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**COUNCIL DIRECTIVE**  
**of 28 June 1990**  
**on the protection of workers from the risks related to exposure to carcinogens at work (Sixth**  
**individual Directive within the meaning of Article 16 (1) of Directive 89/391/EEC)**  
**(90/394/EEC)**

(OJ No L 196, 26. 7. 1990, p. 1)

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THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 118a thereof,

Having regard to the proposal from the Commission<sup>(1)</sup>, drawn up following consultation with the Advisory Committee on Safety, Hygiene and Health Protection at Work,

In cooperation with the European Parliament<sup>(2)</sup>,

Having regard to the opinion of the Economic and Social Committee<sup>(3)</sup>,

Whereas Article 118a of the Treaty provides that the Council is to adopt, by means of Directives, minimum requirements in order to encourage improvements, especially in the working environment, so as to guarantee better protection of the health and safety of workers;

Whereas, according to that Article, such directives must avoid imposing administrative, financial and legal constraint in a way which would hold back the creation and development of small and medium-sized undertakings;

Whereas the Council resolution of 27 February 1984 on a second action programme of the European Communities on safety and health at work<sup>(4)</sup> provides for the development of protective measures for workers exposed to carcinogens;

Whereas the Commission communication on its programme concerning safety, hygiene and health at work<sup>(5)</sup> provides for the adoption of Directives to guarantee the health and safety of workers;

Whereas compliance with the minimum requirements designed to guarantee a better standard of health and safety as regards the protection of workers from the risks related to exposure to carcinogens at work is essential to ensure the health and safety of workers;

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<sup>(1)</sup> OJ No C 34, 8. 2. 1988, p. 9.

<sup>(2)</sup> OJ No C 158, 26. 6. 1989, p. 121 and  
OJ No C 149, 18. 6. 1990.

<sup>(3)</sup> OJ No C 208, 8. 8. 1988, p. 43.

<sup>(4)</sup> OJ No C 67, 8. 3. 1984, p. 2.

<sup>(5)</sup> OJ No C 28, 3. 2. 1988, p. 1.

Whereas this Directive is an individual Directive within the meaning of Article 16 (1) of Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the health and safety of workers at work <sup>(1)</sup> ; whereas therefore the provisions of that Directive are fully applicable to the exposure of workers to carcinogens, without prejudice to more stringent and/or specific provisions contained in this Directive;

Whereas Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances <sup>(2)</sup>, as last amended by Directive 88/490/EEC <sup>(3)</sup>, contains a list of dangerous substances, together with particulars on the classification and labelling procedures in respect of each substance;

Whereas Council Directive 88/379/EEC of 7 June 1988 on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous preparations <sup>(4)</sup>, as last amended by Directive 89/178/EEC <sup>(5)</sup>, contains particulars on the classification and labelling procedures in respect of such preparations;

Whereas the plan of action 1987 to 1989 adopted under the 'Europe against cancer' programme provides for support for European studies on the possible cancer risks of certain chemical substances;

Whereas, although current scientific knowledge is not such that a level can be established below which risks to health cease to exist, a reduction in exposure to carcinogens will nonetheless reduce those risks;

Whereas nevertheless, in order to contribute to a reduction in these risks, limit values and other directly related provisions should be established for all those carcinogens for which the available information, including scientific and technical data, make this possible;

Whereas preventive measures must be taken for the protection of the health and safety of workers exposed to carcinogens;

Whereas this Directive lays down particular requirements specific to exposure to carcinogens;

Whereas this Directive constitutes a practical aspect of the realization of the social dimension of the internal market;

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<sup>(1)</sup> OJ No L 183, 29. 6. 1989, p. 1.

<sup>(2)</sup> OJ No 196, 16. 8. 1967, p. 1.

<sup>(3)</sup> OJ No L 259, 19. 9. 1988, p. 1.

<sup>(4)</sup> OJ No L 187, 16. 7. 1988, p. 14.

<sup>(5)</sup> OJ No L 64, 8. 3. 1989, p. 18.

Whereas, pursuant to Decision 74/325/EEC<sup>(1)</sup>, as last amended by the 1985 Act of Accession, the Advisory Committee on Safety, Hygiene and Health Protection at Work is to be consulted by the Commission with a view to drawing up proposals in this field,

HAS ADOPTED THIS DIRECTIVE:

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<sup>(1)</sup> OJ No L 185, 9. 7. 1974, p. 15.

