



Occupational Safety & Health

Specific risks (Chemicals)

DG EMPL, unit B3 Health and Safety

These slides accompany the explanation of the acquis to Albania and North Macedonia and can only be used for that purpose. Their content is subject to further development of the acquis and interpretation by the Court of Justice of the European Union

Framework and Individual Directives

- Carcinogens
- Biological Agents
- Chemical Agents
- Physical Agents:
 - Noise
 - Vibrations
 - EMF
 - Optical Radiation

Manual Handling of Loads

- Asbestos



Framework
Directive
89/391/EEC

- Workplaces
- Work Equipment, Scaffolding
- Personal Protective Equipment
- Display Screen Equipment
- Safety Signs
- Construction Sites
- Mineral-extracting Industries
- Drilling in Mineral-extracting Industries
- Fishing Vessels
- Explosive Atmospheres
- Sharp injuries

Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive)

Objective

To set minimum requirements on workers' protection against health and safety hazards related to chemical agents at work, or resulting from any work activity involving chemical agents

Scope: The Directive shall apply where hazardous chemical agents are present or may be present at the workplace, without prejudice to the provisions for chemical agents to which measures for radiation protection apply pursuant to Directives adopted under the Treaty establishing the European Atomic Energy Community

For carcinogens at work the provisions of this Directive shall apply without prejudice to more stringent and/or specific provisions contained in Council Directive 2004/37.

The Framework Directive applies in full, without prejudice to more stringent and/or specific provisions contained in this Directive.

As far as the transport of hazardous chemical agents is concerned, the provisions of this Directive shall apply without prejudice to more stringent and/or specific provisions in specific transport related legislation.

2. Key provisions

Definitions

‘Hazardous chemical agent’ – reference to physical and/or health hazard classes laid down in Regulation (EC) No 1272/2008

“any chemical agent which meets the criteria for classification as hazardous within any physical and/or health hazard classes laid down in Regulation (EC) No 1272/2008 of the European Parliament and of the Council (19), whether or not that chemical agent is classified under that Regulation”

‘Hazard’ means the intrinsic property of a chemical agent with the potential to cause harm

- **Activity involving chemical agents'** means any work in which chemical agents are used, or are intended to be used, in any process, including production, handling, storage, transport or disposal and treatment, or which result from such work;
- **'Occupational exposure limit value'** means, unless otherwise specified, the limit of the time-weighted average of the concentration of a chemical agent in the air within the breathing zone of a worker in relation to a specified reference period;
- **'Biological limit value'** means the limit of the concentration in the appropriate biological medium of the relevant agent, its metabolite, or an indicator of effect;
- **'Health surveillance'** means the assessment of an individual worker to determine the state of health of that individual, as related to exposure to specific chemical agents at work;

Employer's obligation

- to carry out a risk assessment
- to eliminate or reduce risks by design and organization of work systems
- to provide suitable equipment
- to reduce to a minimum the number of exposed or likely-to-be-exposed workers
- to reduce to a minimum the duration and intensity of exposure
- to take appropriate hygiene measures,
- reduce the quantity of chemical agents to the minimum required and suitable working procedures
- to monitor levels of exposure
- to review assessment after change of work practices / conditions
- to sample and measure using standard methods

3. Implementation

On the basis of an independent scientific assessment of the relationship between the health effects of hazardous chemical agents and the level of occupational exposure, after consulting the Advisory Committee on Safety, Hygiene and Health Protection at Work, the Commission must propose European objectives in the form of indicative occupational exposure limit values (*IOELVs*) for the protection of workers from chemical risks, to be set at Union level. *IOELVs may be established where the review of the available scientific data leads to the conclusion that it is possible to identify a clear threshold dose below which exposure to the substance is not expected to lead to adverse health effects.*

Commission Directive 91/322/EEC on establishing **indicative limit values** by implementing Council Directive 80/1107/EEC on the protection of workers from the risks related to exposure to chemical, physical and biological agents at work

-Commission Directive 2000/39/EC establishing a **first list** of indicative occupational exposure limit values in implementation of Directive 98/24/EC

-Commission Directive 2006/15/EC establishing a **second list** of indicative occupational exposure limit values in implementation of Directive 98/24/EC

-Commission Directive 2009/161/EU establishing a **third list** of indicative occupational exposure limit values in implementation of Directive 98/24/EC

-Commission Directive 2017/164/EU establishing a **forth list** of indicative occupational exposure limit values in implementation of Directive 98/24/EC

3. Implementation (cont'd)

The limit values must be established or revised, taking into account the availability of measurement techniques.

