linked to the energy needed to power it.

A machine is either fixed i.e. cannot be moved during the work (group 10 agents) or mobile (group 09 agents), where a single person, without the help of a second person or a handling device, can move it along the ground by using its own energy to roll it (self-propelled construction or agricultural machine), by pushing it (cleaning machine) or by pulling it (site saw), but not by carrying it in his arms or on his body.

10-19 Operating machinery

These codes should be used when the victim is using a machine in the manner foreseen by the manufacturer. They should not be used, for example, when the victim is lifting or repairing a machine (the concept of repair, maintenance, etc. comes under code 52 "maintenance, repair, tuning, adjustment" for the "Working Process" variable. The associated Specific Physical Activity, if known, reflects exactly what is being done to carry out the repair, e.g. "working with hand-held tools" (codes 20-29) if a screwdriver or drill etc. is used, or "handling of objects" (codes 40-49) if the worker is in the process of handling a specific part of a machine, e.g. the crankcase, to gain access to the inside of the machine).

Comments

Code 11 should be used if the intervention on the machine consists in stopping it, for example.

Code 12 is also used if the operator intervenes when something has unexpectedly gone wrong - to remove something that has got stuck in the machine, for instance. If the intervention on the machine concerns transporting or driving conveyor equipment, codes 30-39 apply.

Code 13 applies when the victim's only activity is controlling (in the sense of operating) the machine, by means of control levers, switches and buttons. The victim is not feeding the machine with raw materials or unloading the final product from the machine. Code 13 should be used for operating a printing machine, an assembly line or a robot. In contrast, fixed video monitoring where there is no possibility of intervening on the machine (e.g. in a separate control room) would be coded as "Presence" (70). This code does not apply to driving vehicles or transport or handling equipment.

20-29 Work with hand-held tools

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These codes should be used when the injured person was using a hand-held tool in the normal manner intended by the manufacturer, i.e. for the purpose for which it was originally designed.

Where the victim is moving while using the tool, use of the tool is continuous, and movements are short, it is the use of the hand-held tool which takes precedence over the movement. It is only where the person stops using the tool to move to another position (e.g. to walk from one end of a workshop or room to another, or to enter or leave a room) before restarting use of the tool, and the accident occurs during such movement, that movement takes precedence (codes 60-69).

It is also useful here to refer to the general remark at the beginning of the "Working Process" nomenclature: 1) An office cleaner who twists an ankle walking along the corridor between two offices should be regarded as performing a cleaning task (53) at the time of the accident. 2) Conversely, a person who has spent the morning cleaning a machine but has an accident on the way to the works canteen during the lunch break is involved in movement (61) at the time of the accident. But in both cases the Specific Physical Activity at the precise moment of the accident relates to a movement, code 61 (walking, etc.) or 62 (entering, leaving), for example. However, if a person bumps against a window when moving slightly sideways while cleaning windows with a sponge and other window-cleaning tools, the Working Process is cleaning (53) while the Specific Physical Activity is "Working with hand-held tools" (21)

Comments

In this grouping, a distinction is made between manual and motorised tools. A manual tool is a tool that requires physical effort (for example a screwdriver or a hammer), while a motorised tool is powered by other means (electricity, petrol or other), e.g. an electric drill or an electric screwdriver.

If the tool is not used in the manner intended by the manufacturer, such as using a screwdriver for anything other than screwing or unscrewing screws, codes 40-49 apply. These other uses may or may not be intentional.

There must be a correlation between the Specific Physical Activity and the Material Agent. For example, for codes 20-29, only Material Agents from groups 06, 07 and 08 may be used.

Where the activity takes place on a machine, but consists, for example, in adjusting it by screwing or unscrewing an adjustment screw using a hand-held tool, e.g. a screwdriver, the code for working with a hand-held tool should be used (code 21 for screwdriver), rather than a machine operation, as this is not the Specific Physical Activity at the time of the accident (the concept of machine adjustment is coded using the Working Process variable - code 52 "adjustment" - and the associated Material Agent indicating the machine).

30-39 Driving or being on board handling equipment or a means of transport

These codes must be used when the victim is using the transport or handling equipment in the normal manner intended by the manufacturer. They cover motorised transport equipment, as well as equipment using muscle power, such as wheelbarrows.

Comments

This group of codes covers driving any sort of vehicle, whether motorised (truck, car, aeroplane, motor boat, etc.) or not (bicycle, wheelbarrow, non-motorised boat, etc.) and being on board any of the above vehicles. These codes also encompass driving mobile handling equipment (e.g. forklift trucks) whether motorised or not. Conversely, all fixed handling equipment is regarded as fixed machinery and coded in the 10 series.

The use of a winch to feed a machine is coded 11; operating a conveyor belt transporting materials is also coded 11, as the conveyor belt is fixed equipment. Using a forklift truck, which is considered to be mobile as it moves location, will be coded 31 or 32 depending on whether or not it is motorised. Being a passenger on board a means of transport (bus, plane, train, boat, etc.), whether motorised or not, and whether mobile (i.e. moving) or in a fixed position (i.e. stationary), should be coded 33.

40-49 Handling objects

These codes must be used when the injured person was holding or handling something.

The possibility that the machine, hand-held tool or transport equipment may be used other than for the manufacturer's intended purpose should also be considered. A chisel can be used to remove shavings from an

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object, in which case the Specific Physical Activity is coded 21; however, if it is used for anything else it is coded in group 40-49, for example if it is thrown (44), used to open a beer bottle (45), or simply held in the hand (41), etc.

Comments

Code 41 applies when the victim is holding an object in his/her hand, or when the victim reaches his/her arm out and grasps something (as distinct from “movements on the spot, code 67”, when the victim does not seize the object).

This activity should not be confused with carrying by hand, code 50-59. A number of indicators allow a distinction to be made between these two activities:

- First of all, handling linked to transport tends to take place “before” (or “after”) rather than “during” transport. For example, in grasping the handle of a trunk he intends to move, a worker injures himself during this first phase of the activity, e.g. by catching against an object or cutting himself on a sharp piece of metal next to the handle. The Specific Physical Activity at the time of the accident comes under code 41 “manually taking hold of, grasping, seizing, etc.”. But if, after taking hold of the handle, he injures himself lifting the trunk, the Specific Physical Activity at the time of the accident comes under code 51 “carrying vertically”.
- Furthermore, as far as moving with an object in the hand is concerned, the code may be 41 if a small object is being transported. In this case the size or weight of the object is the indicator which allows a distinction to be made between handling of a “small” object and manual transport of a “larger” or “heavier” load. Thus the Specific Physical Activity at the time of the accident in the case of a worker moving a screwdriver in his immediate vicinity and injuring himself with this tool in his hand will be coded 41 (or 61 if he is walking with the tool). But if, at the time of the accident, he is moving a full carton, the code will be 51 if the movement is vertical, 52 if it is horizontal, or 53 if the victim is transporting the load while walking.

Similarly, handling should not be confused with working with hand-held tools (codes 20-29). Here too, a number of indicators can be used to distinguish between these two activities:

- Although the Working Process can be the same (e.g. repair work, code 52), the Specific Physical Activity – manual – differs. The task can be performed with a hand-held tool, e.g. screwing with a screwdriver (code 21) or with the hands only (code 42).
- In both cases the worker might have a tool in his hand, e.g. a screwdriver, but in one case he uses it for screwing (code 21), while in the other, at the time of the accident, he is just holding it but not actually using it (code 41).

Handling objects is not limited to one or both hands but may include other parts of the body, e.g. the feet.

50-59 Carrying by hand

This group of codes applies when an object or objects are carried using the hands alone and no other sort of transport equipment. The direction in which the object is moved dictates which code is used. Code 51 is used for vertical movements such as stacking shelves, code 52 is used for horizontal movements such as pushing a car into a garage, and code 53 applies when something is carried in the hands or arms, such as carrying a patient into bed or to an armchair or carrying a box from one point to another.

Example of the difference between codes 40 and 50, using the case of a garage mechanic removing a car wheel. When, after removing the bolts, the mechanic takes hold of the wheel before moving it, this is code 41 “manually taking hold of, grasping”. Once the wheel has been removed from the pins, it has to be lowered and placed on the ground, which is code 51 “carrying vertically”. This code indicates a downward movement. When replacing the wheel, the action of lifting it to the level of the pins comes under code 51. Once the wheel is on the pins, the task becomes code 43.

60-69 Movement

These codes should be used when the injured person was moving as the accident happened.

Comments

Code 61 applies only to victims moving or advancing under their own steam (walking or running forwards or backwards), even if the intention was to take just one step. It also applies when the victim walks or runs up or down, on stairs for example.

Code 62 applies when the victim is getting into or out of a car or train, the cab of a machine, or a piece of equipment.

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Code 63 should be used when the victim is moving by hopping, skipping or jumping, while code 64 applies when the victim is crawling or climbing a ladder, tree or rope.

Code 67 applies when the victim moves his legs or arms etc. on the spot, turns around or lifts his head without changing location, or undertakes other more complex series of physical movements without really moving from the spot, e.g. showering, washing, dressing or undressing. This code should also be used where the victim tries unsuccessfully to catch hold of something (an object). In the event that the victim does pick up or catch hold of the object, code 41 applies.

70 Presence

This code is used only when the injured person was physically doing nothing other than being present at the workstation: sitting at a desk, attending a meeting, discussing with a customer, eating at the table, etc.

Being present on board a means of transport, however, is coded 33. Similarly, a person playing with children in a nursery or school or looking after patients in a hospital generally has a Specific Physical Activity which comes under a specific code. For example, this could be taking hold of a toy (41), carrying a tired or sick child (code 53), lifting a patient into bed (code 51), etc.

The Deviation

Reminder of the definition

The proposed Deviation classification describes the abnormal event, such as totally or partially losing control of a machine or falling onto/off something.

Approach

If there are several interlinked events, the last Deviation must be recorded (the Deviation closest in time to the Contact - Mode of Injury). Let us imagine the case of a laboratory worker handling a toxic solution in glass flask. The worker drops it (Deviation 44 "loss of control (total or partial) of object"). The flask breaks (Deviation 32 "breakage, bursting, causing splinters of wood, glass, metal, stone, plastic, others"). The toxic product is thus released and splashes the victim (Deviation 22 "liquid state – leaking, oozing, flowing, splashing, spraying", causing burns (Contact – mode of injury 16 "contact with hazardous substances – on or through skin or eyes"). There are three successive Deviations of equal seriousness, but the last one (code 22) will be used as it is the closest to the injuring contact. This is logical, as it is the splashing of the hazardous substance which has burnt the victim.

The Deviation nomenclature has been organised into the following groups:

Groups 10-30	The Deviation is normally out of the injured person's control and is mainly due to equipment problems.
Groups 40-50	The victim totally or partially loses control of something (including falls).
Groups 60-70	Body movements.
Group 80	The victim, another person or an animal is an active party to the accident.

The classification must be clear and unambiguous, for which reason codes like "bulky, cumbersome, inadequate equipment" have been removed from the classification.

10-19 Deviation due to electrical problems, explosion, fire

This code group must be used in the event of an electrical failure (including static electricity), explosion or fire. It includes all kinds of electrical discharges including shocks caused by static electricity.

Comments

Code 11 should be used where an electrical Deviation causes an electric arc leading to an indirect contact with a harmful electric current (including lightning). The victim is not in physical contact with the Material Agent that is normally or abnormally live.

Code 12 must be used when an electrical Deviation causes a direct contact with objects or installations that are not normally live. In this case the victim does come into physical contact with the Material Agent.

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The Material Agent coded is the object from which the current comes and not the current itself. Correspondingly, for explosion and fire, the Material Agent is the object that explodes or ignites.

This group should not be used if the last Deviation is vaporisation, smoke production, etc., when codes 20-29 apply.

20-29 Deviation by overflow, overturn, leak, flow, vaporisation, emission

This group of codes must be used when the Deviation is due to an outflow, vaporisation or emission of gases, liquids, vapours or dust etc. that either should not have occurred or should not have come into contact with people.

Comments

Code 22 should be used when the Deviation is due to liquids or substances spraying or leaking; code 23 applies when there is an emission of steam. Code 24 should be used only in the case of dust and fine particles, but not for stones or suchlike, for which code 21 or the appropriate 40-49 code should be used.

30-39 Breakage, bursting, splitting, slipping, fall, collapse of Material Agent

The group is mainly used to cover slipping, falling, collapse of structure etc., where the occurrence is outside the victim's control.

Comments

Codes 31-32 should be used where a Deviation consists of a physical change in the form of the Material Agent.

Codes 33-34 should be used in cases of slipping, falling or collapse of a structure, i.e. when the slip, fall or collapse is beyond the injured person's control.

Code 33 is to be used in the case of falling objects, where the object falls to a lower level, e.g. from a shelf or crane. The victim is stationary with regard to the Material Agent, which falls on him from above. Files which are precariously balanced on the top shelf of a cupboard and fall on the victim's head when he opens the cupboard door constitute a code 33 Deviation.

Code 34 should be used when the base (e.g. earth, gravel or scaffolding) or object (e.g. ladder) on which the victim is standing slips (earth, gravel or scaffolding) or breaks (ladder). It is the victim who falls downwards. A settling landfill may cause a code 34 deviation. Note that a ladder rung break is coded 31 ("Breakage of material - at joint, at seams").

Code 35 is used where a Material Agent topples on the victim while remaining at the same level overall. This is a fall of a Material Agent on the same level. For example, a piece of furniture which topples on the victim. Where a piece of furniture being handled or moved tips over, this is coded 44 "loss of control (total or partial) of object".

40-49 Loss of control (total or partial) of machine, means of transport or handling equipment, hand-held tool, object, animal

These codes should be used when the victim or another person loses control of a machine, tool, means of transport, or handling or conveyor equipment, while handling, operating or transporting with it. The victim or another person no longer has (sufficient) control over the Material Agent in question. Loss of control can be total (with no possibility of recovery) or partial (limited in extent but nevertheless leading to an injury, or limited in time with recovery of control by the victim but too late to prevent injury). For example, if a lorry taking a bend too fast overturns, injuring the driver, this is a total loss of control coded 42. By contrast, a worker whose screwdriver slips from the screw head without him dropping it has only "partially" lost control of his tool; nevertheless, if the worker's hand knocks against the object being screwed, causing an injury, this is a code 43 Deviation. Similarly, where a person carrying a box lets it slip from his hands, stops it with his knee and regains control of it with his hands but injures his leg, this is a partial loss of control of an object and is coded 44.

