HSA

An tÚdarás Sláinte agus Sábháilteachta
Health and Safety Authority

2026 Code of Practice

for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001 to 2026) and the Safety, Health and Welfare at Work (Carcinogens, Mutagens and Reprotoxic Substances) Regulations (2024 and 2026)

Our Vision:

To deliver healthy and safe working lives and contribute to productive enterprises

Contents

Foreword

The Health and Safety Authority, with the consent of Alan Dillon, Minister of State at the Department of Enterprise, Tourism and Employment, publishes this Code of Practice entitled "2026 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001 to 2026) & Safety, Health and Welfare at Work (Carcinogens) Regulations 2024 and 2026" in accordance with section 60 of the Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005).

This Code of Practice provides practical guidance as to the observance of the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 (S.I. No. 619 of 2001), as amended by the Safety, Health and Welfare at Work (Chemical Agents) (Amendment) Regulations 2015 (S.I. No. 623 of 2015) and the Safety, Health and Welfare at Work (Chemical Agents) (Amendment) Regulations 2021 (S.I. No. 231 of 2021) and the Safety, Health and Welfare at Work (Chemical Agents) (Amendment) Regulations 2026 (S.I. No. 127 of 2026) (hereinafter collectively referred to as the 'Chemical Agents Regulations') and the Safety, Health and Welfare at Work (Carcinogens, Mutagens and Reprotoxic Substances) Regulations 2024 (S.I. No. 122 of 2024) as amended by the Safety, Health and Welfare at Work (Carcinogens, Mutagens and Reprotoxic Substances) (Amendment) Regulations 2026 (S.I. No. 128 of 2026) (hereinafter referred to as the 'CMRS Regulations') in relation to occupational exposure limit values (OELVs) for a number of chemical agents as listed in the Code, having regard to the provisions of the Safety, Health and Welfare at Work Act 2005.

This Code of Practice comes into operation on 9th April 2026 and from that date it replaces the "2024 Code of Practice for the Chemical Agents Regulations and the Carcinogens Regulations" which was issued in accordance with the Safety, Health and Welfare at Work Act 2005.

Notice of the publication of this Code of Practice, and the withdrawal of the 2024 Code of Practice, was published in the Iris Oifigiúil on 10 April 2026.

As regards the use of Codes of Practice in criminal proceedings, section 61 of the 2005 Act provides as follows -

> "61.—(1) Where in proceedings for an offence under this Act relating to an alleged contravention of any requirement or prohibition imposed by or under a relevant statutory provision being a provision for which a code of practice had been published or approved by the Authority under section 60 at the time of the alleged contravention, subsection (2) shall have effect with respect to that code of practice in relation to those proceedings.
>
> (2) (a) Where a code of practice referred to in subsection (1) appears to the court to give practical guidance as to the observance of the requirement or prohibition alleged to have been contravened, the code of practice shall be admissible in evidence.
>
> (b) Where it is proved that any act or omission of the defendant alleged to constitute the contravention—
>
> (i) is a failure to observe a code of practice referred to in subsection (1), or
>
> (ii) is a compliance with that code of practice,
>
> then such failure or compliance is admissible in evidence.
>
> (3) A document bearing the seal of the Authority and purporting to be a code of practice or part of a code of practice published or approved of by the Authority under this section shall be admissible as evidence in any proceedings under this Act."

Periodic revision of the Code of Practice

A revision of the Occupational Exposure Limit Values (OELVs) and Biological Limit Values (BLV's) listed in **Schedule 1, Schedule 2** and **Schedule 5,** to reflect current knowledge concerning the health hazards of the listed chemical agents, will be undertaken by the Health and Safety Authority periodically. Specific attention should be paid to those substances listed in **Schedule 3,** as they are candidates for revision when the Code of Practice is next updated.

Comments concerning any of the limit values proposed may be made in writing to the Health and Safety Authority, Programme Manager, Occupational Health Division, Metropolitan Building, James Joyce Street, Dublin 1, **Lo call: 0818 289 389** or e-mail contactus@hsa.ie

Dr Marie Dalton
Secretary to the Board

1 - Introduction

Occupational exposure limit values **(OELVs)** provide a basis for ensuring that exposure to airborne contaminants in the workplace is controlled in such a way as to prevent adverse health effects. Existing information has been used to establish limit values for inhalational exposures which, for the majority of chemicals listed, even when repeated regularly throughout a working lifetime, are not expected to result in adverse effects on the health of exposed workers.

Exceptions to this may be:

1. Certain risk groups such as employees known to be sensitised; or
2. certain chemicals classified as carcinogenic, mutagenic, toxic for reproduction or as chemicals causing dermal or respiratory sensitisation, where identification of a safe level of exposure is extremely difficult.

An OELV for a given chemical represents the maximum exposure to the chemical in workplace air, which is considered consistent with this objective. In practice, exposure levels should be maintained well below the OELV and should always be as low as reasonably achievable. This is particularly important for substances causing sensitisation (occupational asthma or allergic contact dermatitis). For carcinogens, mutagens and reprotoxic substances (CMRs) exposure levels should be maintained well below the OELV and should be as low as technically possible.

The occupational exposure limit values (OELVs) are based on:

- an 8-hour reference period, a time-weighted average **(TWA)** concentration of airborne substances; and
- a 15-minute reference period or Short-Term Exposure Limits **(STEL)**.

These terms are defined in the Definitions/Glossary. Terms used by other regulatory bodies throughout the world to describe exposure standards include Threshold Limit Value **(TLV)**, Occupational Exposure Standard **(OES)**, and Workplace Exposure Limit **(WEL)**. While Safety Data Sheets **(SDSs)** must refer to Irish OELVs, these other terms may appear in Safety Data Sheets or other information on chemicals.