SECTION I  
GENERAL PROVISIONS

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*Article 1*

**Objective**

1. This Directive, which is the sixth individual Directive within the meaning of Article 16 (1) of Directive 89/391/EEC, has as its aim the protection of workers against risks to their health and safety, including the prevention of such risks, arising or likely to arise from exposure to carcinogens at work.

It lays down particular minimum requirements in this area, including limit values.

2. This Directive shall not apply to workers exposed only to radiation covered by the Treaty establishing the European Atomic Energy Community.

3. Directive 89/391/EEC shall apply fully to the whole area referred to in paragraph 1, without prejudice to more stringent and/or specific provisions contained in this Directive.

4. As regards asbestos and vinyl chloride monomer, which are dealt with by specific Directives, the provisions of this Directive shall apply when they are more favourable to safety and health at work.

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*Article 2*

For the purposes of this Directive,

(a) “carcinogen” means:

- (i) a substance which meets the criteria for classification as a category 1 or 2 carcinogen set out in Annex VI of Directive 67/548/EEC;
- (ii) a preparation composed of one or more substances referred to in point (i) where the concentration of one or more of the individual substances meets the requirements for concentration limits for the classification of a preparation as a category 1 or 2 carcinogen set out either:
  - in Annex I to Directive 67/548/EEC, or
  - in Annex I to Directive 88/379/EEC where the substance or substances do not appear in Annex I to Directive 67/548/EEC or appear in it without concentration limits;
- (iii) a substance, preparation or process referred to in Annex I as well as a substance or preparation released by a process referred to in Annex I;

- (b) “limit value” means, unless otherwise specified, the limit of the time-weighted average of the concentration for a “carcinogen” in the air within the breathing zone of a worker in relation to a specified reference period as set out in Annex III. 97/42/EC

*Article 3*

**Scope — determination and assessment of risks**

1. This Directive shall apply to activities in which workers are or are likely to be exposed to carcinogens as a result of their work. 90/394/EEC

2. In the case of any activity likely to involve a risk of exposure to carcinogens, the nature, degree and duration of workers’ exposure must be determined in order to make it possible to assess any risk to the workers’ health or safety and to lay down the measures to be taken.

The assessment must be renewed regularly and in any event when any change occurs in the conditions which may affect workers’ exposure to carcinogens.

The employer must supply the authorities responsible at their request with the information used for making the assessment.

3. Furthermore, when assessing the risk, account shall be taken of all other routes of exposure, such as absorption into and/or through the skin 97/42/EC

4. When the assessment referred to in paragraph 2 is carried out, employers shall give particular attention to any effects concerning the health or safety of workers at particular risk and shall, *inter alia*, take account of the desirability of not employing such workers in areas where they may come into contact with carcinogens. 90/394/EEC

SECTION II

**EMPLOYERS’ OBLIGATIONS**

*Article 4*

**Reduction and replacement**

1. The employer shall reduce the use of a carcinogen at the place of work, in particular by replacing it, in so far as is technically possible, by a substance, preparation or process which, under its conditions of use, is not dangerous or is less dangerous to workers’ health or safety, as the case may be.

2. The employer shall, upon request, submit the findings of his investigations to the relevant authorities.

*Article 5***Prevention and reduction of exposure**

1. Where the results of the assessment referred to in Article 3 (2) reveal a risk to workers' health or safety, workers' exposure must be prevented.

2. Where it is not technically possible to replace the carcinogen by a substance, preparation or process which, under its conditions of use, is not dangerous or is less dangerous to health or safety, the employer shall ensure that the carcinogen is, in so far as is technically possible, manufactured and used in a closed system.

3. Where a closed system is not technically possible, the employer shall ensure that the level of exposure of workers is reduced to as low a level as is technically possible.