Comments

Code 41 must be used in the case of accidentally starting a machine, or operating it by some involuntary action or movement. It also applies where a workpiece, waste from a workpiece, or a machine component is thrown out or otherwise moves in an unexpected manner. For example, a volley of woodchips thrown out by a fixed-position circular saw (the same reasoning applies for code 43) or an emery wheel that works loose and is thrown out of a milling machine. It must also be used in the case of some abnormality in the flow of raw material into a machine or in the Material Agent itself, without human action being the cause, such as a Deviation caused by worn parts.

Code 42 applies when the victim or another person totally or partially loses control of a means of transport or of handling or conveying equipment that is moving. This code is to be used for the total or partial loss of control of any means of transport, whether manual, mechanical or automatic. For example, in the case of means of transport, a lorry going round a bend skids on ice and hits a postman's car travelling normally in the opposite direction. Code 42 applies both to the lorry driver and to the postman. But if the postman, in order to deliver mail, has stopped on the road just after the bend where the lorry driver is unable to see him in time, and is hit by the lorry which was travelling normally but could not avoid him owing to the surprise factor, the Deviation code for both the postman and the lorry driver will be 85. Similarly, a motorised truck toppling over is coded 42. If, on the other hand, the total or partial loss of control concerns the article being transported, e.g. an object that falls from a hoist, then code 33 applies.

Code 43 should be used when a hand-held tool (motorised or not) totally or partially escapes from the victim's or another person's control or throws out splinters which cause an injury.

Code 44 applies when the victim or another person drops an object such as a hammer or toolbox on someone's foot. This is also the case where the contents of a bag injure the victim. This must be regarded as a total or partial loss of control of the Material Agent being carried. Where a piece of furniture, a non-operational machine being transported, or a ream of paper slips out of the victim's hands, this comes under code 44. This code is used where the Material Agent slips from the hands of the victim(s). By contrast, if the object falls and breaks, causing splinters which injure the victim, the correct code is 32.

The total or partial loss of control of an animal (code 45) means that the victim is injured by an animal which was being looked after by himself or another person, regardless of whether the animal is a domestic, farm or wild animal. The animal in question must have escaped from the control of its owner, keeper or transporter.

50-59 Slipping or stumbling - with fall, fall of persons

Code 51 is to be used when the injured person slips, stumbles or falls to a lower level, measured in relation to his or her position before the deviant event. This code is used irrespective of the distance of the fall, and whether it is from a chair, a mobile or stationary ladder, scaffolding or a permanent stairway.

Code 52 applies when the injured person slips, stumbles or falls on the same level, measured in relation to his or her position before the deviant event. This includes uneven ground. However, code 52 always involves a fall, and code 75 must be used where the victim does not fall, but treads badly causing a dislocation or sprain (internal injury).

When the victim is injured by the fall of another person (Deviation), code 59 applies.

Preliminary note on the use of codes 60-69 and 70-79

A distinction between body movements without physical stress and body movements under or with physical stress is made by assessing the degree of physical effort being made by the victim at the time of the Deviation. For example, in the case of "walking on a sharp object" (code 61), the effort can be said to be normal, whereas in the case of "lifting, carrying" (code 71), a load is being carried, necessitating a greater muscular effort.

A greater than normal physical effort is not restricted to the handling of loads, but also includes a person's own actions, e.g. an injury caused by standing up or turning round.

The correct code is selected by applying the group of indicators method:

- the first indicator refers to the muscular effort involved,
- the second indicator concerns whether the injury is external or internal,
- the third indicator is the presence or absence of a Material Agent of the Contact - Mode of Injury.

A relatively substantial muscular effort suggests the use of the group 70 codes. External injuries generally require group 60 to be used, and internal injuries group 70. The absence of a Material Agent of the Contact - Mode of Injury very often results in a group 70 code.

60-69 Body movement without physical stress (generally leading to an external injury)

These codes must be used when the injured person's own body movement, which did not involve a special physical effort, led to (in general) an external injury. The body movement may be voluntary or involuntary.

Walking, as covered by code 61, does not necessitate a particular effort and is usually a voluntary movement, as is kneeling down (code 62), which does not need much more of an effort. This means it is necessary to assess the effort involved, rather than whether the movement is voluntary or involuntary. Walking on a sharp object causes an external injury and is therefore coded 61.

An example of code 62 is the victim injuring his knee on an open desk drawer while sitting down. This too is a voluntary body movement without effort, leading to an external injury.

The movement covered by code 63 is involuntary in most cases, but this is of little consequence, as it does not require a physical effort (the resistance effort is not taken into account) and leads to an external injury. Code 63 covers the concept of being carried by one's own momentum, so as to bring a part of the body into contact with a Material Agent which causes an injury.

Code 64 covers cases where the victim in most cases injures himself without the involvement of a third person; it is not necessary for a Material Agent or another person to be involved in the Deviation. It includes cases where the injury caused by uncoordinated movements or spurious/untimely actions is external. Generally speaking, this implies the presence of a Material Agent of the Contact - Mode of Injury, e.g. the victim bumps against an object as he stands up, bends down or turns round, causing a bruise or open wound.

Another case in which code 64 is used is where a person inadvertently places his hand or foot in a place or on an object which causes an injury, e.g. by touching a hotplate in a restaurant kitchen. Similarly, throwing something in a dustbin without paying attention and striking a sharp object is coded 64 in terms of the Deviation and 52 for the Contact. An example of this would be a nurse who, in disposing of dressings in a hospital bin, injures herself on a syringe which is already in the bin. In this case it is interesting to code the Material Agent of the Deviation if there is one, in addition to the Agent of the Contact, as it gives a sense in terms of prevention to what is just a simple movement. The Material Agent for the Contact will be the hotplate (10.04) or the syringe (06.14). For the Deviation, there is no object associated with the movement of the kitchen worker who touches a hotplate, as he is simply moving his hand. On the other hand, in the case of the nurse, the movement (which goes too far into the bin, leading to contact with the syringe) is the throwing away of the dressings, which are therefore associated with the Deviation and coded 19.01.

The preventive action will then consist in avoiding spurious, untimely and uncoordinated movements in kitchens, with or without an object in the hand. In hospitals, when handling contaminated objects, it is also necessary to pay attention to similar objects which are not being handled but which are in the vicinity and can cause an injury to anyone who is concentrating only on what he or she is handling.

Other examples of the use of code 64 with or without an associated Material Agent: a window-cleaner moves sideways and bumps against an open window; in manoeuvring an industrial cleaning machine, a worker strikes his foot against a pallet - associated Material Agent: the cleaning machine, code (09.04); in cleaning a metal cupboard, a person cuts his hand on the lock.

70-79 Body movement under or with physical stress (generally leading to an internal injury)

These codes should be used only in cases of movement involving a greater than normal physical effort on the part of the victim. They imply that the victim has injured himself without external involvement.

There may be an external Material Agent which is a source of an additional physical effort at the origin of the physical stress. Example: where a person suffers a musculoskeletal injury while handling a load or object, i.e. lifting it (71), pushing or pulling it (72), putting it down (73), twisting or turning while handling it (74), or treading badly while carrying it, without falling (75).

In these cases the first indicator is the muscular effort needed to handle the Material Agent, and the second is the occurrence of an internal injury.

However, codes 70-79 are also used where a Material Agent of the Deviation does not exist and therefore cannot be the source of a particular muscular effort. The physical stress will be directly internal. Example: a person suffering a musculoskeletal injury while standing up (71), bending down (73), turning round (74) or treading badly while walking forwards or backwards, but without falling (75) (see above for the difference between codes 52 and 75), i.e. moving in a spurious manner causing an internal injury, without carrying a load or handling an object. All

such actions are commonly referred to as “false movements”. The third indicator will then be the absence of a Material Agent of the Contact - Mode of Injury.

80-89 Shock, fright, violence, aggression, threat, presence

These codes must be used when the victim is exposed to physical violence or experiences a traumatic situation, e.g. a hold-up; this group covers intentional and unintentional violence, and harassment.

Comments

Code 81 must be used for surprise or shock without physical contact.

Code 82 applies when the victim is subjected to aggression, threats or violence from inside the company.

Code 83 is used where the victim is subjected to aggression, threats or violence from outside the work unit (attack for robbery, angry customers, settlement of scores by a third person, etc.). Violence may also stem from college students or hospital patients.

Code 84 applies in the case of violence involving wild or unsupervised animals.

Code 85 should only be used if the only Deviation is that the victim or a third person is in the wrong place at the wrong time. It suggests that the victim or a third person does something which he or she is not expected to do (standing in the vicinity of a machine, presence in the middle of a road or on a railway, where the accident is caused by the machine, a car or a train operating or travelling perfectly normally in its rightful place. If the accident can be coded more precisely on the basis of other data about the Deviation, it should be.

The Contact – Mode of injury

Reminder of the definition

The classification for the Contact - Mode of Injury (i.e. the action that leads to the injury) is designed to describe how the victim was injured and how he or she came into contact with the object that caused the injury. For instance: crashing onto the ground or the floor (31) or contact with a sharp object (e.g. a knife) (51).

Approach

The Contact - Mode of Injury leading to the most serious injury should be recorded.

The classification follows the structure indicated below:

- 10-29: The various injuries with non-mechanical sources (poison, temperature, electricity and asphyxiation);
- 30-69: The various injuries with mechanical sources;
- 70-79: The various injuries caused by physical or mental stress;
- 80-89: The various injuries caused by animals or humans.

10-19 Contact with electrical current, temperature, hazardous substances

These codes must be used when electric current, temperature or the hazardous substance is critical to why the object causes injury. This group should be used when the injury-causing factor is the intensity of the current.

Comments

Code 11 should also be used where the victim comes into contact with an electric arc and receives an electric shock or a burn caused by heat. The live object, e.g. the tool, nippers or pincers, is coded as the Material Agent, rather than the current.

Code 12 should be used where victims come into direct contact with an object that is normally or abnormally live such that the current passes through them.

Codes 11 and 12 apply when the intensity of the current is the factor causing the injury.

Code 13 applies when the temperature of the object/environment causes the injury. The injury-causing factor is the temperature of the object with which the victim comes into contact. The Material Agent to be coded is the object that is burning or from which the flames are coming, e.g. burning petrol, wooden beam, car on fire, etc.

Code 14 applies when the victim comes into contact with an agent causing frostbite, whether the agent is touched or not. It may be cold air, water, liquid oxygen, etc. The associated Material Agent is the cold object.

Codes 15-17 apply when a chemical or biological substance or its properties cause the injury. Injuries are coded according to how they occur, i.e. via the airways by inhalation; by contact with the skin or touching; or via the digestive system by eating or drinking. On the other hand, dust which in itself is not directly harmful but gets lodged in the eyes after being projected from a tool (mechanical origin) is a code 41 Contact, not code 16.

20-29 Drowned, buried, enveloped

These codes must be used where the victim is prevented from taking in oxygen, resulting in asphyxiation. The lack of oxygen can then lead to death. This group is used when the lack of oxygen intake is the injury-causing factor.

Comments

Code 21 is to be used where the lack of oxygen is due to immersion in a liquid that prevents oxygen intake, such as water. The associated Material Agent coded is the liquid or, if this is not specified, the “container” holding the liquid in which the victim is immersed.

Code 22 applies where the lack of oxygen is due to being buried under solid materials that prevent oxygen supply, e.g. soil. The associated Material Agent coded is the substance in which the victim is buried, in this case soil.

Code 23 applies when suffocating vapours or gases prevent oxygen supply or when something else prevents the victim from breathing, such as a plastic bag over the face. The associated Material Agent to be coded is the suffocating vapours or gases or whatever is preventing the victim from breathing.

These codes do not apply when the chemical properties of vapours or gases make them toxic, caustic (corrosive) or harmful, or if the poisoning or chemical burns from these chemical products are the most serious injury. When this is the case, code 15, 16 or 17 “Contact with hazardous substances” must be used.

31-39 Horizontal or vertical impact with or against a stationary object (the victim is in motion)

These codes have to be used where the victim is in motion and the injury-causing object is not. The victim may be moving vertically or horizontally.

Code 31 should be used when the cause of the injury is the victim's vertical motion (i.e. the Deviation is a fall). The distance fallen prior to the impact is not relevant. This code also applies when the victim falls (Deviation) and the injury-causing factor (Material Agent of the Contact) is the object the victim hits in falling, e.g. a chair.

Code 32 should be used when the victim knocks into something that is not in motion, such as a table. The victim is moving horizontally, and the Material Agent to be coded is the table. Or the case of a lorry driver who hits a tree or a stationary vehicle.

40-49 Struck by a moving object, collision

These codes should be used in cases where the injuring object is in motion and hits or collides with the victim. Codes 41-44 imply that the victim is stationary or does not move in relation to the Contact-Mode of Injury. In other words the collision is due entirely to the movement of the object. By contrast, code 45 implies that the collision involves movement of both the object and the victim at the time of the impact. A collision between two moving vehicles is coded 45. Road accidents will often be coded 44 or 45. The object is usually a vehicle (however, for the driver of a vehicle which hits a stationary obstacle such as a wall or stationary vehicle, the code is 32, and accidents involving pedestrians hit by vehicles come under codes 60-69).

Comments

Code 41 should be used where the victim is hit by an object flying through the air (e.g. projected from a machine), but not by an object falling vertically. This code is also used when the victim is struck by a door that has been flung open. The object may also be very small (e.g. sawdust or metal filings), see comment on code 16.

Code 42 is used where the victim is hit by a vertically falling object (Deviation), but not by an object flying through the air. Example: a brick falling from a height.

Code 43 should be used in cases where the victim is hit or knocked down by an object that springs back because it is under tension. Examples: branches, springs, elastic bands and similar. This code also applies to an object swinging like a pendulum.