Schedule 1 to this Code of Practice contains the OELVs which are currently legally binding under the Chemical Agents Regulations and CMRS Regulations. The Schedule contains the substances which have been assigned a binding occupational exposure limit value (BOELV), an indicative occupational exposure limit value (IOELV), and/or a biological limit value (BLV) under EU legislation.

Schedule 2 of this Code of Practice provides a list of Advisory OELVs derived from sources other than EU Commission Directives. Advisory OELVs are generally health based and therefore may not incorporate socioeconomic and technical feasibility factors. Employers should take all reasonably practicable measures to comply with the advisory OELVs set out in Schedule 2.

Within **Schedules 1 and 2** additional notations are provided to help identify substances having the potential to cause particular and significant reactions following exposure. These are non-exhaustive, and notations can change.

These notations include:

- **CMR** - Chemicals classified as carcinogenic (Carc.1A/1B), mutagenic (Muta.1A/1B) and/or toxic for reproduction (Repr.1A/1B)
- **Sens** - Chemicals classified as sensitisers can cause respiratory and/or dermal sensitisation. This is further differentiated into **Dermal and / or Respiratory** sensitisation for some substances.
- **Skin** -Where a Substantial contribution to the total body burden via dermal exposure is possible via absorption into and/or through the skin.
- **Non threshold reprotoxic substance** means a reprotoxic substance to which there is no safe level of exposure for employees' health.

Employers must take these notations into account when performing risk assessments and implementing preventive and protective measures for chemical agents, carcinogens, mutagens and reprotoxic substances.

Schedule 3 to this Code of Practice provides a non-exhaustive list of OELVs under review by the European Chemicals Agency, the European Commission and the Health and Safety Authority. This Schedule therefore serves to highlight the possibility of a change occurring to these substances, including, for example the introduction of an OELV or BLV or a change to an existing OELV or BLV, when appropriate. As the Code of Practice is updated periodically, specific attention should be paid to those substances listed in **Schedule 3**, as they are candidates for revision when the Code of Practice is next updated.

Schedule 4 to this Code of Practice provides a list of Carcinogenic and Mutagenic Substances, Mixtures or Processes as well as Carcinogenic and Mutagenic Substances or mixtures released by the process and are listed in Annex I of the Carcinogens, Mutagens and Reprotoxic Substances Directive [2004/37/EC] as amended.

Schedule 5 to this Code of Practice provides Health Surveillance Measures and Biological Limit Values.

It should be noted that exposure to **radioactive material is excluded** from the scope of this Code of Practice.

This Code of Practice, in conjunction with the Chemical Agents Regulations, transpose the provisions of:

- Commission Directive 2000/39/EC[1] establishing a first list of IOELVs in implementation of Council Directive 98/24/EC[2];
- Commission Directive 2006/15/EC[3] establishing a second list of IOELVs in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC[4] and 2000/39/EC;
- Commission Directive 2009/161/EU[5] of 17 December 2009 establishing a third list of IOELVs;
- Commission Directive (EU) 2017/164[6] of 31st January 2017 establishing a fourth list of IOELVs.
- Commission Directive (EU) 2019/1831[7] of 24th October 2019 establishing a fifth list of IOELVs.
- Directive (EU) 2024/869 of the European Parliament and of the Council of 13 March 2024 amending Directive 2004/37/EC of the European Parliament and of the Council and Council Directive 98/24/EC as regards the limit values for lead and its inorganic compounds and for diisocyanates.[8]

1 OJ No. L 142, 16.06.2000, p. 47

2 OJ No. L 131, 05.05.1998, p. 11

3 OJ No. L 38, 09.02.2006, p. 36

4 OJ No. L 177, 05.07.1991, p. 22

5 OJ No. L 338, 19.12.2009, p. 87

6 OJ No. L 27, 01.02.2017, p. 115

7 OJ No. L 279, 31.10 2019 p. 31

8 OJ L, 2024/869, 19.3.2024

This Code of Practice, in conjunction with the CMRS Regulations, transpose provisions from the following Commission Directives:

- Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens, mutagens or reprotoxic substances at work[9];
- Directive (EU) 2017/2398 of the European Parliament and of the Council of 12 December 2017 amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work[10];
- Directive (EU) 2019/130 of the European Parliament and of the Council of 16 January 2019 amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work[11];
- Directive (EU) 2019/983 of the European Parliament and of the Council of 5 June 2019 amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work[12];
- Directive (EU) 2022/431 of the European Parliament and of the Council of 9 March 2022 amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work[13];
- Directive (EU) 2024/869 of the European Parliament and of the Council of 13 March 2024 amending Directive 2004/37/EC of the European Parliament and of the Council and Council Directive 98/24/EC as regards the limit values for lead and its inorganic compounds and for diisocyanates.[14]

REACH and CLP

While this Code of Practice is based on the requirements of the Chemical Agents Regulations and CMRS Regulations, it is also worth noting other relevant chemicals legislation. The EU REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) Regulation (EC) No. 1907/2006[15] and the EU Classification, Labelling and Packaging (CLP) Regulation (EC) No. 1272/2008[16] and their related amendments are relevant. See https://www.echa.europa.eu/legislation

The European Chemicals Agency (ECHA) is the central agency to implement the EU's chemicals legislation to protect people and the environment from the hazards of chemicals. It also contributes to a well-functioning internal market and the innovation and competitiveness of the European chemicals industry. ECHA develops independent scientific and technical opinions and takes binding decisions to ensure that chemicals companies comply with European law. Its committees provide scientific advice to the European Commission, relating to hazards and risks of chemicals, their impact on society and ways to mitigate their risks.