4. Exposure shall not exceed the limit value of a carcinogen as set out in Annex III.

5. Wherever a carcinogen is used, the employer shall apply all the following measures:

- (a) limitation of the quantities of a carcinogen at the place of work;
- (b) keeping as low as possible the number of workers exposed or likely to be exposed;
- (c) design of work processes and engineering control measures so as to avoid or minimize the release of carcinogens into the place of work;
- (d) evacuation of carcinogens at source, local extraction system or general ventilation, all such methods to be appropriate and compatible with the need to protect public health and the environment;
- (e) use of existing appropriate procedures for the measurement of carcinogens, in particular for the early detection of abnormal exposures resulting from an unforeseeable event or an accident;
- (f) application of suitable working procedures and methods;
- (g) collective protection measures and/or, where exposure cannot be avoided by other means, individual protection measures;
- (h) hygiene measures, in particular regular cleaning of floors, walls and other surfaces;
- (i) information for workers;

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- (j) demarcation of risk areas and use of adequate warning and safety signs including 'no smoking' signs in areas where workers are exposed or likely to be exposed to carcinogens;
- (k) drawing up plans to deal with emergencies likely to result in abnormally high exposure;
- (l) means for safe storage, handling and transportation, in particular by using sealed and clearly and visibly labelled containers;
- (m) means for safe collection, storage and disposal of waste by workers, including the use of sealed and clearly and visibly labelled containers.

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#### *Article 6*

##### **Information for the competent authority**

Where the results of the assessment referred to in Article 3 (2) reveal a risk to workers' health or safety, employers shall, when requested, make available to the competent authority appropriate information on:

- (a) the activities and/or industrial processes carried out, including the reasons for which carcinogens are used;
- (b) the quantities of substances or preparations manufactured or used which contain carcinogens;
- (c) the number of workers exposed;
- (d) the preventive measures taken;
- (e) the type of protective equipment used;
- (f) the nature and degree of exposure;
- (g) the cases of replacement.

#### *Article 7*

##### **Unforeseen exposure**

1. In the event of an unforeseeable event or an accident which is likely to result in an abnormal exposure of workers, the employer shall inform the workers thereof.
2. Until the situation has been restored to normal and the causes of the abnormal exposure have been eliminated:
  - (a) only those workers who are essential to the carrying out of repairs and other necessary work shall be permitted to work in the affected area;



- (b) the workers concerned shall be provided with protective clothing and individual respiratory protection equipment which they must wear; the exposure may not be permanent and shall be kept to the strict minimum of time necessary for each worker;
- (c) unprotected workers shall not be allowed to work in the affected area.

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#### *Article 8*

##### **Foreseeable exposure**

1. For certain activities such as maintenance, in respect of which it is foreseeable that there is the potential for a significant increase in exposure of workers, and in respect of which all scope for further technical preventive measures for limiting workers' exposure has already been exhausted, the employer shall determine, after consultation of the workers and/or their representatives in the undertaking or establishment, without prejudice to the employer's responsibility, the measures necessary to reduce the duration of workers' exposure to the minimum possible and to ensure protection of workers while they are engaged in such activities.

Pursuant to the first subparagraph, the workers concerned shall be provided with protective clothing and individual respiratory protection equipment which they must wear as long as the abnormal exposure persists; that exposure may not be permanent and shall be kept to the strict minimum of time necessary for each worker.

2. Appropriate measures shall be taken to ensure that the areas in which the activities referred to in the first subparagraph of paragraph 1 take place are clearly demarcated and indicated or that unauthorized persons are prevented by other means from having access to such areas.

#### *Article 9*

##### **Access to risk areas**

Appropriate measures shall be taken by employers to ensure that access to areas in which the activities in respect of which the results of the assessment referred to in Article 3 (2) reveal a risk to workers' safety or health take place are accessible solely to workers who, by reason of their work or duties, are required to enter them.

#### *Article 10*

##### **Hygiene and individual protection**

1. Employers shall be obliged, in the case of all activities for which there is a risk of contamination by carcinogens, to take appropriate measures to ensure that:

- (a) workers do not eat, drink or smoke in working areas where there is a risk of contamination by carcinogens;
- (b) workers are provided with appropriate protective clothing or other appropriate special clothing;  
separate storage places are provided for working or protective clothing and for street clothes;
- (c) workers are provided with appropriate and adequate washing and toilet facilities;
- (d) protective equipment is properly stored in a well-defined place;  
it is checked and cleaned if possible before, and in any case after, each use;  
defective equipment is repaired or replaced before further use.
2. Workers may not be charged for the cost of these measures.