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Code 44 should normally be used where the victim is hit by a running or rolling object. Example: equipment on wheels (trolley) or a vehicle.

Code 45 should be used in cases in which both the victim and the injury-causing object are in motion. A collision is an impact between a person and an object moving in the same or opposite directions; this code also applies to two people or two vehicles colliding with each other.

50-59 Contact with a sharp, pointed, hard or rough Material Agent

These codes are to be used when the main reason for an object causing an injury is that it is sharp, pointed, hard or rough, and not just the fact that the injured person has been struck by this object.

Comments

Code 51 should be used where the victim suffers a cut on something sharp, e.g. a knife or sharp edge.

Code 52 should be used where the victim is pricked by a pointed object, e.g. a punch or needle.

Code 53 should be used for cases where the victim suffers scratching or grazing on something rough (grater, sandpaper, unplaned wood, etc.). A hard agent is a Material Agent which is inflexible as a result of its mass or density and therefore does not soften or absorb the contact.

60-69 Trapped, crushed, etc.

These codes are to be used when the force, size, weight, pressure or speed of an object or machine is the injury-causing factor. Examples: a press that crushes the victim (or a limb), a heavy container that crushes the victim (or a limb) by its weight, a lifting truck that crushes the victim against a wall, or a car which overturns and crushes a road worker underneath it.

Comments

Code 61 is to be used when the victim gets caught in or crushed by something movable. This may be a part of a machine or something mobile. The Material Agent to be coded is the moving object (or whatever the moving object is part of), e.g. a machine (or machine component), a vehicle engine, or a strap (with a hook on it). The object that catches or crushes the victim should be coded as the Material Agent.

Code 62 should be used when the victim is crushed under something and against a surface (floor, road). Code 62 implies some vertical movement. For instance: crushed by a car, crushed under a concrete slab, etc. The Material Agent to be coded is the moving object (or whatever the moving object is part of), e.g. a car (or wheel which is part of it). This code therefore involves two objects, but it is the object that does the crushing that should be coded as the Material Agent, and not what the victim is caught or crushed against. If the victim is crushed by a car, "car" should be coded and not "road or surface".

Code 63 is to be used when the victim is crushed between a tool in use and something else, for example between a heavy drilling machine and a wall, or between a heavy crate and a machine. Code 63 implies horizontal movement. The Material Agent to be coded is the object that is being used or handled, which is therefore moving, (or whatever the moving object is part of), i.e. the drilling machine or the crate in the examples given. This code applies when the victim is crushed between two objects, but it is the object that does the crushing that should be coded as the Material Agent, not the object against which the victim is crushed. For example, if the victim is crushed against a wall by a lorry, "lorry" and not "wall" should be coded.

Code 64 concerns cases where the victim has a limb or finger torn off or severed. Example: where the victim's finger is trapped in and torn off by a rotating/cutting tool.

70-79 Physical or mental stress

These codes cover cases of strain of whatever degree on muscles, joints, organs or tissues, due to excessive movement, physical agents (noise, radiation, friction, etc.) or trauma. Actions causing external injury should be coded elsewhere. Only events that occur suddenly and accidentally are covered by this code; regular long-term exposure to physical stress, on the other hand, leads to occupational diseases.

There may or may not be a Material Agent associated with these codes, depending on the type of accident. For example, where a person is irradiated, Agent 15.06 may describe the Contact. An aircraft pilot whose hearing is damaged by loss of cabin pressure comes under Agent 20.1. By contrast, someone who suffers a strain as a result of standing up, without carrying or being struck by an object, does not have an associated Agent of the Contact (Contact code 71, Agent code 00.01). Similarly, there is no Material Agent of the Contact where a person treads badly and sprains an ankle (Contact code 71, Agent code 00.01).

Code 73 concerns in particular psychological shocks resulting from an act of aggression or violence, or shock resulting from witnessing an event such as accident to someone else. However, if the injury resulting from the act of aggression is essentially physical, the contact comes under another code, e.g. 50-59 for injuries caused by a blade or bullet or 83 for blows or kicks.

80-89 Bite, kick, etc. (animal or human)

These codes should be used when the causal factor of the injury is a person, animal or insect.

Comments

Code 81 applies when the victim is bitten by a person or an animal. Insect bites should be coded 82, which applies exclusively to harmful stings from dangerous insects (e.g. wasps, bees) or from fish with poisonous stings or fins (e.g. sea scorpions, weavers). Code 82 should not be confused with code 52 (contact with a pointed Material Agent), where the cause of injury is a pointed object.

The Material Agent

Reminder of the definition

The Material Agent associated with the Specific Physical Activity describes the tool, object, or instrument being used by the victim when the accident happened. If there are several Material Agents associated with the Specific Physical Activity, the Material Agent most closely linked to the accident or injury must be recorded.

The Material Agent associated with the Deviation describes the tool, object, or instrument involved in the abnormal event. If several Material Agents are associated with the (last) Deviation, the last Material Agent involved should be recorded, i.e. that closest in time to the injuring contact.

The Material Agent associated with the Contact - Mode of Injury refers to the object, tool, or instrument with which the victim came into contact or the psychological mode of injury. If several Material Agents are associated with the injury, the Material Agent linked with the most serious injury must be recorded.

Approach

It should be noted that there is a single list of Material Agents for all three variables (Specific Physical Activity, Deviation and Contact - Mode of Injury).

The three Material Agents need not be different. In practice, the same Material Agent may be associated with one or more of the three variables, though it is equally possible for each variable to correspond to a different Material Agent.

The principle underlying this coding system is that the victim was performing an “activity” (the Specific Physical Activity) with the first Material Agent, the second Material Agent “behaved abnormally” (the Deviation) and the third Material Agent “injured” the victim (the Contact - Mode of Injury). The three Agents may be different, identical or may not even exist. See “General comments about using the codes”.

Description of the groups at the 1-position level

Codes 01 - 02 - 03 (buildings, constructions and surface areas) are used mainly in cases where the victim falls or impacts.

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Codes 04 to 11 (tools and machines) should be used for accidents resulting from their malfunction or for injuries directly caused by these devices; they are also associated with the Specific Physical Activities that require their use.

Distinction between tool and machine - fixed machine and mobile machine

A tool is a manufactured object used to work a material and perform a task. It may or may not be powered (agents 06-08). It can be carried by a single person by hand or on his body without having to roll or pull it along the ground.

A machine is a manufactured object, generally complex, used to transform energy in such a way as to act on a material or perform a task. The concept of machine is linked to the energy needed to power it.

A machine is either fixed i.e. cannot be moved during the work (group 10 agents) or mobile (group 09 agents), where a single person, without the help of a second person or a handling device, can move it along the ground by using its own energy to roll it (self-propelled construction or agricultural machine), by pushing it (cleaning machine) or by pulling it (site saw), but not by carrying it in his arms or on his body.

Agricultural equipment is in 06.09 or 07.09, according to whether it is manual or mechanised; however, equipment that is self-propelling, i.e. can be driven, such as lawn mowers, reapers, motorised cultivators and large agricultural machines, are coded in 09.02.

All machines for processing and manufacturing materials are coded 10.

Storage devices are coded 11.06 when they are fixed and 11.07 when they are mobile (transportable); they may also be permanently open or permanently closed, or pressurised. Code 11.07 covers bulk storage in the form of heaps of various materials.

Code 11.09 covers small containers, including those under pressure, such as bottles of liquefied or pressurised gas, fire extinguishers, etc. It applies to single containers. Large quantities in a storage room (on shelving for instance) should be coded 14.08.

Codes 12 and 13 apply to transportation vehicles; however, civil engineering and agricultural devices are coded 09.01 and 09.02 respectively.

Codes 14 include construction materials and the various objects to be found on a building site (14.01); 14.02 covers all machine and vehicle components and parts; code 14.03 covers workpieces or parts, machine tools (including parts and splinters coming from these Material Agents), and 14.04 covers assembly components (screws, nuts, bolts, nails etc.).

Code 14.05 includes products in the form of dust, chips, pieces or splinters. 14.06 and 14.07 cover products from or for agriculture.

All objects kept in storage are coded 14.08. Code 14.09 is used for products stored in rolls, such as paper or cables.

Codes 14.10, 14.11 and 14.12 cover all objects that constitute a load, either transported on mechanical devices, suspended from hoisting devices, or handled manually, where accidents occur due to impact, falls or overturning.

Codes 15, 16, 17 and 18 are self-explanatory.

Code 19 (waste) applies when the constituents cannot be coded in 14 - 15 or 18 because they are unknown or because they are complex mixtures to be disposed of. The use of the term "bulk" emphasises the idea of large quantities.

Code 20 applies in cases where the elements, extreme weather conditions, earthquakes etc. are responsible for the accident.

Optional more detailed classification

If it is so desired, Material Agents can be classified in more detail at national level using the 3-position or 4-position classification developed for this purpose (see Appendix D). However, Eurostat will only use the 2-position classification.

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Furthermore, most tools and machines have 2-position classifications according to their function, and independently of the materials worked. Using the more detailed 3-position or 4-position classification, however, it is possible, where necessary, to specify the material worked (mainly for machines in groups 10.02, 10.04 and 10.07 to 10.15), or the packaging used in packaging machines (codes 10.16).

The fourth position of the code is used to make this distinction. This position consists of a 0X classification to denote the type of material worked or a 0Y classification to denote the type of packaging. When encoding the Material Agent, the letters X and Y should be replaced by one of the letters below, depending on the nature of the material or packaging. However, for some Material Agents, only one material/packaging code is possible, in which case it is used in the classification directly.

Value of codes 0X or 0Y (fourth position)	Nature of the objet
0A	Stone, mineral
0B	Metal,
0C	Wood,
0D	Rubber, plastic,
0E	Paper, cardboard,
0F	Textile,
0G	Leather,
0H	Foodstuffs

Examples

- i) A circular saw will be coded:
 - 10.11 for a sawing machine (2-position code)
 - 10.11.01 for a circular saw (3-position code)
 - 10.11.01.0X four-position classification code for a circular saw, however this 0X ending is not used for codifying a Material Agent; instead, the following codes are used depending on the material, namely:
 - 10.11.01.0A for a circular saw to cut stone
 - 10.11.01.0B for a circular saw to cut metal
 - 10.11.01.0H for a circular saw to cut foodstuffs.
- ii) A concrete mixer comes directly under code 10.02.15.0A, because it is used exclusively for concrete by definition.

Examples of codification of the causes and circumstances

- 1) On a new construction site, a bricklayer carrying a tool up some stairs treads on a nail sticking out of a piece of wood left lying around.

Variable	Code	Label (summarised)
Working Environment	021	Construction site - building under construction
Working Process	22	New construction - building
Specific Physical Activity	61	Walking, running, going up, going down
Material Agent- 2-position code	02.01	Elevated positions of building - fixed (stairs)
Material Agent- 4-position code (*)	02.01.01.00	Stairs
Deviation	61	Walking on a sharp object
Material Agent- 2-position code	01.02	Surfaces, circulation areas - ground indoors, outdoors
Material Agent- 4-position code (*)	01.02.01.04	Plank with nails in it
Contact - Mode of Injury	52	Contact with pointed Material Agent (nail, sharp tool)
Material Agent- 2-position code	14.04	Assembly components
Material Agent- 4-position code (*)	14.04.02.00	Nails

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- 2) In a hospital, a nurse injures her thumb disposing of a syringe in a waste-box by inadvertently pricking herself on another needle sticking out of the box.

Variable	Code	Label (summarised)
Working Environment	051	Health establishment, clinic, hospital
Working Process	41	Service, care, assistance to people
Specific Physical Activity	46	Pouring, pouring into, replenishing, emptying
Material Agent- 2-position code	11.09	Miscellaneous package, small and medium, mobile
Material Agent- 4-position code (*)	11.09.06.00	Dustbin, rubbish container
Deviation	64	Spurious actions
Material Agent- 2-position code	06.14	Hand-held non-motorised tools – medical - sharp
Material Agent- 4-position code (*)	06.14.01.00	Syringe, needle
Contact - Mode of Injury	52	Contact with pointed Material Agent (nail, sharp tool)
Material Agent- 2-position code	06.14	Hand-held non-motorised tools – medical - sharp
Material Agent- 4-position code (*)	06.14.01.00	Syringe, needle

- 3) A hook breaks off, causing a painter to fall to the ground from the mobile ladder he was climbing to repaint an office ceiling.

Variable	Code	Label (summarised)
Working Environment	041	Office, meeting room, library
Working Process	24	Remodelling, repairing, building maintenance
Specific Physical Activity	64	Crawling, climbing
Material Agent- 2-position code	02.03	Constructions, elevated areas - mobile
Material Agent- 4-position code (*)	02.03.01.00	Mobile ladder, stepladder
Deviation	31	Breakage of material
Material Agent- 2-position code	11.05	Hoisting, strapping, gripping devices
Material Agent- 4-position code (*)	11.05.03.00	Hooks
Contact - Mode of Injury	31	Vertical motion, crash on or against
Material Agent- 2-position code	01.02	Surfaces, circulation areas - ground indoors, outdoors
Material Agent- 4-position code (*)	01.02.01.00	Surface areas in general

- 4) A rope holding a suspended load breaks, causing the load to swing through the loading zone and hit a worker.

Variable	Code	Label (summarised)
Working Environment	013	Area where the main activity is storage, loading
Working Process	61	Movement
Specific Physical Activity	70	Presence
Material Agent- 2-position code	01.02	Surfaces, circulation areas - ground indoors, outdoors
Material Agent- 4-position code (*)	01.02.01.00	Surface areas in general
Deviation	31	Breakage of material
Material Agent- 2-position code	11.05	Hoisting, strapping, gripping devices
Material Agent- 4-position code (*)	11.05.06.00	Ropes
Contact - Mode of Injury	43	Struck - by swinging object
Material Agent- 2-position code	14.11.	Load - suspended from hoisting device, a crane
Material Agent- 4-position code (*)	14.11.00.00	Load - suspended from a hoisting device or crane

- 5) In a sawmill, an unskilled labourer feeding a motorised saw is injured on the head by a flying fragment of wood thrown back at him by the saw blade as the wood is fed in.