REACH is based on the principle that industry shall ensure that chemicals placed on the European market do not adversely affect human health and the environment. One requirement is that industry complete hazard and exposure assessments and put adequate controls in place.

Where the quantity of the material manufactured or imported is greater than 10 tonnes per annum, the manufacturers and importers are required to calculate Derived No Effect Levels (DNELs) as part of the Chemical Safety Assessment (CSA) for chemical(s) used. The DNELs will be published in the manufacturer's Chemical Safety Report and included in an extended Safety Data Sheet (eSDS). REACH specifies that it may be necessary to identify different DNELs for each relevant human endpoint exposure scenario and possibly for certain vulnerable sub-populations and for different routes of exposure and different exposure durations.

9 OJ No. L 158, 30.04.2004, p. 50

10 OJ No. L 345, 27.12.2017, p. 87

11 OJ No. L 30, 31.01.2019, p. 112

12 OJ No. L 164, 20.06.2019, p. 23

13 OJ No. L 088, 16.03.2022, p. 1

14 OJ L, 2024/869, 19.3.2024

15 OJ No. L 396, 30.12.2006, p. 1

16 OJ No. L 353, 31.12.2008, p. 1

Classification, labelling and packaging (CLP) legislation is a hazard-based system and the particular hazards of a chemical are identified by standardised methods. These hazards must be clearly identified on the labels of containers and in the associated Safety Data Sheet along with advice on protective measures to be taken. If exposure to a hazardous chemical is prevented or minimised, e.g. by maintaining the exposure level below the OELV, then the risk to health will also be prevented or minimised. OELVs are thus an important part of chemical risk assessments.

There is no direct link between the health hazard categories identified in the CLP legislation and the OELVs in this Code of Practice. In general, however, chemicals classified as carcinogenic, mutagenic, reprotoxic or as skin/respiratory sensitisers are more likely to have an OELV assigned to them than chemicals which are not classified as hazardous for health, particularly if they have been classified as hazardous by inhalation or in contact with skin.

Activities under REACH include:

- evaluation of non-human and human information,
- classification and labelling,
- the calculation of derived no-effect levels (DNELs) and derived minimum effect levels (DMELs),
- Development of Exposure Risk Relationships (ERR) which are used as a basis for setting limit values for non-threshold substances, and
- Providing scientific opinions on OELs since 2019.
- Authorisations and Restrictions.

ECHA CHEM

ECHA CHEM is the European Chemical Agency public chemicals database with information from all REACH registrations, Classification and Labelling Inventory and Regulatory lists and processes under REACH, CLP, DWD and POPs regulations. It has searchable information on substances, the legal obligations in relation to them and the regulatory activities carried out by authorities. Webinars and support documentation are also available. See https://echa.europa.eu/echa-chem

2 - Definitions/Glossary

Asphx. - Gaseous chemical substances which may not produce significant physiological effects in the exposed employee, but when present in high concentrations will act as simple asphyxiants.

Advisory OELV - Advisory Occupational Exposure Limit Values are derived from sources other than EU Commission Directives. Advisory OELVs are generally health based and therefore may not incorporate socio-economic and technical feasibility factors. Employers should take all reasonably practicable measures to comply with the advisory OELVs set out in Schedule 2.

Biological Limit Value (BLV) - means the limit of the concentration in the appropriate biological medium of the relevant agent, its metabolite or an indicator of effect.

BOELV - BOELVs are Binding Occupational Exposure Limit Values. BOELVs take account of socio-economic and technical feasibility factors as well as the factors considered when establishing IOELVs while maintaining the aim of ensuring the health of workers at work. For any chemical for which a BOELV is established at EU level, Member States must establish a corresponding BOELV, which can be stricter but cannot exceed the Community limit value. Binding Occupational Exposure Limit Values are transposed directly from the relevant EU Directives into Schedule 1.

Breathing Zone is defined as the zone where air samples are collected as part of personal monitoring for comparison with OELVs.

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[17];

(ii) a substance, mixture or process referred to in Schedule 4 to this Code of Practice as well as a substance or mixture released by a process referred to in that Schedule.

Carc.1A - Substances known to have carcinogenic potential for humans; classification is largely based on human evidence to which the EU Classification, Labelling and Packaging Regulation (EC) No. 1272/2008 applies.

Carc.1B - Substances presumed to have carcinogenic potential for humans; classification is largely based on animal evidence to which the EU Classification, Labelling and Packaging Regulation (EC) No. 1272/2008 applies.

Chemical Abstracts Service (CAS) Number – This is a unique numerical identifier assigned by the American Chemical Abstracts Service to every chemical substance described in the open scientific literature, including organic and inorganic compounds, minerals, isotopes, alloys and non-structurable materials. Individual CAS numbers and associated nomenclature can be checked on the ECHA Website – https://echa.europa.eu/echa-chem

Chemical Agent - as defined in the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001-2026, means any chemical element or compound, on its own or admixed, as it occurs in the natural state or as produced, used or released, including release as waste, by any work activity, whether or not produced intentionally and whether or not placed on the market.

17 OJ OJ No. L 353, 31.12.2008, p. 1

Chemical Agents Regulations 2001 to 2026 - means the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 (S.I. No. 619 of 2001), as amended by the Safety, Health and Welfare at Work (Chemical Agents) (Amendment) Regulations 2015 (S.I. No. 623 of 2015) and the Safety, Health and Welfare at Work (Chemical Agents) (Amendment) Regulations 2021 (S.I. No. 231 of 2021), and the Safety, Health and Welfare at Work (Chemical Agents) (Amendment) Regulations 2026 (S.I. No. 127 of 2026).