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*Article 11*

**Information and training of workers**

1. Appropriate measures shall be taken by the employer to ensure that workers and/or workers' representatives in the undertaking or establishment receive sufficient and appropriate training, on the basis of all available information, in particular in the form of information and instructions, concerning:
- (a) potential risks to health, including the additional risks due to tobacco consumption;
- (b) precautions to be taken to prevent exposure;
- (c) hygiene requirements;
- (d) wearing and use of protective equipment and clothing;
- (e) steps to be taken by workers, including rescue workers, in the case of incidents and to prevent incidents.
- The training shall be:
- adapted to take account of new or changed risk, and
  - repeated periodically if necessary.
2. Employers shall inform workers of installations and related containers containing carcinogens, ensure that all containers, packages and installations containing carcinogens are labelled clearly and legibly, and display clearly visible warning and hazard signs.

*Article 12*

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**Information for workers**

Appropriate measures shall be taken to ensure that:

- (a) workers and/or any workers' representatives in the undertaking or establishment can check that this Directive is applied or can be involved in its application, in particular with regard to:
  - (i) the consequences for workers' safety and health of the selection, wearing and use of protective clothing and equipment, without prejudice to the employer's responsibility for determining the effectiveness of protective clothing and equipment;
  - (ii) the measures determined by the employer which are referred to in the first subparagraph of Article 8 (1), without prejudice to the employer's responsibility for determining such measures;
- (b) workers and/or any workers' representatives in the undertaking or establishment are informed as quickly as possible of abnormal exposures, including those referred to in Article 8, of the causes thereof and of the measures taken or to be taken to rectify the situation;
- (c) the employer keeps an up-to-date list of the workers engaged in the activities in respect of which the results of the assessment referred to in Article 3 (2) reveal a risk to workers' health or safety, indicating, if the information is available, the exposure to which they have been subjected;
- (d) the doctor and/or the competent authority as well as all other persons who have responsibility for health and safety at work have access to the list referred to in subparagraph (c);
- (e) each worker has access to the information on the list which relates to him personally;
- (f) workers and/or any workers' representatives in the undertaking or establishment have access to anonymous collective information.

*Article 13***Consultation and participation of workers**

Consultation and participation of workers and/or their representatives in connection with matters covered by this Directive, including the Annexes hereto, shall take place in accordance with Article 11 of Directive 89/391/EEC.

SECTION III  
MISCELLANEOUS PROVISIONS

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*Article 14*

**Health surveillance**

1. The Member States shall establish, in accordance with national laws and/or practice, arrangements for carrying out relevant health surveillance of workers for whom the results of the assessment referred to in Article 3 (2) reveal a risk to health or safety.

2. The arrangements referred to in paragraph 1 shall be such that each worker shall be able to undergo, if appropriate, relevant health surveillance:

- prior to exposure,
- at regular intervals thereafter.

Those arrangements shall be such that it is directly possible to implement individual and occupational hygiene measures.

3. If a worker is found to be suffering from an abnormality which is suspected to be the result of exposure to carcinogens, the doctor or authority responsible for the health surveillance of workers may require other workers who have been similarly exposed to undergo health surveillance.

In that event, a reassessment of the risk of exposure shall be carried out in accordance with Article 3 (2).

4. In cases where health surveillance is carried out, an individual medical record shall be kept and the doctor or authority responsible for health surveillance shall propose any protective or preventive measures to be taken in respect of any individual workers.

5. Information and advice must be given to workers regarding any health surveillance which they may undergo following the end of exposure.

6. In accordance with national laws and/or practice:

- workers shall have access to the results of the health surveillance which concern them, and
- the workers concerned or the employer may request a review of the results of the health surveillance.

7. Practical recommendations for the health surveillance of workers are given in Annex II.

8. All cases of cancer identified in accordance with national laws and/or practice as resulting from occupational exposure to a carcinogen shall be notified to the competent authority.

*Article 15***Record-keeping**

1. The list referred to in Article 12 (c) and the medical record referred to in Article 14 (4) shall be kept for at least 40 years following the end of exposure, in accordance with national laws and/or practice.
2. Those documents shall be made available to the responsible authority in cases where the undertaking ceases activity, in accordance with national laws and/or practice.