Variable	Code	Label (summarised)
Working Environment	011	Production area, factory, workshop
Working Process	11	Production, manufacture, processing
Specific Physical Activity	12	Feeding the machine
Material Agent- 2-position code	10.11	Machines tools - for sawing
Material Agent- 4-position code (*)	10.11.00.00	Machine tools (for sawing)
Deviation	44	Loss of control (total or partial) - of an object
Material Agent- 2-position code	14.03	Workpieces or parts/machine tools
Material Agent- 4-position code (*)	14.03.01.00	Workpieces
Contact - Mode of Injury	41	Struck - by flying object
Material Agent- 2-position code	14.05	Particles, dust
Material Agent- 4-position code (*)	14.05.01.00	Fragment, projectile, splinter

- 6) A slaughterhouse worker carving cutlets in the cutting department of a slaughterhouse knocks his knife on the edge of the table and wounds his thumb.

Variable	Code	Label (summarised)
Working Environment	011	Production area, factory, workshop
Working Process	11	Production, manufacture, processing
Specific Physical Activity	21	Working with hand-held tools
Material Agent- 2-position code	06.02	Hand-held non-motorised tools - for cutting, separating
Material Agent- 4-position code (*)	06.02.02.00	Knife, large knife, craft knife
Deviation	43	Loss of control (total or partial) - of hand-held tool
Material Agent- 2-position code	06.02	Hand-held non-motorised tools - for cutting, separating
Material Agent- 4-position code (*)	06.02.02.00	Knife, large knife, craft knife
Contact - Mode of Injury	51	Contact with sharp Material Agent (knife or blade)
Material Agent- 2-position code	06.02	Hand-held non-motorised tools - for cutting, separating
Material Agent- 4-position code (*)	06.02.02.00	Knife, large knife, craft knife

- 7) On a construction site, an apprentice was unbolting a bolt on a boiler using a spanner. The screw broke and with the sudden wrench the apprentice's hand hit the boiler violently.

Variable	Code	Label (summarised)
Working Environment	021	Construction site - building under construction
Working Process	51	Disassembling, dismantling
Specific Physical Activity	21	Working with hand-held tools - manual
Material Agent- 2-position code	06.05	Hand-held non-motorised tools - for screwing
Material Agent- 4-position code (*)	06.05.01.00	Wrench
Deviation	31	Breakage of material
Material Agent- 2-position code	06.05	Hand-held non-motorised tools - for screwing
Material Agent- 4-position code (*)	06.05.01.00	Wrench
Contact - Mode of Injury	53	Contact with a hard or rough Material Agent
Material Agent- 2-position code	10.04	Machines for transforming materials - using heat
Material Agent- 4-position code (*)	10.04.02.05	Boiler, water heater, cauldron

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- 8) In a warehouse, a fire extinguisher being inspected was accidentally put under pressure, causing the top to be blown off. The handle of the fire extinguisher hit the employee who was inspecting it - a fire extinguisher salesman - in the lower part of the face, injuring him in the mouth.

Variable	Code	Label (summarised)
Working Environment	013	Area used principally for storage
Working Process	52	Maintenance
Specific Physical Activity	40	Handling an object - Not specified
Material Agent- 2-position code	11.09	Miscellaneous packaging, small/medium, mobile
Material Agent- 4-position code (*)	11.09.03.00	Gas bottle, spray, fire extinguisher
Deviation	32	Breakage, bursting, producing splinters
Material Agent- 2-position code	11.09	Miscellaneous packaging, small/medium, mobile
Material Agent- 4-position code (*)	11.09.03.00	Gas bottle, spray, fire extinguisher
Contact - Mode of Injury	41	Struck - by flying object
Material Agent- 2-position code	14.03	Workpieces or parts/machine tools
Material Agent- 4-position code (*)	14.03.99.00	Other related agents, workpieces, tools

- 9) An electrician walking through a construction site hears a strange noise coming from the crane and sees some scrap metal falling from it; despite flattening himself against a wall the scrap metal hits him, causing bruising and scratches to his right shoulder and back.

Variable	Code	Label (summarised)
Working Environment	021	Construction site - building under construction
Working Process	61	Movement
Specific Physical Activity	70	Presence
Material Agent- 2-position code	01.02	Surfaces, circulation areas - ground indoors, outdoors
Material Agent- 4-position code (*)	01.02.01.00	Surface areas in general
Deviation	33	Slip, fall, collapse of Material Agent - from above
Material Agent- 2-position code	14.11	Load - suspended from a hoisting device, crane
Material Agent- 4-position code (*)	14.11.00.00	Load suspended from a hoisting device, crane
Contact - Mode of Injury	42	Struck - by a falling object
Material Agent- 2-position code	14.11	Load -suspended from a hoisting device, crane
Material Agent- 4-position code (*)	14.11.00.00	Load suspended from a hoisting device, crane

- 10) A cleaner walking on the roof of a block of flats to make some checks trips on a tile and falls from the roof onto a balcony two floors below.

Variable	Code	Label (summarised)
Working Environment	091	Elevated - on a fixed level (roof, terrace,...)
Working Process	55	Monitoring, inspection
Specific Physical Activity	61	Walking
Material Agent- 2-position code	02.01	Elevated parts of building - fixed
Material Agent- 4-position code (*)	02.01.02.00	Roof, terrace, glass roof, frame, structure
Deviation	51	Fall of person - from a height
Material Agent- 2-position code	02.01	Elevated parts of building - fixed
Material Agent- 4-position code (*)	02.01.02.00	Roof, terrace, glass roof, frame, structure
Contact - Mode of Injury	31	Vertical motion, crash on or against
Material Agent- 2-position code	02.01	Elevated parts of building - fixed
Material Agent- 4-position code (*)	02.01.99.00	Other elevated parts of a building

- 11) A worker undertaking lift maintenance in a private block of flats climbs on to the top of the lift cabin. He starts the lift and is crushed against the ceiling.

Variable	Code	Label (summarised)
Working Environment	091	Elevated - on a fixed level (roof, terrace,...)
Working Process	52	Maintenance/repair, tuning, adjustment
Specific Physical Activity	64	Crawling, climbing
Material Agent- 2-position code	11.02	Elevators, lifts, hoisting devices
Material Agent- 4-position code (*)	11.02.01.00	Lift, hoist
Deviation	42	Loss of control (total or partial) - of handling equipment
Material Agent- 2-position code	11.02	Elevators, lifts, hoisting devices
Material Agent- 4-position code (*)	11.02.01.00	Lift, hoist
Contact - Mode of Injury	63	Trapped, crushed - between
Material Agent- 2-position code	11.02	Elevators, lifts, hoisting devices
Material Agent- 4-position code (*)	11.02.01.00	Lift, hoist

- 12) A worker carrying out maintenance on a boiler located in the boiler-room of a block of flats stands on the gas supply line (fixed to the ground). He slips and sprains his left ankle without falling.

Variable	Code	Label (summarised)
Working Environment	072	Private home – communal parts
Working Process	52	Maintenance/repair, tuning, adjustment
Specific Physical Activity	61	Walking
Material Agent- 2-position code	01.02	Surfaces, circulation areas – ground indoors, outdoors
Material Agent- 4-position code (*)	01.02.01.00	Surface areas in general
Deviation	75	Slipping without falling
Material Agent- 2-position code	04.01	Pipe networks – fixed
Material Agent- 4-position code (*)	04.01.01.00	Pipe networks – fixed – for gas
Contact - Mode of Injury	71	Physical stress
Material Agent- 2-position code	00.01	No material agent
Material Agent- 4-position code (*)	00.01.00.00	No material agent

- 13) While polishing an item of vehicle bodywork using a brushing machine, the victim tilts the item too far, causing it to be caught in the brush and knocked back into his face.

Variable	Code	Label (summarised)
Working Environment	011	Production area, factory, workshop
Working Process	11	Production, manufacturing, processing
Specific Physical Activity	41	Holding
Material Agent- 2-position code	14.02	Vehicle component
Material Agent- 4-position code (*)	14.02.00.99	Other vehicle component known but not listed
Deviation	44	Loss of control (total or partial) of object
Material Agent- 2-position code	14.02	Vehicle component
Material Agent- 4-position code (*)	14.02.00.99	Other vehicle component known but not listed
Contact - Mode of Injury	41	Struck by flying object
Material Agent- 2-position code	14.02	Vehicle component
Material Agent- 4-position code (*)	14.02.00.99	Other vehicle component known but not listed

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- 14) The victim switches on a cutting tool and the metal item rotates too quickly under the cutting axes. The lathe jams, the tool breaks and the cutting edge is thrown out and hits the victim on the forehead.

Variable	Code	Label (summarised)
Working Environment	011	Production area, factory, workshop
Working Process	11	Production, manufacturing, processing
Specific Physical Activity	13	Operating the machine
Material Agent- 2-position code	10.10	Machine tool for turning
Material Agent- 4-position code (*)	10.10.09.00	Centre lathe
Deviation	32	Breakage, bursting, producing splinters
Material Agent- 2-position code	14.03	Machine tool
Material Agent- 4-position code (*)	14.03.02.00	Tool, part of tool of machine
Contact - Mode of Injury	41	Struck by flying object
Material Agent- 2-position code	14.03	Machine tool
Material Agent- 4-position code (*)	14.03.02.02	Splinter, part of tool

- 15) The victim, who is driving his tractor and spreading weed killer on his vines, is intoxicated by gas vapours as a result of the wind turning.

Variable	Code	Label (summarised)
Working Environment	033	Farming area – tree crop
Working Process	32	Agricultural type work
Specific Physical Activity	31	Driving a means of transport
Material Agent- 2-position code	09.02	Portable or mobile machine – farming
Material Agent- 4-position code (*)	09.02.05.00	Agricultural equipment for treating crops
Deviation	99	Other deviation
Material Agent- 2-position code	20.02	Wind
Material Agent- 4-position code (*)	20.02.00.00	Wind
Contact - Mode of Injury	15	Contact with hazardous substances
Material Agent- 2-position code	15.02	Substances – harmful, toxic – gaseous
Material Agent- 4-position code (*)	15.02.00.00	Substances – harmful, toxic – gaseous

- 16) In a restaurant kitchen, a worker injures a hand on a broken cup while washing up.

Variable	Code	Label (summarised)
Working Environment	044	Restaurant
Working Process	53	Cleaning (manual)
Specific Physical Activity	49	Other handling of object
Material Agent- 2-position code	17.08	Domestic-type equipment
Material Agent- 4-position code (*)	17.08.00.00	Domestic-type equipment
Deviation	64	Spurious action
Material Agent- 2-position code	00.01	No material agent
Material Agent- 4-position code (*)	00.01.00.00	No material agent
Contact - Mode of Injury	51	Contact with sharp material agent
Material Agent- 2-position code	14.05	Splinters, other debris
Material Agent- 4-position code (*)	14.05.01.00	Splinters, broken glass

(*) If the detailed classification is used (see the Material Agent classification 4-position in Appendix D).

Appendix D: Optional 4-position classifications

Economic activity of the employer (NACE)

As indicated in Appendix A, at its meeting on 16/10/2000, the ESAW Working Group decided to consider in ESAW Phase III the variable « Economic activity of the Employer » according to the NACE Rev1 on 4 digits. Only the 2 first positions, corresponding to the divisions already used in Phases I and II, are compulsory. The 3rd and/or 4th positions are available in an optional way for the Member States that can and wish to communicate this information to Eurostat, as some national systems already use the 4 positions. The last 2 positions or the last one will remain with the value '(0)0' for the other countries.

The 4-position NACE classification is indicated in the following pages (a revised version with only few modifications at the 3rd or 4th position will be issued in 2002 – NACE 2002 -).

NACE 4-POSITION CLASSIFICATION

Section & Division	Group	Class	Label
Section A			Agriculture, hunting and forestry
01			Agriculture, hunting and related service activities
	01.1		Growing of crops; market gardening; horticulture
		01.11	Growing of cereals and other crops n.e.c.
		01.12	Growing of vegetables, horticultural specialities and nursery products
		01.13	Growing of fruit, nuts, beverage and spice crops
	01.2		Farming of animals
		01.21	Farming of cattle, dairy farming
		01.22	Farming of sheep, goats, horses, asses, mules and hinnies
		01.23	Farming of swine
		01.24	Farming of poultry
		01.25	Other farming of animals
	01.3		Growing of crops combined with farming of animals (mixed farming)
		01.30	Growing of crops combined with farming of animals (mixed farming)
	01.4		Agricultural and animal husbandry service activities, except veterinary activities
		01.41	Agricultural service activities
		01.42	Animal husbandry service activities, except veterinary activities
	01.5		Hunting, trapping and game propagation, including related service activities
		01.50	Hunting, trapping and game propagation, including related service activities
02			Forestry, logging and related service activities
	02.0		Forestry, logging and related service activities
		02.01	Forestry and logging
		02.02	Forestry and logging related service activities
Section B			Fishing
05			Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing
	05.0		Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing
		05.01	Fishing
		05.02	Operation of fish hatcheries and fish farms
Section C			Mining and quarrying
Subsection CA			Mining and quarrying of energy producing materials
10			Mining of coal and lignite; extraction of peat
	10.1		Mining and agglomeration of hard coal
		10.10	Mining and agglomeration of hard coal
	10.2		Mining and agglomeration of lignite
		10.20	Mining and agglomeration of lignite
	10.3		Extraction and agglomeration of peat
		10.30	Extraction and agglomeration of peat
11			Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying
	11.1		Extraction of crude petroleum and natural gas
		11.10	Extraction of crude petroleum and natural gas
	11.2		Service activities incidental to oil and gas extraction, excluding surveying
		11.20	Service activities incidental to oil and gas extraction, excluding surveying
12			Mining of uranium and thorium ores
	12.0		Mining of uranium and thorium ores
		12.00	Mining of uranium and thorium ores
Subsection CB			Mining and quarrying, except of energy producing materials
13			Mining of metal ores
	13.1		Mining of iron ores
		13.10	Mining of iron ores
	13.2		Mining of non-ferrous metal ores, except uranium and thorium ores
		13.20	Mining of non-ferrous metal ores, except uranium and thorium ores
14			Other mining and quarrying
	14.1		Quarrying of stone

	14.11	Quarrying of stone for construction
	14.12	Quarrying of limestone, gypsum and chalk
	14.13	Quarrying of slate
14.2		Quarrying of sand and clay
	14.21	Operation of gravel and sand pits
	14.22	Mining of clays and kaolin
14.3		Mining of chemical and fertilizer minerals
	14.30	Mining of chemical and fertilizer minerals
14.4		Production of salt
	14.40	Production of salt
14.5		Other mining and quarrying n.e.c.
	14.50	Other mining and quarrying n.e.c.