CLP - Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures.

CMRS Regulations - means the Safety, Health and Welfare at Work (Carcinogens, Mutagens and Reprotoxic Substances) Regulations 2024, SI 122 of 2024 and the Safety, Health and Welfare at Work (Carcinogens, Mutagens and Reprotoxic Substances) (Amendment) Regulations 2026, S.I. No. 128 of 2026).

- The Regulation applies to a substance or mixture which meets the criteria for classification as a category 1A or 1B carcinogen, (Carc.1A, Carc.1B) a category 1A or 1B germ cell mutagen (Mut.1A, Mut.1B) or a category 1A or 1B reproductive toxicant (Rep.1A, Rep.1B).
- The Regulation applies to a substance, mixture or process referred to in Schedule 4 of this Code of Practice as well as substances or mixtures released by processes referred to in Schedule 4.

CMRD - Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work, as amended by Directives 2017/2398, 2019/130, 2019/983 and 2022/431 and 2024/869.

CMRs - Carcinogens, Mutagens and Reprotoxic substances, to which CMRS Regulations apply.

Dermal sensitisation - The substance can cause sensitisation of the skin (See “Sens”).

DNEL - The Derived No-Effect Level is defined as the level of exposure above which humans should not be exposed (EU REACH Regulation (EC) No. 1907/2006).

ECHA - European Chemical Agency is a European Union (EU) regulatory agency responsible for implementing and administering chemicals legislation. www.echa.europa.eu

EC No. - The European Community number, or EC number, also known as EINECS No., and EC#, is a unique seven-digit identifier that is assigned to chemical substances for regulatory purposes within the European Union by the regulatory authorities. Online searches can be carried out using the European Chemical Agency’s Website – https://echa.europa.eu/echa-chem

Exposure Risk Relationship (ERR) - For non-threshold carcinogens, no health-based OEL can be identified. An exposure-risk relationship (ERR) expresses the excess (lifetime) cancer risk (cases per 100 000 exposed) as a function of the concentration in the air. Each substance has a different ERR. It can be used as a basis for setting limit values for non-threshold substances. The aim is to set limit values for non-threshold carcinogens between predetermined upper and lower risk levels.

f/ml - fibres per millilitre of air.

Hazardous chemical agent includes –

- any chemical agent which meets the criteria for classification as hazardous within any physical and health hazard classes, or either such class, laid down in Regulation (EC) No. 1272/2008, whether or not that chemical agent is classified under that Regulation,
- any chemical agent which, whilst not meeting the criteria for classification above, may, because of its physico-chemical, chemical or toxicological properties and the way it is used or is present in the workplace, present a risk to the safety and health of workers, including any chemical agent that is assigned an occupational exposure limit value in this code of practice;

Hazardous Medicinal Products (HMP) - are defined as medicinal products that contain one or more substances that meet the criteria for classification as:

- Carcinogenic (category 1A or 1B),
- Mutagenic (category 1A or 1B), or
- Toxic for reproduction (category 1A or 1B)

in accordance with Regulation (EC) No 1272/2008 (the CLP Regulation). This includes medicinal products for both human and veterinary use.

Inhalable Fraction (I) - The Inhalable Fraction note is used for those materials that are hazardous when deposited anywhere in the respiratory tract.

Inhalable Fraction and Vapour (IFV) - The Inhalable Fraction and Vapour note is used when a material exerts sufficient vapour pressure such that it may be present in both particle and vapour phases.

IOELV - Indicative Occupational Exposure Limit Values are limits set under the Chemical Agents Directive 98/24/EC as amended. Indicative occupational exposure limit values (IOELV) are health-based, non-binding values, derived from the most recent scientific data available and taking into account the availability of reliable measurement techniques. The European Commission is advised on limits by ECHA's Risk Assessment Committee (RAC) which evaluates the scientific information available on hazardous substances and makes recommendations for the establishment of an IOELV. For any chemical agent for which an IOELV has been set at Union level, Member States are required to establish a national occupational exposure limit value. They also are required to take into account the Union limit value, determining the nature of the national limit value in accordance with national legislation and practice. The HSA have adopted the IOELVs as our national occupational exposure limit values in Schedule 1 of the Code of Practice.

Health Surveillance means the assessment of an individual employee to determine the state of health of that individual, as related to exposure to specific chemical agents (including carcinogens, mutagens or reprotoxic substances) at work and includes biological monitoring; so that any adverse variations in their health which may be related to working conditions are identified as early as possible.

Mg/m^3 - milligrams per cubic metre of air at 20°C and 101.3 kPa (760 mm mercury pressure)

Mutagen - means

(i) 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;

(ii) a substance, mixture or process referred to in Schedule 4 of this Code of Practice as well as a substance or mixture released by a process referred to in Schedule 4.

Muta.1A – Substances which are known to induce heritable mutations in the germ cells of humans; classification is based on positive evidence from human studies to which the Regulation (EC) No. 1272/2008 apply.

Muta.1B – Substances which should be regarded as if they induce heritable mutations in the germ cells of humans; classification is based on evidence from mutagenicity tests in mammals or humans, to which the Regulation (EC) No. 1272/2008 apply.