Member States must keep workers' and employers' organisations informed of these limit values.

For any chemical agent for which a binding occupational exposure limit value is established at Union level, Member States must establish a corresponding national binding occupational exposure limit value that does not exceed the Union limit value

- Binding Occupational Exposure Limit Values (BOELVs)

BOELVs take account of socio-economic and technical feasibility factors as well as factors considered when establishing IOELVs

For any chemical agent for which a binding biological limit value is established at Union level, Member States must establish a corresponding national binding biological limit value that does not exceed the Union limit value.

Where a Member State introduces or revises a national (biological or occupational exposure) limit value for a chemical agent, it must inform the Commission and other Member States.

The employer must ensure that the risk is eliminated or reduced to a minimum, preferably by substitution

Where the nature of the activity does not permit risk to be eliminated by substitution, the following protection and prevention measures must be taken, listed in order of priority:

- design of appropriate work processes and engineering controls and use of adequate equipment and materials so as to avoid or minimise the release of hazardous chemical agents;
- application of collective protection measures at the source of the risk;
- application of personal protection measures.

The employer must establish procedures (action plans) which can be implemented in the event of an accident, incident or emergency related to the presence of hazardous chemical agents at the workplace.

When one of these events occurs, the employer must take appropriate remedial action as soon as possible and inform the workers concerned.

Only workers who are needed to restore the normal situation are permitted to remain in the affected area; they must be provided with protective clothing, personal protective equipment, and specialised safety equipment and plant.

Information and training for workers

The employer must ensure that workers and/or their representatives are provided with:

- the results of the risk assessment;
- full information on the hazardous chemical agents present at the workplace;
- training and information on the appropriate precautions and on the personal and collective protection measures that are to be taken;
- access to any safety data sheet provided by the supplier.

The information must be provided in an appropriate manner and updated to take account of changing circumstances.

Miscellaneous provisions

- **Prohibitions**

Annex III to the Directive specifies limits above which certain chemical agents and activities involving chemical agents are prohibited.

Member States may permit derogations from these prohibitions in the following circumstances:

- for the sole purpose of scientific research and testing;
- for activities intended to eliminate chemical agents that are present in the form of by-products or waste products;
- for the production and use of the chemical agents as intermediates.

When requesting a derogation, the employer must provide the competent authority with the following information:

- the reason for requesting the derogation;
- the quantity of the chemical agent to be used annually;
- the activities involved;
- the number of workers liable to be involved;
- the precautions envisaged to protect the safety and health of the workers concerned;
- the technical and organisational measures taken to prevent the exposure of workers.

Member States must introduce arrangements for carrying out appropriate **health surveillance** of workers for whom the results of the assessment made by the employer reveal a risk to health.

The results of this surveillance must result in the taking of preventive measures when:

- the exposure of the worker to a hazardous chemical agent is such that an identifiable disease or adverse health effect may be related to the exposure, and;
- there is a likelihood that the disease or effect may occur under the particular conditions of the worker's work, and;
- the technique of investigation is of low risk to workers.

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (Sixth Individual Directive)

Objectives

- Protection of workers from risks related to carcinogens and mutagens.
- To lay down the minimum requirements for protection including occupational exposure limit values.
- The directive codifies the amendments to Directive 90/394 (97/42 and 99/38) and repeals these directives.

Key provisions

- **Definition** of carcinogens and mutagens (Article 1):
reference to the Annex I to Regulation (EC) No 1272/2008
- **'carcinogen'** means:
 - (i) a substance or mixture which meets the criteria for classification as a category 1A or 1B carcinogen set out in Annex I to Regulation (EC) No 1272/2008 of the European Parliament and of the Council
 - (ii) a substance, mixture or process referred to in Annex I to this Directive as well as a substance or mixture released by a process referred to in that Annex;
- (b) **'mutagen'** means:
 - a substance or mixture which meets the criteria for classification as a category 1A or 1B germ cell mutagen set out in Annex I to Regulation (EC) No 1272/2008;

- Limit values

'limit value' means, unless otherwise specified, the limit of the time-weighted average of the concentration for a 'carcinogen or mutagen' in the air within the breathing zone of a worker in relation to a specified reference period as set out in Annex III to this Directive.