Section D

Manufacturing

Subsection DA

Manufacture of food products, beverages and tobacco

15		Manufacture of food products and beverages
	15.1	Production, processing and preserving of meat and meat products
		15.11 Production and preserving of meat
		15.12 Production and preserving of poultrymeat
		15.13 Production of meat and poultrymeat products
	15.2	Processing and preserving of fish and fish products
		15.20 Processing and preserving of fish and fish products
	15.3	Processing and preserving of fruit and vegetables
		15.31 Processing and preserving of potatoes
		15.32 Manufacture of fruit and vegetable juice
		15.33 Processing and preserving of fruit and vegetables n.e.c.
	15.4	Manufacture of vegetable and animal oils and fats
		15.41 Manufacture of crude oils and fats
		15.42 Manufacture of refined oils and fats
		15.43 Manufacture of margarine and similar edible fats
	15.5	Manufacture of dairy products
		15.51 Operation of dairies and cheese making
		15.52 Manufacture of ice cream
	15.6	Manufacture of grain mill products, starches and starch products
		15.61 Manufacture of grain mill products
		15.62 Manufacture of starches and starch products
	15.7	Manufacture of prepared animal feeds
		15.71 Manufacture of prepared feeds for farm animals
		15.72 Manufacture of prepared pet foods
	15.8	Manufacture of other food products
		15.81 Manufacture of bread; manufacture of fresh pastry goods and cakes
		15.82 Manufacture of rusks and biscuits; manufacture of preserved pastry goods and cakes
		15.83 Manufacture of sugar
		15.84 Manufacture of cocoa; chocolate and sugar confectionery
		15.85 Manufacture of macaroni, noodles, couscous and similar farinaceous products
		15.86 Processing of tea and coffee
		15.87 Manufacture of condiments and seasonings
		15.88 Manufacture of homogenized food preparations and dietetic food
		15.89 Manufacture of other food products n.e.c.
	15.9	Manufacture of beverages
		15.91 Manufacture of distilled potable alcoholic beverages
		15.92 Production of ethyl alcohol from fermented materials
		15.93 Manufacture of wines
		15.94 Manufacture of cider and other fruit wines
		15.95 Manufacture of other non-distilled fermented beverages
		15.96 Manufacture of beer
		15.97 Manufacture of malt
		15.98 Production of mineral waters and soft drinks
16		Manufacture of tobacco products
	16.0	Manufacture of tobacco products
		16.00 Manufacture of tobacco products

Subsection DB		Manufacture of textiles and textile products
17		Manufacture of textiles
	17.1	Preparation and spinning of textile fibres
		17.11 Preparation and spinning of cotton-type fibres
		17.12 Preparation and spinning of woollen-type fibres
		17.13 Preparation and spinning of worsted-type fibres
		17.14 Preparation and spinning of flax-type fibres
		17.15 Throwing and preparation of silk, including from noils, and throwing and texturing of synthetic or artificial filament yarns
		17.16 Manufacture of sewing threads
		17.17 Preparation and spinning of other textile fibres
	17.2	Textile weaving
		17.21 Cotton-type weaving
		17.22 Woollen-type weaving
		17.23 Worsted-type weaving
		17.24 Silk-type weaving
		17.25 Other textile weaving
	17.3	Finishing of textiles
		17.30 Finishing of textiles
	17.4	Manufacture of made-up textile articles, except apparel
		17.40 Manufacture of made-up textile articles, except apparel
	17.5	Manufacture of other textiles
		17.51 Manufacture of carpets and rugs
		17.52 Manufacture of cordage, rope, twine and netting
		17.53 Manufacture of non-wovens and articles made from non-wovens, except apparel
		17.54 Manufacture of other textiles n.e.c.
	17.6	Manufacture of knitted and crocheted fabrics
		17.60 Manufacture of knitted and crocheted fabrics
	17.7	Manufacture of knitted and crocheted articles
		17.71 Manufacture of knitted and crocheted hosiery
		17.72 Manufacture of knitted and crocheted pullovers, cardigans and similar articles
18		Manufacture of wearing apparel; dressing and dyeing of fur
	18.1	Manufacture of leather clothes
		18.10 Manufacture of leather clothes
	18.2	Manufacture of other wearing apparel and accessories
		18.21 Manufacture of workwear
		18.22 Manufacture of other outerwear
		18.23 Manufacture of underwear
		18.24 Manufacture of other wearing apparel and accessories n.e.c.
	18.3	Dressing and dyeing of fur; manufacture of articles of fur
		18.30 Dressing and dyeing of fur; manufacture of articles of fur
Subsection DC		Manufacture of leather and leather products
19		Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
	19.1	Tanning and dressing of leather
		19.10 Tanning and dressing of leather
	19.2	Manufacture of luggage, handbags and the like, saddlery and harness
		19.20 Manufacture of luggage, handbags and the like, saddlery and harness
	19.3	Manufacture of footwear
		19.30 Manufacture of footwear
Subsection DD		Manufacture of wood and wood products
20		Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
	20.1	Sawmilling and planing of wood; impregnation of wood
		20.10 Sawmilling and planing of wood; impregnation of wood
	20.2	Manufacture of veneer sheets; manufacture of plywood, laminboard, particle board, fibre board and other panels and boards
		20.20 Manufacture of veneer sheets; manufacture of plywood, laminboard, particle board, fibre board and other panels and boards
	20.3	Manufacture of builders' carpentry and joinery
		20.30 Manufacture of builders' carpentry and joinery

20.4		Manufacture of wooden containers
	20.40	Manufacture of wooden containers
20.5		Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials
	20.51	Manufacture of other products of wood
	20.52	Manufacture of articles of cork, straw and plaiting materials
Subsection DE		Manufacture of pulp, paper and paper products; publishing and printing
21		Manufacture of pulp, paper and paper products
	21.1	Manufacture of pulp, paper and paperboard
	21.11	Manufacture of pulp
	21.12	Manufacture of paper and paperboard
	21.2	Manufacture of articles of paper and paperboard
	21.21	Manufacture of corrugated paper and paperboard and of containers of paper and paperboard
	21.22	Manufacture of household and sanitary goods and of toilet requisites
	21.23	Manufacture of paper stationery
	21.24	Manufacture of wallpaper
	21.25	Manufacture of other articles of paper and paperboard n.e.c.
22		Publishing, printing and reproduction of recorded media
	22.1	Publishing
	22.11	Publishing of books
	22.12	Publishing of newspapers
	22.13	Publishing of journals and periodicals
	22.14	Publishing of sound recordings
	22.15	Other publishing
	22.2	Printing and service activities related to printing
	22.21	Printing of newspapers
	22.22	Printing n.e.c.
	22.23	Bookbinding and finishing
	22.24	Composition and plate-making
	22.25	Other activities related to printing
	22.3	Reproduction of recorded media
	22.31	Reproduction of sound recording
	22.32	Reproduction of video recording
	22.33	Reproduction of computer media
Subsection DF		Manufacture of coke, refined petroleum products and nuclear fuel
23		Manufacture of coke, refined petroleum products and nuclear fuel
	23.1	Manufacture of coke oven products
	23.10	Manufacture of coke oven products
	23.2	Manufacture of refined petroleum products
	23.20	Manufacture of refined petroleum products
	23.3	Processing of nuclear fuel
	23.30	Processing of nuclear fuel
Subsection DG		Manufacture of chemicals, chemical products and man-made fibres
24		Manufacture of chemicals and chemical products
	24.1	Manufacture of basic chemicals
	24.11	Manufacture of industrial gases
	24.12	Manufacture of dyes and pigments
	24.13	Manufacture of other inorganic basic chemicals
	24.14	Manufacture of other organic basic chemicals
	24.15	Manufacture of fertilizers and nitrogen compounds
	24.16	Manufacture of plastics in primary forms
	24.17	Manufacture of synthetic rubber in primary forms
	24.2	Manufacture of pesticides and other agro-chemical products
	24.20	Manufacture of pesticides and other agro-chemical products
	24.3	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
	24.30	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
	24.4	Manufacture of pharmaceuticals, medicinal chemicals and botanical products

APPENDIX D: OPTIONAL 4-POSITION CLASSIFICATIONS

	24.41	Manufacture of basic pharmaceutical products
	24.42	Manufacture of pharmaceutical preparations
24.5		Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
	24.51	Manufacture of soap and detergents, cleaning and polishing preparations
	24.52	Manufacture of perfumes and toilet preparations
24.6		Manufacture of other chemical products
	24.61	Manufacture of explosives
	24.62	Manufacture of glues and gelatines
	24.63	Manufacture of essential oils
	24.64	Manufacture of photographic chemical material
	24.65	Manufacture of prepared unrecorded media
24.7	24.66	Manufacture of other chemical products n.e.c.
		Manufacture of man-made fibres
	24.70	Manufacture of man-made fibres

Subsection DH

Manufacture of rubber and plastic products

25		Manufacture of rubber and plastic products
	25.1	Manufacture of rubber products
		25.11 Manufacture of rubber tyres and tubes
		25.12 Retreading and rebuilding of rubber tyres
		25.13 Manufacture of other rubber products
	25.2	Manufacture of plastic products
		25.21 Manufacture of plastic plates, sheets, tubes and profiles
		25.22 Manufacture of plastic packing goods
		25.23 Manufacture of builders' ware of plastic
		25.24 Manufacture of other plastic products

Subsection DI

Manufacture of other non-metallic mineral products

26		Manufacture of other non-metallic mineral products
	26.1	Manufacture of glass and glass products
		26.11 Manufacture of flat glass
		26.12 Shaping and processing of flat glass
		26.13 Manufacture of hollow glass
		26.14 Manufacture of glass fibres
		26.15 Manufacture and processing of other glass, including technical glassware
	26.2	Manufacture of non-refractory ceramic goods other than for construction purposes; manufacture of refractory ceramic products
		26.21 Manufacture of ceramic household and ornamental articles
		26.22 Manufacture of ceramic sanitary fixtures
		26.23 Manufacture of ceramic insulators and insulating fittings
		26.24 Manufacture of other technical ceramic products
		26.25 Manufacture of other ceramic products
		26.26 Manufacture of refractory ceramic products
	26.3	Manufacture of ceramic tiles and flags
		26.30 Manufacture of ceramic tiles and flags
	26.4	Manufacture of bricks, tiles and construction products, in baked clay
		26.40 Manufacture of bricks, tiles and construction products, in baked clay
	26.5	Manufacture of cement, lime and plaster
		26.51 Manufacture of cement
		26.52 Manufacture of lime
		26.53 Manufacture of plaster
	26.6	Manufacture of articles of concrete, plaster and cement
		26.61 Manufacture of concrete products for construction purposes
		26.62 Manufacture of plaster products for construction purposes
		26.63 Manufacture of ready-mixed concrete
		26.64 Manufacture of mortars
		26.65 Manufacture of fibre cement
		26.66 Manufacture of other articles of concrete, plaster and cement
	26.7	Cutting, shaping and finishing of stone
		26.70 Cutting, shaping and finishing of stone

26.8		Manufacture of other non-metallic mineral products
	26.81	Production of abrasive products
	26.82	Manufacture of other non-metallic mineral products n.e.c.
Subsection DJ		Manufacture of basic metals and fabricated metal products
27		Manufacture of basic metals
	27.1	Manufacture of basic iron and steel and of ferro-alloys (ECSC) ⁽²⁵⁾
	27.10	Manufacture of basic iron and steel and of ferro-alloys (ECSC) ⁽²⁵⁾
	27.2	Manufacture of tubes
	27.21	Manufacture of cast iron tubes
	27.22	Manufacture of steel tubes
	27.3	Other first processing of iron and steel and production of non-ECSC ⁽²⁵⁾ ferro-alloys
	27.31	Cold drawing
	27.32	Cold rolling of narrow strip
	27.33	Cold forming or folding
	27.34	Wire drawing
	27.35	Other first processing of iron and steel n.e.c.; production of non-ECSC ⁽²⁵⁾ ferro-alloys
	27.4	Manufacture of basic precious and non-ferrous metals
	27.41	Precious metals production
	27.42	Aluminium production
	27.43	Lead, zinc and tin production
	27.44	Copper production
	27.45	Other non-ferrous metal production
	27.5	Casting of metals
	27.51	Casting of iron
	27.52	Casting of steel
	27.53	Casting of light metals
	27.54	Casting of other non-ferrous metals
28		Manufacture of fabricated metal products, except machinery and equipment
	28.1	Manufacture of structural metal products
	28.11	Manufacture of metal structures and parts of structures
	28.12	Manufacture of builders' carpentry and joinery of metal
	28.2	Manufacture of tanks, reservoirs and containers of metal; manufacture of central heating radiators and boilers
	28.21	Manufacture of tanks, reservoirs and containers of metal
	28.22	Manufacture of central heating radiators and boilers
	28.3	Manufacture of steam generators, except central heating hot water boilers
	28.30	Manufacture of steam generators, except central heating hot water boilers
	28.4	Forging, pressing, stamping and roll forming of metal; powder metallurgy
	28.40	Forging, pressing, stamping and roll forming of metal; powder metallurgy
	28.5	Treatment and coating of metals; general mechanical engineering
	28.51	Treatment and coating of metals
	28.52	General mechanical engineering
	28.6	Manufacture of cutlery, tools and general hardware
	28.61	Manufacture of cutlery
	28.62	Manufacture of tools
	28.63	Manufacture of locks and hinges
	28.7	Manufacture of other fabricated metal products
	28.71	Manufacture of steel drums and similar containers
	28.72	Manufacture of light metal packaging
	28.73	Manufacture of wire products
	28.74	Manufacture of fasteners, screw machine products, chain and springs
	28.75	Manufacture of other fabricated metal products n.e.c.
Subsection DK		Manufacture of machinery and equipment n.e.c.
29		Manufacture of machinery and equipment n.e.c.
	29.1	Manufacture of machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines
	29.11	Manufacture of engines and turbines, except aircraft, vehicle and cycle engines
	29.12	Manufacture of pumps and compressors

⁽²⁵⁾ ECSC: European Coal and Steel Community.