Occupational Exposure Limit Value (OELV) is the term used in this Code of Practice to describe an exposure standard for a chemical in workplace air. It is 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 (8 hour or a 15-minute reference period), as approved by the Health and Safety Authority. The concentration of the chemical agent in the air is expressed as parts per million (ppm), milligrams per cubic metre (mg/m^3), fibre(s) per millilitre (fibre(s)/ml) or fibre(s) per cubic centimetre (fibre(s)/cm^3) as appropriate.

Occupational Exposure Standard (OES) - is a generic term which includes all occupational exposure limit values such as OELV, TLV etc.

Occupational Hygiene - is the science of identification, evaluation and control of exposure to workplace health hazards including chemicals, dust, fumes and fibres.

Ototoxicant - Substances that may affect the structures and/or the function of the inner ear (auditory plus vestibular apparatus) and the connected neural pathways.

Ppm -parts per million by volume in air.

REACH – European Regulation (EC) 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals.

Reprotoxic Substance - means a substance or mixture which meets the criteria for classification as a category 1A or 1B reproductive toxicant set out in Regulation (EC) No. 1272/2008, and may be grouped as follows:

(a) "non-threshold reprotoxic substances" for which there is no safe level of exposure for employees' health, and is identified as such in the Notes column of Schedule 1.

(b) "threshold reprotoxic substances" for which a safe level of exposure exists below which there is no risk to employees' health.

Repr.1A – Substances which are known human reproductive toxicants, largely based on evidence from human studies to which the Regulation (EC) No. 1272/2008 apply.

Repr.1B – Substances which are presumed human reproductive toxicants, largely based on data from animal studies, to which the Regulation (EC) No. 1272/2008 apply.

Respiratory sensitisation – The substance can cause sensitisation of the respiratory tract. (See "Sens")

Respirable Fraction (R) – Particles of inhalable aerosols that are inhaled and are not captured in the upper airways (nasopharyngeal and tracheobronchial regions) but penetrate to the pulmonary region containing the respiratory bronchioles, alveolar ducts and alveolar sacs are considered to comprise the Respirable Fraction of the aerosol.

Sens. – In the workplace, respiratory or dermal exposures to sensitising agents may occur. Sensitisers may evoke respiratory or dermal reactions, e.g. asthma, rhinitis and allergic contact dermatitis. The "Sens" notation alone does not distinguish between respiratory or dermal sensitisation.

Chemical agents that are sensitisers present special problems in the workplace. Should an employee become sensitised, subsequent exposure may cause intense responses, even at low exposure concentrations well below the OELV. Exposure should be eliminated or significantly reduced through control measures such as engineering and process controls and use of personal protective equipment (PPE). The absence of a "Sens." note does not signify that the chemical agent lacks the ability to produce a sensitisation but may reflect the lack of, or inconclusiveness of, scientific evidence.

Skin – Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible.

8-hour reference period – relates to the procedure whereby the occupational exposures in any 24-hour period are treated as equivalent to a single uniform exposure for 8 hours (the 8-hour time-weighted average (TWA) exposure). The TWA may be expressed mathematically by:

$(C_1 T_1 + C_2 T_2 + \ldots\ldots\ldots + C_n T_n) / 8,$

where C_1 .....C_n are the occupational exposures and T_1 .... T_n are the associated exposure times in hours in any 24-hour period.

15-minute reference period - means the short-term exposure reference period and is the sampling period used for assessing compliance with the associated short term exposure limit (STEL).

STEL - Short Term Exposure Limit, is a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified in the Schedule. Its purpose is to help prevent

adverse health effects such as eye irritation and other unwanted effects due to peak exposure which may occur following exposure for a few minutes, and that may not be controlled by the application of an 8 hour TWA limit.

Note: *Where no specific short term exposure limit is listed, a figure three times the long-term exposure limit value can be used.*

Thoracic Fraction (T) - The Thoracic Fraction note is used for those materials that are hazardous when deposited in the thoracic region of the respiratory tract.

Threshold Limit Value (TLV) - defined as the time-weighted average concentration of airborne substances to which nearly all workers may be repeatedly exposed, without adverse effect. (U.S.A., American Conference of Governmental Industrial Hygienists (ACGIH).

TWA - Time-Weighted Average, defined as the time-weighted average concentration for a conventional 8 hour day/40 hour week.

3 - Risk Assessment

3.1 Legislation

Risk Assessments and controls for chemical agents must comply with the specific requirements of the following:

- Safety, Health and Welfare at Work Act, 2005.
- Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 to 2026.
- Safety, Health and Welfare at Work (Carcinogens, Mutagens and Reprotoxic Substances) Regulations 2024 and 2026.

Other legislation is also relevant for specific groups or categories of chemicals. These include:

- Safety, Health and Welfare At Work (Confined Spaces) Regulations, 2001.
- Safety, Health and Welfare at Work (General Application) Regulations 2007, Chapter 1 of Part 5: Control of Noise at Work (Noise Regulations) (referred to in this document as the 'Control of Noise Regulations'.
- Safety, Health and Welfare at Work (General Application) (Amendment) Regulations 2010 (Control of Artificial Optical Radiation at Work).

In the workplace, workers are often exposed to a combination of hazardous substances, which can increase risks and cause adverse health effects. To ensure a comprehensive level of protection, it is necessary to consider the effects of exposure to a combination of substances. When two or more hazardous substances, which have the same mode of action or act upon the same target organ, tissues or cells are present, their combined effect, rather than that of either individually, must be risk assessed.

Regulation 4(2) of the **Chemical Agents Regulations** (which also apply to CMR's) has a specific provision:

- "In the case of activities involving exposure to several hazardous chemical agents, the risk shall be assessed on the basis of the risk presented by all such chemical agents in combination."