- Reduction of use of carcinogens and mutagens by replacing with less dangerous substances wherever possible.
- Manufacture and use in a closed system, where substance cannot be replaced
- Reduce the level of exposure to a minimum, not exceeding the limit value, where no closed system is possible

Key provisions

- Specific requirements for use
- Provisions for unforeseen exposure and accidents
- Restricted access to risk areas
- Particular hygiene and individual protection
- Health surveillance including keeping of records (40 years)
- Annex I contains a list of substances, mixtures and processes and complements other EC legislation
- Annex II contains practical recommendations for health surveillance
- Annex III contains limit values for occupational exposure.

Amendements to Directive 2004/37/EC

- *1. Directive 2017/2398/EU*
- *2. Directive 2019/130/EU*
- *3. The Commission submitted a proposal for a third amendment of Directive 2004/37/EC on 5 April 2018 which addresses a further five carcinogenic agents in terms of occupational exposure limit values which are part of the risk-management measures under Directive 2004/37/EC – the proposal is currently with the EU legislators*
- *Work on **subsequent amendments** of the Carcinogens & Mutagens Directive*
 - including key substances such as diesel engine exhaust emissions, nickel compounds, acrylonitrile and benzene
 - next proposal envisaged for 2019

Directive 2009/148/EC on the protection of workers from the risks related to exposure to asbestos at work

Objectives

- To protect workers from risks related to the exposure to asbestos
- To lay down limit values for this exposure and specific requirements
- It does not prevent Member States from applying laws which ensure greater protection for workers
- After numerous amendments this new asbestos Directive was adopted and the previous directives 83/477/EEC and its amendments were repealed.

Key provisions

- The risk assessment has to determine the nature and degree of the workers' exposure to dust arising from asbestos or materials containing asbestos
- Activities with exposure to asbestos dust are to be notified by the employer to the responsible authority of the Member State,
- Exposure to asbestos during demolition and asbestos removal must be reduced to a minimum
- The single maximum limit value for airborne concentration of asbestos is 0.1 fibres per cm³ as an eight-hour time-weighted average (TWA)

2. Key provisions (Cont.)

- If the limit value is exceeded, the reasons must be identified and appropriate measures taken to remedy the situation
- In case limit values cannot be observed by other means, employers shall provide proper protective equipment
- Asbestos removal/demolition can be done by firms that have provided evidence of their ability
- Training and information to workers on every aspects of work in asbestos exposures
- Assessment of workers' state of health

Implementation

- EC (2012) Practical guidelines for the information and training of workers involved with asbestos removal or maintenance work <http://ec.europa.eu/social/BlobServlet?docId=7478&langId=en>
- EU-OSHA (2015) Practical guide on best practice to prevent or minimise asbestos risks <https://osha.europa.eu/data/links/a-practical-guide-on-best-practice-to-prevent-or-minimise-asbestos-risks>

Directive 1999/92/EC - minimum requirements for improving safety and health protection of workers potentially at risk from **explosive atmospheres** (15th Individual Directive)

Objective

Establishment and harmonisation of minimum requirements for improving the protection of workers potentially at risk from explosive atmospheres (ATEX)

2. Key provisions/definition ATEX

ATEX = a mixture of flammable substances with air under atmospheric conditions, in which after ignition, combustion spreads to the whole mixture

Exceptions to scope of application (Article 1)

Key provisions

- Prevention principles: employer must ensure the prevention of the formation of ATEX (1), avoid the ignition of ATEX(2), to mitigate/reduce detrimental effects of an explosion (3)
- General requirements for a safe working environment including supervision during workers' presence:
- Assessment of risks
- Drawing up of explosion protection document
- Coordination of workers from several undertakings
- Inform and train adequately the workers potentially at risk from explosive atmospheres

Key provisions (cont.)

- Classification of places (Annex I)
- Special requirements for training, work permits, equipment and explosion protection matters (Annex II)

3. Implementation

- Commission has set up a non-binding guide of good practice for the implementation (COM(2003)515). The guide must be taken into account in drawing up the national health and safety policy to the largest possible extent (Article 11 of the Directive).

Thank you for your attention!