APPENDIX D: OPTIONAL 4-POSITION CLASSIFICATIONS

	29.13	Manufacture of taps and valves
	29.14	Manufacture of bearings, gears, gearing and driving elements
29.2		Manufacture of other general purpose machinery
	29.21	Manufacture of furnaces and furnace burners
	29.22	Manufacture of lifting and handling equipment
	29.23	Manufacture of non-domestic cooling and ventilation equipment
	29.24	Manufacture of other general purpose machinery n.e.c.
29.3		Manufacture of agricultural and forestry machinery
	29.31	Manufacture of agricultural tractors
	29.32	Manufacture of other agricultural and forestry machinery
29.4		Manufacture of machine-tools
	29.40	Manufacture of machine-tools
29.5		Manufacture of other special purpose machinery
	29.51	Manufacture of machinery for metallurgy
	29.52	Manufacture of machinery for mining, quarrying and construction
	29.53	Manufacture of machinery for food, beverage and tobacco processing
	29.54	Manufacture of machinery for textile, apparel and leather production
	29.55	Manufacture of machinery for paper and paperboard production
	29.56	Manufacture of other special purpose machinery n.e.c.
29.6		Manufacture of weapons and ammunition
	29.60	Manufacture of weapons and ammunition
29.7		Manufacture of domestic appliances n.e.c.
	29.71	Manufacture of electric domestic appliances
	29.72	Manufacture of non-electric domestic appliances

Subsection DL

Manufacture of electrical and optical equipment

30		Manufacture of office machinery and computers
	30.0	Manufacture of office machinery and computers
	30.01	Manufacture of office machinery
	30.02	Manufacture of computers and other information processing equipment
31		Manufacture of electrical machinery and apparatus n.e.c.
	31.1	Manufacture of electric motors, generators and transformers
	31.10	Manufacture of electric motors, generators and transformers
	31.2	Manufacture of electricity distribution and control apparatus
	31.20	Manufacture of electricity distribution and control apparatus
	31.3	Manufacture of insulated wire and cable
	31.30	Manufacture of insulated wire and cable
	31.4	Manufacture of accumulators, primary cells and primary batteries
	31.40	Manufacture of accumulators, primary cells and primary batteries
	31.5	Manufacture of lighting equipment and electric lamps
	31.50	Manufacture of lighting equipment and electric lamps
	31.6	Manufacture of electrical equipment n.e.c.
	31.61	Manufacture of electrical equipment for engines and vehicles n.e.c.
	31.62	Manufacture of other electrical equipment n.e.c.
32		Manufacture of radio, television and communication equipment and apparatus
	32.1	Manufacture of electronic valves and tubes and other electronic components
	32.10	Manufacture of electronic valves and tubes and other electronic components
	32.2	Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy
	32.20	Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy
	32.3	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods
	32.30	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods
33		Manufacture of medical, precision and optical instruments, watches and clocks
	33.1	Manufacture of medical and surgical equipment and orthopaedic appliances
	33.10	Manufacture of medical and surgical equipment and orthopaedic appliances
	33.2	Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment

	33.20	Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment
33.3		Manufacture of industrial process control equipment
	33.30	Manufacture of industrial process control equipment
33.4		Manufacture of optical instruments and photographic equipment
	33.40	Manufacture of optical instruments and photographic equipment
33.5		Manufacture of watches and clocks
	33.50	Manufacture of watches and clocks
Subsection DM		Manufacture of transport equipment
34		Manufacture of motor vehicles, trailers and semi-trailers
	34.1	Manufacture of motor vehicles
	34.10	Manufacture of motor vehicles
34.2		Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers
	34.20	Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers
34.3		Manufacture of parts and accessories for motor vehicles and their engines
	34.30	Manufacture of parts and accessories for motor vehicles and their engines
35		Manufacture of other transport equipment
	35.1	Building and repairing of ships and boats
	35.11	Building and repairing of ships
	35.12	Building and repairing of pleasure and sporting boats
35.2		Manufacture of railway and tramway locomotives and rolling stock
	35.20	Manufacture of railway and tramway locomotives and rolling stock
35.3		Manufacture of aircraft and spacecraft
	35.30	Manufacture of aircraft and spacecraft
35.4		Manufacture of motorcycles and bicycles
	35.41	Manufacture of motorcycles
	35.42	Manufacture of bicycles
	35.43	Manufacture of invalid carriages
	35.5	Manufacture of other transport equipment n.e.c.
	35.50	Manufacture of other transport equipment n.e.c.
Subsection DN		Manufacturing n.e.c.
36		Manufacture of furniture; manufacturing n.e.c.
	36.1	Manufacture of furniture
	36.11	Manufacture of chairs and seats
	36.12	Manufacture of other office and shop furniture
	36.13	Manufacture of other kitchen furniture
	36.14	Manufacture of other furniture
	36.15	Manufacture of mattresses
36.2		Manufacture of jewellery and related articles
	36.21	Striking of coins and medals
	36.22	Manufacture of jewellery and related articles n.e.c.
36.3		Manufacture of musical instruments
	36.30	Manufacture of musical instruments
36.4		Manufacture of sports goods
	36.40	Manufacture of sports goods
36.5		Manufacture of games and toys
	36.50	Manufacture of games and toys
36.6		Miscellaneous manufacturing n.e.c.
	36.61	Manufacture of imitation jewellery
	36.62	Manufacture of brooms and brushes
	36.63	Other manufacturing n.e.c.
37		Recycling
	37.1	Recycling of metal waste and scrap
	37.10	Recycling of metal waste and scrap
37.2		Recycling of non-metal waste and scrap
	37.20	Recycling of non-metal waste and scrap
Section E		Electricity, gas and water supply

APPENDIX D: OPTIONAL 4-POSITION CLASSIFICATIONS

40		Electricity, gas, steam and hot water supply
	40.1	Production and distribution of electricity
		40.10 Production and distribution of electricity
	40.2	Manufacture of gas; distribution of gaseous fuels through mains
		40.20 Manufacture of gas; distribution of gaseous fuels through mains
	40.3	Steam and hot water supply
		40.30 Steam and hot water supply
41		Collection, purification and distribution of water
	41.0	Collection, purification and distribution of water
		41.00 Collection, purification and distribution of water
Section F		Construction
45		Construction
	45.1	Site preparation
		45.11 Demolition and wrecking of buildings; earth moving
		45.12 Test drilling and boring
	45.2	Building of complete constructions or parts thereof; civil engineering
		45.21 General construction of buildings and civil engineering works
		45.22 Erection of roof covering and frames
		45.23 Construction of highways, roads, airfields and sport facilities
		45.24 Construction of water projects
		45.25 Other construction work involving special trades
	45.3	Building installation
		45.31 Installation of electrical wiring and fittings
		45.32 Insulation work activities
		45.33 Plumbing
		45.34 Other building installation
	45.4	Building completion
		45.41 Plastering
		45.42 Joinery installation
		45.43 Floor and wall covering
		45.44 Painting and glazing
		45.45 Other building completion
	45.5	Renting of construction or demolition equipment with operator
		45.50 Renting of construction or demolition equipment with operator
Section G		Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
50		Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel
	50.1	Sale of motor vehicles
		50.10 Sale of motor vehicles
	50.2	Maintenance and repair of motor vehicles
		50.20 Maintenance and repair of motor vehicles
	50.3	Sale of motor vehicle parts and accessories
		50.30 Sale of motor vehicle parts and accessories
	50.4	Sale, maintenance and repair of motorcycles and related parts and accessories
		50.40 Sale, maintenance and repair of motorcycles and related parts and accessories
	50.5	Retail sale of automotive fuel
		50.50 Retail sale of automotive fuel
51		Wholesale trade and commission trade, except of motor vehicles and motorcycles
	51.1	Wholesale on a fee or contract basis
		51.11 Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods
		51.12 Agents involved in the sale of fuels, ores, metals and industrial chemicals
		51.13 Agents involved in the sale of timber and building materials
		51.14 Agents involved in the sale of machinery, industrial equipment, ships and aircraft
		51.15 Agents involved in the sale of furniture, household goods, hardware and ironmongery
		51.16 Agents involved in the sale of textiles, clothing, footwear and leather goods
		51.17 Agents involved in the sale of food, beverages and tobacco
		51.18 Agents specializing in the sale of particular products or ranges of products n.e.c.
		51.19 Agents involved in the sale of a variety of goods
	51.2	Wholesale of agricultural raw materials and live animals

		These groups include only wholesale on own account
	51.21	Wholesale of grain, seeds and animal feeds
	51.22	Wholesale of flowers and plants
	51.23	Wholesale of live animals
	51.24	Wholesale of hides, skins and leather
	51.25	Wholesale of unmanufactured tobacco
51.3		Wholesale of food, beverages and tobacco
	51.31	Wholesale of fruit and vegetables
	51.32	Wholesale of meat and meat products
	51.33	Wholesale of dairy produce, eggs and edible oils and fats
	51.34	Wholesale of alcoholic and other beverages
	51.35	Wholesale of tobacco products
	51.36	Wholesale of sugar and chocolate and sugar confectionery
	51.37	Wholesale of coffee, tea, cocoa and spices
	51.38	Wholesale of other food, including fish, crustaceans and molluscs
	51.39	Non-specialized wholesale of food, beverages and tobacco
51.4		Wholesale of household goods
	51.41	Wholesale of textiles
	51.42	Wholesale of clothing and footwear
	51.43	Wholesale of electrical household appliances and radio and television goods
	51.44	Wholesale of china and glassware, wallpaper and cleaning materials
	51.45	Wholesale of perfume and cosmetics
	51.46	Wholesale of pharmaceutical goods
	51.47	Wholesale of other household goods
51.5		Wholesale of non-agricultural intermediate products, waste and scrap
	51.51	Wholesale of solid, liquid and gaseous fuels and related products
	51.52	Wholesale of metals and metal ores
	51.53	Wholesale of wood, construction materials and sanitary equipment
	51.54	Wholesale of hardware, plumbing and heating equipment and supplies
	51.55	Wholesale of chemical products
	51.56	Wholesale of other intermediate products
	51.57	Wholesale of waste and scrap
51.6		Wholesale of machinery, equipment and supplies
	51.61	Wholesale of machine-tools
	51.62	Wholesale of construction machinery
	51.63	Wholesale of machinery for the textile industry and of sewing and knitting machines
	51.64	Wholesale of office machinery and equipment
	51.65	Wholesale of other machinery for use in industry, trade and navigation
	51.66	Wholesale of agricultural machinery and accessories and implements, including tractors
51.7		Other wholesale
	51.70	Other wholesale
52		Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods
52.1		Retail sale in non-specialized stores
	52.11	Retail sale in non-specialized stores with food, beverages or tobacco predominating
	52.12	Other retail sale in non-specialized stores
52.2		Retail sale of food, beverages and tobacco in specialized stores
	52.21	Retail sale of fruit and vegetables
	52.22	Retail sale of meat and meat products
	52.23	Retail sale of fish, crustaceans and molluscs
	52.24	Retail sale of bread, cakes, flour confectionery and sugar confectionery
	52.25	Retail sale of alcoholic and other beverages
	52.26	Retail sale of tobacco products
	52.27	Other retail sale of food, beverages and tobacco in specialized stores
52.3		Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles
	52.31	Dispensing chemists
	52.32	Retail sale of medical and orthopaedic goods
	52.33	Retail sale of cosmetic and toilet articles
52.4		Other retail sale of new goods in specialized stores
	52.41	Retail sale of textiles
	52.42	Retail sale of clothing
	52.43	Retail sale of footwear and leather goods

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	52.44	Retail sale of furniture, lighting equipment and household articles n.e.c.
	52.45	Retail sale of electrical household appliances and radio and television goods
	52.46	Retail sale of hardware, paints and glass
	52.47	Retail sale of books, newspapers and stationery
	52.48	Other retail sale in specialized stores
52.5		Retail sale of second-hand goods in stores
	52.50	Retail sale of second-hand goods in stores
52.6		Retail sale not in stores
	52.61	Retail sale via mail order houses
	52.62	Retail sale via stalls and markets
	52.63	Other non-store retail sale
52.7		Repair of personal and household goods
	52.71	Repair of boots, shoes and other articles of leather
	52.72	Repair of electrical household goods
	52.73	Repair of watches, clocks and jewellery
	52.74	Repair n.e.c.
Section H		Hotels and restaurants
55		Hotels and restaurants
	55.1	Hotels
	55.11	Hotels and motels, with restaurant
	55.12	Hotels and motels, without restaurant
55.2		Camping sites and other provision of short-stay accommodation
	55.21	Youth hostels and mountain refuges
	55.22	Camping sites, including caravan sites
	55.23	Other provision of lodgings n.e.c.
55.3		Restaurants
	55.30	Restaurants
55.4		Bars
	55.40	Bars
55.5		Canteens and catering
	55.51	Canteens
	55.52	Catering
Section I		Transport, storage and communication
60		Land transport; transport via pipelines
	60.1	Transport via railways
	60.10	Transport via railways
60.2		Other land transport
	60.21	Other scheduled passenger land transport
	60.22	Taxi operation
	60.23	Other land passenger transport
	60.24	Freight transport by road
	60.3	Transport via pipelines
	60.30	Transport via pipelines
61		Water transport
	61.1	Sea and coastal water transport
	61.10	Sea and coastal water transport
	61.2	Inland water transport
	61.20	Inland water transport
62		Air transport
	62.1	Scheduled air transport
	62.10	Scheduled air transport
	62.2	Non-scheduled air transport
	62.20	Non-scheduled air transport
	62.3	Space transport
	62.30	Space transport
63		Supporting and auxiliary transport activities; activities of travel agencies
	63.1	Cargo handling and storage
	63.11	Cargo handling
	63.12	Storage and warehousing