The **Control of Noise Regulations** require the employer to give particular attention when carrying out a risk assessment to the following:

- "as far as technically possible, any effects on employees' safety and health resulting from interactions between noise and work-related ototoxic substances".

Exposure to certain chemicals or medicinal products can affect hearing and are known as ototoxic substances. Ototoxic substances can be ototoxic by themselves or exposure to such chemicals may increase the risk with the added effect of noise.

The **Control of Artificial Optical Radiation Regulations** require employers when carrying out the determination of exposure and assessment of risks to give particular attention to

- "any possible effects on employee safety or health resulting from workplace interactions between artificial optical radiation and photosensitising chemical substances".

3.2 Control of Exposure

Compliance with an OELV is not a guarantee of control. (See Section 4 for further information on assessing compliance with an OELV). OELV compliance does not take other routes of exposure into account. The risk assessment must take other route of exposure into account for example, dermal exposure, ingestion, injection.

OELVs are just one type of measure. Other factors to be taken into account include:

- Units used.
- Different forms at different temperature and pressure.
- Combined and Sequential Exposure.
- Non-standard shift lengths and shift patterns.
- Other routes of exposure e.g. dermal, ingestion.

Biological Monitoring may be the most appropriate.

Specific legal requirements in relation to prevention and control of exposure to chemical agents (including during maintenance, accidents, incidents and emergencies) are contained in the

- Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 to 2026 and the
- Safety, Health and Welfare at Work (Carcinogens, Mutagens and Reprotoxic Substances) Regulations 2024 and 2026.

3.3 Biological Monitoring

Biological monitoring is an element of health surveillance which can be used in the assessment of the risks to health.

Biological monitoring is the measurement of a substance or its metabolites (breakdown products) in a worker's biological sample, such as blood or urine. Biological monitoring data reflects the total chemical absorption from all exposure routes, such as inhalation, ingestion, absorption through skin or a combination of these routes, representing the worker's actual exposure level.

4 - OELV Compliance

4.1 Measurement of Exposure

Occupational Exposure Limit Values (OELV) are the concentration limits of a chemical agent within the breathing zone of an employee. Only personal monitoring can be compared with an OELV. Area samples, background monitoring or environmental monitoring results cannot be compared with the OELV.

There is a role for background and continuous or real time monitoring including use of continuous monitoring and direct reading instruments from perspective of:

- relative comparisons of areas,
- confined space testing and monitoring is a form of real time and continuous monitoring which is used to detect hazardous gases from asphyxiant and flammable perspective prior to entry into a confined space and during work in the confined space. https://www.hsa.ie/eng/Publications_and_Forms/Publications/Codes_of_Practice/COP_Confined_Space.pdf,
- checking oxygen concentrations and asphyxiant gas levels,
- verifying controls are working for example leak detection,
- emergency situations, for example carbon monoxide alarms.

4.2 Conversion of Units of Concentration

Concentrations of substances in workplace air can sometimes be expressed in different units. For dusts, fumes and aerosols the units are normally mg/m^3 (except for fibres for which fibres/millilitre or $fibres/cm^3$ is used). However, gases and vapours tend to be expressed in parts per million of volume (ppm) although the two different units are in common use (mg/m^3 and ppm) and the OELV will have a different value depending on which unit is chosen.

It is possible to convert from ppm to mg/m^3 and vice versa, but the conversion factor differs from substance to substance and depends on its molecular weight. A formula to allow exact conversions from mg/m^3 to ppm takes the form:

$$\text{ppm} = \frac{\text{mg/m}^3 \times \text{Molar Volume}}{\text{Molecular Weight}}$$

The Molar Volume varies with temperature, but at 25°C (the temperature usually used for OELVs) the formula becomes:

$$\text{ppm} = \frac{\text{mg/m}^3 \times 24.45}{\text{Molecular Weight}}$$

By way of example, 10 mg/m^3 of hydrogen sulphide (molecular weight 34) at 25oC is equivalent to

$$\frac{10 \times 24.45}{34} = 7.2 \text{ ppm}$$

Such conversions are usually rounded off to two significant figures for values below 100 and to three significant figures for values above 100.

This calculation does not take into account the effect of temperature and pressure which changes the formula. A competent Occupational Hygienist will be able to advise on your circumstances.

4.3 Mixtures and Combined and Sequential Exposure

In the workplace, workers are often exposed to a combination of hazardous substances, which can increase risks and cause adverse health effects. These can arise as a result of work with materials containing a mixture of substances, or from work with several individual substances, simultaneously or successively, in a work shift. To ensure a comprehensive level of protection, it is necessary to consider the effects of exposure to a combination of substances. When two or more hazardous substances, which have the same mode of action or act upon the same target organ, tissues or cells are present, their combined effect, rather than that of either individually, must be risk assessed.

Regulation 4(2) of the Chemical Agents Regulations (which also apply to CMR's) has a specific provision – "In the case of activities involving exposure to several hazardous chemical agents, the risk shall be assessed on the basis of the risk presented by all such chemical agents in combination")

Additive effects,

In the absence of information to the contrary, the effects of the different hazards should be considered as ***additive***. That is, if the sum of the following fractions,

$C_1/OELV_1 + C_2/OELV_2 + C_3/OELV_3 + ...C_n/OELV_n$

exceeds 1.0, then the OELV of the mixture should be considered as being exceeded. C_1 indicates the observed atmospheric concentration of substance 1 over 8 hours, and $OELV_1$, its corresponding OELV; C_2 indicates the observed atmospheric concentration of substance 2 over 8 hours, and $OELV_2$, its corresponding OELV etc. to the nth term.