*Article 16***Limit values**

1. The Council shall, in accordance with the procedure laid down in Article 118a of the Treaty, set out limit values in Directives on the basis of the available information, including scientific and technical data, in respect of all those carcinogens for which this is possible, and, where necessary, other directly related provisions.
2. Limit values and other directly related provisions shall be set out in Annex III.

*Article 17***Annexes**

1. Annexes I and III may be amended in accordance only with the procedure laid down in Article 118a of the Treaty.
2. Purely technical adjustments to Annex II in the light of technical progress, changes in international regulations or specifications and new findings in the field of carcinogens shall be adopted in accordance with the procedure laid down in Article 17 of Directive 89/391/EEC.

*Article 18***Use of data**

The Commission shall have access to the use made by the competent national authorities of the information referred to in Article 14 (8).

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*Article 19***Final provisions**

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive not later than 31 December 1992.

Should Directives 67/548/EEC or 88/379/EEC be amended by amending Directives after notification of this Directive with respect to the substances and preparations referred to in Article 2 (a) and (b), Member States shall bring into force the laws, regulations and administrative provisions necessary to introduce the amendments in question into the provisions referred to in the first subparagraph by the deadlines laid down for implementation of such amending Directives.

Member States shall forthwith inform the Commission that the provisions referred to in this paragraph have been brought into force.

2. Member States shall communicate to the Commission the provisions of national law already adopted or which they adopt in the future in the field governed by this Directive.

*Article 20*

This Directive is addressed to the Member States.

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*ANNEX I***List of substances, preparations and processes***(Article 2 (c))*

- |   |            |
|---|------------|
| 1. Manufacture of auramine.   | 90/394/EEC |
| 2. Work involving exposure to polycyclic aromatic hydrocarbons present in coal soot, coal tar or coal pitch.                    | 97/42/EC   |
| 3. Work involving exposure to dusts, fumes and sprays produced during the roasting and electro-refining of cupro-nickel mattes. | 90/394/EEC |
| 4. Strong acid process in the manufacture of isopropyl alcohol.   |            |

*ANNEX II*

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**Practical recommendations for the health surveillance of workers***(Article 14 (7))*

1. The doctor and/or authority responsible for the health monitoring of workers exposed to carcinogens must be familiar with the exposure conditions or circumstances of each worker.
2. Health monitoring of workers must be carried out in accordance with the principles and practices of occupational medicine; it must include at least the following measures:
  - keeping records of a worker's medical and occupational history,
  - a personal interview,
  - where appropriate, biological monitoring, as well as detection of early and reversible effects.

Further tests may be decided upon for each worker when he is the subject of health monitoring, in the light of the most recent knowledge available to occupational medicine.



## ANNEX III

## Limit values and other directly related provisions

(Article 16)

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## A. LIMIT VALUES FOR OCCUPATIONAL EXPOSURE

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Name of agent	Einecs <sup>(1)</sup>	CAS <sup>(2)</sup>	Limit values		Notation	Transitional measures
			mg/m <sup>3</sup> <sup>(3)</sup>	ppm <sup>(4)</sup>		
Benzene	200-753-7	71-43-2	3,25 <sup>(5)</sup>	1 <sup>(5)</sup>	Skin	Limit value: 3 ppm (= 9,75 mg/m <sup>3</sup> ) until (3 years after date in Article 2 (1) of Directive 97/42/EC <sup>(*)</sup> )

<sup>(1)</sup> EINECS: European Inventory of Existing Chemical Substances.

<sup>(2)</sup> CAS: Chemical Abstract Service Number.

<sup>(3)</sup> mg/m<sup>3</sup> = milligrams per cubic metre of air at 20 °C and 101,3 KPa (760 mm mercury pressure).

<sup>(4)</sup> ppm = parts per million by volume in air (ml/m<sup>3</sup>).

<sup>(5)</sup> Measured or calculated in relation to a reference period of eight hours.

<sup>(6)</sup> Substantial contribution to the total body burden via dermal exposure possible.

<sup>(\*)</sup> OJ No L 179, 8. 7. 1997, p. 4.

## B. OTHER DIRECTLY RELATED PROVISIONS (SIC! PROVISIONS)

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