63.2		Other supporting transport activities
	63.21	Other supporting land transport activities
	63.22	Other supporting water transport activities
	63.23	Other supporting air transport activities
63.3		Activities of travel agencies and tour operators; tourist assistance activities n.e.c.
	63.30	Activities of travel agencies and tour operators; tourist assistance activities n.e.c.
63.4		Activities of other transport agencies
	63.40	Activities of other transport agencies
64		Post and telecommunications
	64.1	Post and courier activities
	64.11	National post activities
	64.12	Courier activities other than national post activities
	64.2	Telecommunications
	64.20	Telecommunications
Section J		Financial intermediation
65		Financial intermediation, except insurance and pension funding
	65.1	Monetary intermediation
	65.11	Central banking
	65.12	Other monetary intermediation
	65.2	Other financial intermediation
	65.21	Financial leasing
	65.22	Other credit granting
	65.23	Other financial intermediation n.e.c.
66		Insurance and pension funding, except compulsory social security
	66.0	Insurance and pension funding, except compulsory social security
	66.01	Life insurance
	66.02	Pension funding
	66.03	Non-life insurance
67		Activities auxiliary to financial intermediation
	67.1	Activities auxiliary to financial intermediation, except insurance and pension funding
	67.11	Administration of financial markets
	67.12	Security broking and fund management
	67.13	Activities auxiliary to financial intermediation n.e.c.
	67.2	Activities auxiliary to insurance and pension funding
	67.20	Activities auxiliary to insurance and pension funding
Section K		Real estate, renting and business activities
70		Real estate activities
	70.1	Real estate activities with own property
	70.11	Development and selling of real estate
	70.12	Buying and selling of own real estate
	70.2	Letting of own property
	70.20	Letting of own property
	70.3	Real estate activities on a fee or contract basis
	70.31	Real estate agencies
	70.32	Management of real estate on a fee or contract basis
71		Renting of machinery and equipment without operator and of personal and household goods
	71.1	Renting of automobiles
	71.10	Renting of automobiles
	71.2	Renting of other transport equipment
	71.21	Renting of other land transport equipment
	71.22	Renting of water transport equipment
	71.23	Renting of air transport equipment
	71.3	Renting of other machinery and equipment
	71.31	Renting of agricultural machinery and equipment
	71.32	Renting of construction and civil engineering machinery and equipment
	71.33	Renting of office machinery and equipment, including computers
	71.34	Renting of other machinery and equipment n.e.c.
	71.4	Renting of personal and household goods n.e.c.

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	71.40	Renting of personal and household goods n.e.c.
72		Computer and related activities
	72.1	Hardware consultancy
	72.10	Hardware consultancy
	72.2	Software consultancy and supply
	72.20	Software consultancy and supply
	72.3	Data processing
	72.30	Data processing
	72.4	Database activities
	72.40	Database activities
	72.5	Maintenance and repair of office, accounting and computing machinery
	72.50	Maintenance and repair of office, accounting and computing machinery
	72.6	Other computer related activities
	72.60	Other computer related activities
73		Research and development
	73.1	Research and experimental development on natural sciences and engineering
	73.10	Research and experimental development on natural sciences and engineering
	73.2	Research and experimental development on social sciences and humanities
	73.20	Research and experimental development on social sciences and humanities
74		Other business activities
	74.1	Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings
	74.11	Legal activities
	74.12	Accounting, book-keeping and auditing activities; tax consultancy
	74.13	Market research and public opinion polling
	74.14	Business and management consultancy activities
	74.15	Management activities of holding companies
	74.2	Architectural and engineering activities and related technical consultancy
	74.20	Architectural and engineering activities and related technical consultancy
	74.3	Technical testing and analysis
	74.30	Technical testing and analysis
	74.4	Advertising
	74.40	Advertising
	74.5	Labour recruitment and provision of personnel
	74.50	Labour recruitment and provision of personnel
	74.6	Investigation and security activities
	74.60	Investigation and security activities
	74.7	Industrial cleaning
	74.70	Industrial cleaning
	74.8	Miscellaneous business activities n.e.c.
	74.81	Photographic activities
	74.82	Packaging activities
	74.83	Secretarial and translation activities
	74.84	Other business activities n.e.c.

Section L

Public administration and defence; compulsory social security

75		Public administration and defence; compulsory social security
	75.1	Administration of the State and the economic and social policy of the community
	75.11	General (overall) public service activities
	75.12	Regulation of the activities of agencies that provide health care, education, cultural services and other social services, excluding social security
	75.13	Regulation of and contribution to more efficient operation of business
	75.14	Supporting service activities for the government as a whole
	75.2	Provision of services to the community as a whole
	75.21	Foreign affairs
	75.22	Defence activities
	75.23	Justice and judicial activities
	75.24	Public security, law and order activities
	75.25	Fire service activities
	75.3	Compulsory social security activities
	75.30	Compulsory social security activities

Section M

Education

80		Education
	80.1	Primary education
		80.10 Primary education
	80.2	Secondary education
		80.21 General secondary education
		80.22 Technical and vocational secondary education
	80.3	Higher education
		80.30 Higher education
	80.4	Adult and other education
		80.41 Driving school activities
		80.42 Adult and other education n.e.c.
Section N		Health and social work
85		Health and social work
	85.1	Human health activities
		85.11 Hospital activities
		85.12 Medical practice activities
		85.13 Dental practice activities
		85.14 Other human health activities
	85.2	Veterinary activities
		85.20 Veterinary activities
	85.3	Social work activities
		85.31 Social work activities with accommodation
		85.32 Social work activities without accommodation
Section O		Other community, social and personal service activities
90		Sewage and refuse disposal, sanitation and similar activities
	90.0	Sewage and refuse disposal, sanitation and similar activities
		90.00 Sewage and refuse disposal, sanitation and similar activities
91		Activities of membership organizations n.e.c.
	91.1	Activities of business, employers' and professional organizations
		91.11 Activities of business and employers' organizations
		91.12 Activities of professional organizations
	91.2	Activities of trade unions
		91.20 Activities of trade unions
	91.3	Activities of other membership organizations
		91.31 Activities of religious organizations
		91.32 Activities of political organizations
		91.33 Activities of other membership organizations n.e.c.
92		Recreational, cultural and sporting activities
	92.1	Motion picture and video activities
		92.11 Motion picture and video production
		92.12 Motion picture and video distribution
		92.13 Motion picture projection
	92.2	Radio and television activities
		92.20 Radio and television activities
	92.3	Other entertainment activities
		92.31 Artistic and literary creation and interpretation
		92.32 Operation of arts facilities
		92.33 Fair and amusement park activities
		92.34 Other entertainment activities n.e.c.
	92.4	News agency activities
		92.40 News agency activities
	92.5	Library, archives, museums and other cultural activities
		92.51 Library and archives activities
		92.52 Museums activities and preservation of historical sites and buildings
		92.53 Botanical and zoological gardens and nature reserves activities
	92.6	Sporting activities
		92.61 Operation of sports arenas and stadiums
		92.62 Other sporting activities
	92.7	Other recreational activities
		92.71 Gambling and betting activities

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		92.72	Other recreational activities n.e.c.
93			Other service activities
	93.0		Other service activities
		93.01	Washing and dry-cleaning of textile and fur products
		93.02	Hairdressing and other beauty treatment
		93.03	Funeral and related activities
		93.04	Physical well-being activities
		93.05	Other service activities n.e.c.
Section P			Private households with employed persons
95			Private households with employed persons
	95.0		Private households with employed persons
		95.00	Private households with employed persons
Section Q			Extra-territorial organizations and bodies
99			Extra-territorial organizations and bodies
	99.0		Extra-territorial organizations and bodies
		99.00	Extra-territorial organizations and bodies

Material Agent

As indicated in Appendixes A, B & C, in Phase III Material Agents can be classified in more detail at national level using the detailed 3-position or 4-position classification (6 or 8 digits) developed for this purpose. However, only the 2 first positions are used for the ESAW data submitted to Eurostat.

Furthermore, as also indicated in Appendix C, most tools and machines have 2-position classifications according to their function, and independently of the materials worked. Using the more detailed 3-position or 4-position classification, however, it is possible, where necessary, to specify the material worked (mainly for machines in groups 10.02, 10.04 and 10.07 to 10.15), or the packaging used in packaging machines (codes 10.16).

The fourth position of the code in the classification below is used to make this distinction. This position consists of a 0X classification to denote the type of material worked or a 0Y classification to denote the type of packaging. When encoding the Material Agent, the letters X and Y should be replaced by one of the letters below, depending on the nature of the material or packaging. However, for some Material Agents, only one material/packaging code is possible, in which case it is used in the classification directly.

Value of codes 0X or 0Y (fourth position)	Nature of the objet
0A	Stone, mineral
0B	Metal,
0C	Wood,
0D	Rubber, plastic,
0E	Paper, cardboard,
0F	Textile,
0G	Leather,
0H	Foodstuffs

The 4-position Material Agent classification is indicated in the following pages.

Appendix E: Weighting

With regard to the Member States (MS) which will code the causes and the circumstances only for a *national sample* of accidents at work, a weighting procedure has been proposed to the Task Force during the meeting on 14/02/2001.

It has been proposed to use also this procedure for reporting levels < 100% or to solve some issues about the coverage of the data or the type of accidents covered, etc. . When various situations are cumulated (reporting level < 100% + sample + etc.), the MS should provide for each case (accident) in the data *only 1 weight cumulating all the effects*. For MS for which no weighting is necessary, all weights will be = 1 in the datafile. It will be also the same for all fatal accidents of all MS.

Consequently a new variable "weight" would be introduced in Phase III on a compulsory basis (the default value being 1). This proposal was adopted by the ESAW Working Group during its meeting on 17/10/2001. The detailed methodology will be discussed with Member States and the Working Group. It could be based on the following proposals :

- i. *Situation* : in Phase 3 some Member States (MS) will not encode all accidents > 3 days' absence but only a national sample of such accidents (either providing phase 1 and 2 data only on the sample or for all accidents).

Problem : Eurostat needs to extrapolate the results from the sample to all accidents > 3 days' absence for these MS.

Solution : Post-stratification method as done, for ex., in the Labour Force Survey methodology.

- ii. *Definition of control variables for the post-stratification* :

- ✓ Economic activity (NACE 1- or 2-digit)
- ✓ Sex
- ✓ Age group
- ✓ Others ? (but, e.g., ISCO & employment status are not covered by all MS in ESAW).

- iii. *Example with 2 control variables I & J - Definition of weights and extrapolation to the whole population of accidents* :

- ✓ N_{ij} the number of cases with values of control variables $I = 'i'$ & $J = 'j'$ in the whole population of accidents at work > 3 days' absence in the MS during the reference year;
- ✓ n_{ij} the number of cases with values of control variables $I = 'i'$ & $J = 'j'$ in the sample of accidents at work > 3 days' absence codified for phase 3 variables;
- ✓ Weight of each case in the sample with values of control variables $I = 'i'$ & $J = 'j'$:

$W_{ij} = 1 / P_{ij} = N_{ij} / n_{ij}$	formula 1;
---	------------

- ✓ n_{ijk} the number of cases with values of control variables $I = 'i'$ & $J = 'j'$ in the sample, having the value k for the phase 3 variable K (ex. Contact);
- ✓ Calculation of the number N_{ijk} of accidents at work > 3 days' absence with values of control variables $I = 'i'$ & $J = 'j'$, having the value k for the phase 3 variable K in the whole population of accidents at work > 3 days' absence occurred in the MS during the reference year :

$N_{ijk} = n_{ijk} \times W_{ij}$	(= $n_{ijk} \times N_{ij} / n_{ij}$)	formula 2;
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APPENDIX E: WEIGHTING

- ✓ Calculation of the number N_k of accidents at work > 3 days' absence having the value 'k' for the phase 3 variable K in the whole population of accidents at work > 3 days' absence occurred in the MS during the reference year :

$$N_k = \sum_{ij} N_{ijk} = \sum_{ij} n_{ijk} \times W_{ij} \quad (= \sum_{ij} n_{ijk} \times N_{ij} / n_{ij}) \quad \text{formula 3;}$$

- ✓ Calculation of the total number N of accidents at work > 3 days' absence occurred in the MS during the reference year :

$$N = \sum_k N_k = \sum_{ijk} N_{ijk} = \sum_{ijk} n_{ijk} \times W_{ij} \quad \text{formula 4}$$

$$(= \sum_{ijk} n_{ijk} \times N_{ij} / n_{ij} = \sum_{ij} [N_{ij} / n_{ij}] \times \sum_k n_{ijk} = \sum_{ij} [N_{ij} / n_{ij}] \times n_{ij} = \sum_{ij} N_{ij}).$$

iv. Extension of the use of weights to MS that register only partly the non-fatal accidents at work :

- ✓ Some MS do not register 100% of the accidents at work > 3 days' absence; these MS provide Eurostat with evaluations of their national reporting levels, breakdown mainly according to the economic activity branches - NACE sections 1 letter – (also partly by occupation - ISCO 1-digit -, employment status or size of enterprise); this information is provided levels at 1-digit level via the evaluation questionnaire filled by the MS for each reference year's ESAW data.
- ✓ If I, J & K are the 3 variables NACE, ISCO and employment status (size of enterprise not used up to date);
- ✓ The calculation done by Eurostat to estimate the numbers of accidents > 3 days' absence occurred in these MS is based on the following formulas, according to the ESAW methodology agreed with the MS :

R_i the reporting level for people with value 'i' of the variable I (for ex., I = NACE, i = A agriculture, in UK in 1998, $R_i = 28\% = 0.28$, etc.);

R_j and R_k similarly the reporting levels for people with value 'j' and 'k' of variables J and K respectively;