Example

Workplace air contains 400 ppm of acetone (OELV, 500 ppm), 25 ppm of dipropyl ketone (OELV, 50 ppm) and 100 ppm of methyl ethyl ketone (OELV, 200 ppm).

$C_1/OELV_1 + C_2/OELV_2 + C_3/OELV_3$

$= 400/500 + 25/50 + 100/200$

$= 0.8 + 0.5 + 0.5$

$= 1.8$

As the sum exceeds 1.0, the combined OELV based on an additive effect is well exceeded.

Synergistic effects occur when substances combine to give a greater effect than expected from simple linear addition. The overall effect is considerably greater than the sum of the individual effects. This may occur with some combinations of atmospheric contaminants; such cases at present must be determined individually. This may arise from mutual enhancements of the effects of the constituents or because one substance potentiates another, causing it to act in a way which it would not do alone. Specialist advice is necessary.

Example

Carbon tetrachloride is toxic to the liver H372

Consumption of alcohol increases the toxic effects of carbon tetrachloride and may cause more severe organ damage

$1 + 1 > 2$

Carbon tetrachloride and alcohol together are more toxic to the liver than expected from the sum of the two individual toxic effects.

Independent effects,

Exceptions to the above rules may be made when there is good reason to believe that the principal effects of the different harmful substances are not in fact additive or synergistic but ***independent***, as when purely local effects on different organs of the body are produced by the various components of the mixture. In such cases the OELV for the mixture is exceeded only when at least one member of the series (C1/OELV1 or C2/OELV2 etc.) itself has a value exceeding unity.

4.4 Intermittent Exposures

The term '8-hour reference period' relates to the procedure whereby the occupational exposures in any 24-hour period are treated as equivalent to a single uniform exposure for 8 hours (the 8-hour time-weighted average (TWA) exposure).

The 8-hour TWA may be represented mathematically by:

$C_1 T_1 + C_2 T_2 + \ldots C_n T_n / 8$

where C_1 is the occupational exposure and T_1 is the associated exposure time in hours in any 24-hour period.

Example

The operator works for 7 hours 20 minutes on a process in which they are exposed to a substance hazardous to health. The average exposure during that period is measured as 0.12 mg/m^3.

The 8-hour TWA =
7 h 20 min (7.33 h) at 0.12 mgm^3
40 min (0.67 h) at 0 mg/m^3

That is (0.12 x 7.33) + (0 x 0.67) 8 = 0.11 mg/m^3

Exposure = 0.11 mg/m^3

4.5 Calculations for Determining Compliance with OELs

To assess the exposure of workers to chemicals and to state with certainty that it does not exceed the occupational exposure limit values (OELVs) (short term or long term) would require measurement of the exposure of every worker for every working day. This approach is not possible, feasible or practical for many chemical agents.

Statistical tools can be used to determine compliance. "EN689 Workplace exposure - Measurement of exposure by inhalation to chemical agents - Strategy for testing compliance with occupational exposure limit value" provides information on measurement strategies, a preliminary test and the frequency of routine monitoring.

A detailed description of the methods is beyond the scope of this code of practice. A competent Occupational Hygienist will be able to advise on the best method to apply in your set of circumstances. Regardless of the method used, a conclusion of compliance cannot be based on 1 sample.

The Short-Term Exposure Limit, is a limit value above which exposure should not occur. It should not be exceeded at any time during the working day even if the 8hour OEL is within the limit. Exposures up to the STEL must be less than 15 minutes, occur no more than 4 times a day and have at least 1 hour between successive exposures.

Example

OELV is 10mg/m^3
3 samples give results of 7mg/m^3, 5mg/m^3 and 0.9 mg/m^3
Based on EN689, where 3 samples are taken, they must be <10% OEL
Result- Noncompliant with OEL

4.6 Results – Communication and Follow up

When measurements of hazardous chemical agents are carried out

- a record of exposure must be maintained in respect of every employee
- an employee must be given access to his or her own such record
- collective results of measurements must be made available to workers or their representatives or both.

Where as a result of exposure monitoring an occupational exposure limit value is found to have been exceeded, the risk assessment must be reviewed immediately. This includes an investigation into the cause and whether controls measures and work practices require updating. Both short and long term measures may be required.

5 - Further Information

1. Health and Safety Authority: Chemical Agents, Carcinogens, Mutagens and Reprotoxic Substances webpages (www.hsa.ie)
2. ECHA - Risk Assessment Committee (RAC): https://echa.europa.eu/oel. The table https://echa.europa.eu/oels-activity-list provides up-to-date information on the activities planned, ongoing or completed by ECHA in relation to its work on occupational exposure limits.
3. American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices", https://www.acgih.org/

SCHEDULE 1 - List of EU derived Occupational Exposure Limit Values

Chemical Agents in bold type are new/direct entrants, changed values as proposed in Schedule 3 of the 2024 Code of Practice, or updated by EU legislation or have reached the end of their transition period.

Asbestos has been removed from Schedule 1 and is in the new Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2025 Code of Practice.