R_{ij} , R_{ik} , R_{jk} , R_{ijk} the crossed reporting level when available (ex. I = NACE & i = A agriculture etc., J = occupation & j = 6 skilled agricultural and fishery workers etc., K = employment status & k = 1 self-employed etc.);

n_{ijk} the number of reported cases with values I = 'i', J = 'j' & K = 'k';

N_{ijk} the total number of accidents at work > 3 days' absence with values I = 'i', J = 'j' & K = 'k' occurred in the MS during the reference year;

(respectively n_i & n_j and N_i & N_j when reporting levels are only available according to 1 or 2 variables, I or I & J);

N the total number of accidents at work > 3 days' absence occurred in the MS during the reference year;

$$N_{ijk} = n_{ijk} / R_{ijk} \quad (\text{respectively } N_i = n_i / R_i, N_j = n_j / R_j)$$

$$N = \sum_{ijk} N_{ijk} = \sum_{ijk} n_{ijk} / R_{ijk};$$

- ✓ If we define for these MS the weights :

$$W_{ijk} = 1 / R_{ijk} \quad \text{similarly } W_i, W_j, W_k, W_{ij} \text{ \& } W_{jk}$$

(for example in UK for NACE A = agriculture in 1998, $W_i = 1 / 28\% = 1 / 0.28 = 3.571429$);

then :

$$\begin{aligned} N_{ijk} &= n_{ijk} \times W_{ijk} \\ N &= \sum_{ijk} N_{ijk} = \sum_{ijk} n_{ijk} \times W_{ijk} \end{aligned} \quad \text{formula 5 for 3 reporting levels' variables;}$$

respectively when reporting levels are only available according to 1 or 2 variables (I or I & J) in the MS :

1 variable I :

$N_{ijk} = n_{ijk} \times W_i$ $N = \sum_{ijk} N_{ijk} = \sum_{ijk} n_{ijk} \times W_i$	formula 5 for 1 reporting levels' variable
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(= $\sum_i W_i \sum_{jk} n_{ijk} = \sum_i n_i \times W_i = \sum_i N_i$) ;

2 variables I & J :

$N_{ijk} = n_{ijk} \times W_{ij}$ $N = \sum_{ijk} N_{ijk} = \sum_{ijk} n_{ijk} \times W_{ij}$	formula 5 for 2 reporting levels' variables
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(= $\sum_{ij} W_{ij} \sum_k n_{ijk} = \sum_{ij} n_{ij} \times W_{ij} = \sum_{ij} N_{ij}$) ;

formula 5 for 2 reporting levels' variables = formula 4 \Rightarrow same method.
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Consequently the “problem” of MS that register only partly the non-fatal accidents at work (> 3 days' absence) could be managed with the same methodology as for the use of samples, defining in that case the weights as the inverses of the reporting levels.

- ✓ This would provide MS with a more flexible case-by-case management of the reporting levels : possibility to use crossed reporting levels and then crossed weights according not only to NACE sections but also to ISCO, employment status, size of the local unit or any other variable;
 - ✓ For MS reporting 100% of the accidents at work > 3 days' absence, all weights $W_{ijk} = W_{ij} = W_i = 1$, i.e., they should fill the weight variable imputing always the value 1; however, this method would also provide more flexibility for these MS as they would be able to consider weights $\neq 1$ for very specific cases if necessary;
 - ✓ Nevertheless, the meta-data provided via the evaluation questionnaire, should be maintained as they allow a general description of the reporting of accidents at work in Europe;
- v. *Broader extension of the weights to all MS :*
- ✓ Some MS can face specific situations; for example some countries, at least in a first time, had/have to include 0-3 days' absence accidents in ESAW data as they were/are not able to distinguish between > or \leq 3 days' absence; however, they could be able to evaluate the share S (ex. $S = 80\% = 0,8$) of the accidents > 3 days' absence in the total of all accidents at work in their country (or S_{ij} if the share depends on variables I & J as in points iii & iv above); in that case a weight could also be used in ESAW data for these MS, “ W_{ij} ” = “ S_{ij} ” or “S” (= 0,8 in the example) with the same formulas and calculations as above;
 - ✓ Finally, we can imagine that in future, for ex. with the enlargement and new MS, new similar situations could occur.

In conclusion, various situations that can be solved by weighting procedures are now involved in ESAW; it would be difficult to use different methods depending on the case, maintaining the reporting levels procedure for some MS, using weights for others implementing samples, etc.; additionally “crossed”-situations could occur, with MS cumulating more than one situation of this type, and it would be very difficult to control these “crossed”-situations with different “corrections” of the data at the same time (reporting levels + weights, etc.); on the opposite it would be very simple to cover all these situations in only 1 weight for each accident > 3 days' absence.

vi. *Conclusion : compulsory variable “weight” in ESAW phase 3 methodology*

It is proposed to include a weight for each case of accident at work in all ESAW Phase III datafiles submitted by the MS. The weights will be $\neq 1$ when using samples for the Phase III codification, when reporting levels < 100% or to solve some issues about coverage or type of accidents, etc. .

When various situations are cumulated (reporting level < 100% + sample + etc.), the MS should provide for each case (accident) in the data *only 1 weight cumulating all the effects*. For MS for which no weighting is necessary, all weights will be = 1 in the datafile. It will be also the same for all fatal accidents of all MS.

Consequently the new variable “weight” will be a *compulsory variable* (the default value being 1).

Appendix F: Methodology for commuting accidents

Introduction

A Sub-project on *commuting accidents* is included in the project on European Statistics on Accidents at Work (ESAW), from 1996 reference year onwards. The objective is to cover more fully the field of accidents relating to work and to meet the demand for the development of harmonised data expressed in the Communication from the Commission, COM(97) 178 final of 14 May 1997, and the European Parliament and Council Decision concerning a Programme on Injury Prevention⁽²⁶⁾.

In order to promote the development of this Sub-project and given the similarity of the subject and the reporting systems, a similar Methodology is used for commuting accidents as that for accidents at work in the ESAW project. For the same reasons, the co-operation with the Member States on this Sub-project is drawn up by the ESAW Working Group and Task Force.

Only 9 Member States (Belgium, Germany, Spain, France, Italy, Luxembourg, Austria, Finland and Sweden), in which this information is available, have sent data to Eurostat on commuting accidents for the period 1996-1998. Portugal and Greece will also provide data in future.

The 4 remaining Member States (and for Portugal and Greece in the meantime) are nevertheless expected to participate in the evaluation questionnaire (see below) to allow Eurostat to know the situation of all national systems on commuting accidents in Europe, even when no data is available. It is also hoped that these 4 countries should be able to participate in the Sub-project in a second step.

Methodology

Definitions

The term *commuting accident* means any accident which occurs during the normal journey between the home, the place of work and the usual place where meals are taken. This journey can include normal activities on the way to or from work, like for example picking one's children up from school. On the other hand, an accident is not considered as a commuting accident if it takes place during a journey different from the usual journey for specific reasons, which is considered as an accident during leisure time (including transport during leisure time). Are also excluded accidents which occur in the course of work even if they occur on the public highway or other public places (e.g., station).

As for accidents at work, the Sub-project covers all commuting accidents leading to an absence of more than three calendar days from work or the death of the victim.

Variables

The variables considered are the same as for accidents at work in the ESAW Project for accidents at work (Phase I to III) presented earlier in this publication.

Evaluation questionnaire

As for the accidents at work, some additional information are necessary to allow an accurate use of the data in Eurostat and a good validity and quality of the statistics. It is also important for Eurostat to have information on the national system on commuting accidents even if no data is available.

⁽²⁶⁾ Decision 99/372/EC of the European Parliament and Council, OJ L46, 20.02.99

Appendix G: References

“Social Europe – 3/93 – Europe for safety and health at work” – DG Employment, Industrial Relations and Social Affairs 1993 / Catalogue number CE-AA-93-003-EN-C.

NACE-Rev1: Council Regulation (EEC) N° 3037/90 of 9.10.90 on the statistical classification of economic activities in the European Community – OJ L 293 of 24.10.90, amended by the Commission Regulation (EEC) N° 761/93 of 24.03.93 - OJ L 83 of 3.04.93.

ILO Resolution of 1998 concerning “Statistics of Occupational Injuries: resulting from Occupational Accidents” Adopted by the Sixteenth International Conference of Labour Statisticians, Geneva, 6-15 October 1998.

“European Union Labour Force Survey – Methods and definitions – 1998 Edition” – Theme 3 Population and social conditions – Eurostat / Catalogue number CA-19-98-536-EN-C.

“European statistics on accidents at work – Methods and definitions – 1998 Edition” – Theme 3 Population and social conditions – Eurostat / Catalogue number CA-19-98-908-EN-S.

“European codification system of the causes and circumstances of accidents at work” – DG Employment and social affairs – Eurostat – Eurogip / Catalogue number CE-25-99-843-EN-C.

“Statistics in focus – Theme 3 Population and social conditions – N°16/2001 - Accidents at work in the EU 1998-1999” – Eurostat / Catalogue number KS-NK-01-016-EN-C.

Appendix H: National ESAW data providers

The list below indicates either Institutions that are the official national provider of the ESAW data to Eurostat, Institutions in charge of the elaboration of this data in the Member State and other national Institutions that participate actively in the ESAW project without elaborating nor providing data. For some countries it is the same administration. For other they are different. In this last case an “*” indicates what is the Institution actually elaborating the main part of the national data.

B - Belgium

Ministère du Travail et de l'Emploi
Administration de la Sécurité
51-53, avenue Belliard
B - 1040
BRUXELLES

* Fonds des Accidents du Travail
100, rue du Trône
B – 1050
BRUXELLES

DK - Denmark

Direktoratet for Arbejdstilsynet
Danish Working Environment Authority
Landskronagade 33-35
DK-2100 København Ø

DE - Germany

Bundesministerium für Arbeit Und Sozialordnung
D – 10117
BERLIN

* HVBG – Hauptverband der gewerblichen Berufsgenossenschaften
Alte Heerstrasse, 111
D – 53754
SANKT AUGUSTIN

EL - Greece

Ministry of Labour and Social Affairs
Directorate of Working Conditions
40 Pireos Str.
GR - 101 82
ATHENS

* IKA - Social Security Institution
Actual and Statistics Service
Agiou Constantinou street, 16-18
GR - 10241
ATHENS

* National Statistical Service
14-16 Lycourgou street
GR - 10166
ATHENS

E - Spain

Ministerio de Trabajo y Seguridad Social
Subdirección General de Estadísticas Sociales y Laborales
Sección de Accidentes de Trabajo
María de Guzmán, 52
E-28071
MADRID

F – France

Ministère du Travail
DARES
Sous direction salaires, travail et relations professionnelles
20, rue d'Estrées
F – 75700
PARIS 07 SP

* CNAMTS - Caisse Nationale d'Assurance Maladie des Travailleurs Salariés
Direction des Risques Professionnels
33, avenue du Maine
B.P. 7
F – 75755
PARIS Cedex 15

Eurogip
55, rue de la Fédération
F – 75015 PARIS

MSA - Caisse Centrale de la Mutualité Sociale Agricole
Direction du Financement, Gestion, Comptabilité
Département Etudes Economiques et Financières
8-10, rue d'Astorg
F - 75413 PARIS Cedex 08

EDF - GDF / Electricité de France – Gaz de France
Service Prévention et Sécurité
Observatoire Statistique
22-30, avenue de Wagram
F - 75382 PARIS Cedex 08

IRL - Ireland

Health and Safety Authority
10, Hogan Place
IRL -
DUBLIN 2

I - Italy

Ministero del Lavoro
Servizio Centrale dell'Ispettorato del Lavoro
Via Pastrengo, 22
I - 00185
ROMA

* INAIL - Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro

Consulenza Statistico
Via Stefano Gradi, 55
I – 00197
ROMA

Direzione Generale
Piazzale Pastore, N° 6
I – 00144
ROMA

L - Luxembourg

* Association d'Assurance contre les Accidents
125, route d'Esch
L – 2976
LUXEMBOURG

Inspection du Travail et des Mines
26, rue Zithe
B.P. 27
L – 2010
LUXEMBOURG

NL - The Netherlands

Ministerie van Sociale Zaken en Werkgelegenheid
Postbus 90804 Anna Van Hannoverstraat, 4
NL – 2509
LV DEN HAAG

A - Austria

Bundesanstalt Statistik Österreich
Direktion Bevölkerung
Untergruppe Gesundheit
Intere Zollamtstrasse, 2b
A – 1030
WIEN

Bundesministerium für Arbeit, Gesundheit und Soziales
Abteilung II/8
Stubenring, 1
A – 1010
WIEN

* AUVA - Allgemeine Unfallversicherungsanstalt Hauptstelle
Adalbert-Stiffer-Str. 65
A – 1200
WIEN

BVA - Versicherungsanstalt der öffentlichen Bediensteten
Versicherungsanstalt der österreichischen Eisenbahnen
SVA d. Bauern - Sozialversicherungsanstalt der Bauern

P – Portugal

* Ministerio de Emprego e da Segurança Social
Departamento de Estatística
Rue Rodrigo Da Fonseca, 55
P-1227
LISBOA Codex

Instituto Nacional de Estatística
Avenida Antonio José de Almeida, 5-9
P – 1078
LISBOA Codex

FIN - Finland

Statistics Finland
PL 5 B
Työpajakatu, 13
FIN – 00022
HELSINKI

* Tapaturmavakuutuslaitosten Liitto
Federation of Accidents Insurance Institutions
Bulevardi, 28
FIN – 00120
HELSINKI

S - Sweden

Statistics Sweden
Box 24300
S – 10451
STOCKHOLM

* Arbetarskyddsstyrelsen
Swedish Work Environment Authority
Statistikenheten (Statistics Division)
SE - 171 84
SOLNA

UK - United Kingdom

Health and Safety Executive
Statistical Service Unit
Daniel House Trinity Road, Bootle
UK -
MERSEYSIDE - L20 7HE

NO - Norway

Direktoratet for Arbeidstilsynet
Postboks 8103 Dep.
N - 0032
OSLO

CH - Switzerland

Schweizerische Unfallversicherungsanstalt Abteilung Versicherungstechnik
Bereich Statistik
Fluhmattstrasse, 1
CH – 6002
LUZERN