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Acetic acid	200-580-7	64-19-7	10	25	20	50	IOELV
Acetone	200-662-2	67-64-1	500	1210	-	-	IOELV
Acetonitrile	**200-835-2**	**75-05-8**	**40**	**70**			**IOELV, Skin**
Acrolein (Acrylaldehyde) (Prop-2-enal)	203-453-4	107-02-8	0.02	0.05	0.05	0.12	IOELV
Acrylonitrile	**203-466-5**	**107-13-1**	**0.45**	**1**	**1.8**	**4**	**BOELV, Skin, Dermal Sensitisation**
Acrylamide	201-173-7	79-06-1		0.1	-	-	BOELV, Skin
Acrylic acid (Prop-2-enoic acid)	201-177-9	79-10-7	10	29	20	59	IOELV
					STEL is for a 1 minute reference period		
Allyl alcohol	203-470-7	107-18-6	2	4.8	5	12.1	IOELV, Skin
2-Aminoethanol (Ethanolamine)	205-483-3	141-43-5	1	2.5	3	7.6	IOELV, Skin
Amitrole (3-Amino-1,2,4 Triazole)	200-521-5	61-82-5	-	0.2	-	-	IOELV
4-aminotoluene (p-Toluidine) (4-methlyaniline)	203-403-1	106-49-0	1	4.46	2	8.92	IOELV, Skin, Sens
Ammonia, anhydrous	231-635-3	7664-41-7	20	14	50	36	IOELV
Amylacetate, tert (2-methylbutan-2-yl acetate		625-16-1	50	270	100	540	IOELV
Aniline	200-539-3	62-53-3	2	7.74	5	19.35	IOELV, Skin, Sens
Arsenic acid and its salts as well as inorganic arsenic compounds				**0.01 (I)**			**BOELV, CMR**
Barium (soluble compounds as Ba)			**-**	**0.5**	**-**	**-**	**IOELV**
Benzene	**200-753-7**	**71-43-2**	**0.2**	**0.66**	**-**	**-**	**BOELV, Skin, CMR**
Beryllium and inorganic beryllium compounds	**231-150-7**	**7440-41-7**		**0.0002mg/m³ (I)**			**BOELV, Sens Dermal and respiratory sensitisation**
	Limit value 0.0006 mg/m³ until 11 July 2026						
Bisphenol A (4,4'-isopropylidenediphenol) (Inhalable dust)	201-245-8	80-05-7	-	2 (I)	-	-	BOELV, Sens, CMR
Bromine	231-778-1	7726-95-6	0.1	0.7			IOELV
Bromoethylene	209-800-6	593-60-2	1	4.4	-	-	BOELV, CMR
1,3-Butadiene	203-450-8	106-99-0	1	2.2	-	-	BOELV CMR

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m^3	ppm	mg/m^3	
Butanone (Methyl ethyl ketone) (MEK)	201-159-0	78-93-3	200	600	300	900	IOELV, Skin
But-2-yne-1,4-diol	203-788-6	110-65-6		0.5			IOELV
2-Butoxyethanol (EGBE, Ethylene Glycol Monobutyl Ether)	203-905-0	111-76-2	20	98	50	246	IOELV, Skin
2-(2-Butoxyethoxy) ethanol	203-961-6	112-34-5	10	67.5	15	101.2	IOELV
2-Butoxyethyl acetate (EGBEA)	203-933-3	112-07-2	20	133	50	333	IOELV, Skin
n-Butyl acetate	204-658-1	123-86-4	50	241	150	723	IOELV
sec-Butyl acetate	203-300-1	105-46-4	50	241	150	723	IOELV
n-Butylacrylate	205-480-7	141-32-2	2	11	10	53	IOELV, Sens
Tert-Butyl-methyl ether	216-653-1	1634-04-4	50	183.5	100	367	IOELV
Cadmium and its inorganic compounds				0.001mg/ m^3 (I)			BOELV, CMR
	Limit value 0.004 mg/m^3 until 11 July 2027.						
Calcium dihydroxide	215-137-3	1305-62-0		1 (R)		4 (R)	IOELV
Calcium oxide	215-138-9	1305-78-8		1 (R)		4 (R)	IOELV
ε-Caprolactam (dust and vapour) (1,6 Hexanolactam)	203-313-2	105-60-2	-	10	-	40	IOELV
Carbon dioxide	204-696-9	124-38-9	5000	9000			IOELV
Carbon disulphide	200-843-6	75-15-0	5	15	-	-	IOELV, Skin
Carbon monoxide	211-128-3	630-08-0	20	23	100	117	BOELV, CMR
Carbon tetrachloride (Tetrachloromethane)	200-262-8	56-23-5	1	6.4	5	32	IOELV, Skin
Chlorine	231-959-5	7782-50-5	-	-	0.5	1.5	IOELV
Chlorobenzene (Monochlorobenzene)	203-628-5	108-90-7	5	23	15	70	IOELV
Chlorodifluoromethane (Difluorochloromethane)	200-871-9	75-45-6	1000	3600			IOELV
Chloroethane (Ethyl chloride)	200-830-5	75-00-3	100	268	-	-	IOELV
Chloroform (Trichloromethane)	200-663-8	67-66-3	2	10	-	-	IOELV, Skin
Chloromethane	200-817-4	74-87-3	20	42			IOELV
Chromium metal **Inorganic Chromium (II) compounds** **Inorganic Chromium (III) compounds (insoluble)**				**2**			**IOELV**
Chromium (VI) compounds which are carcinogens (as chromium)	**-**	**-**	**-**	**0.005**			**BOELV**
Cresols, all isomers	215-293-2	1319-77-3	5	22	-	-	IOELV, Skin
Cyanamide	206-992-3	420-04-2	0.58	1	-	-	IOELV, Skin, Sens
Cyclohexane	203-806-2	110-82-7	200	700	-	-	IOELV
Cyclohexanone	203-631-1	108-94-1	10	40.8	20	81.6	IOELV, Skin

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m^3	ppm	mg/m^3	
Diacetyl; Butanedione	207-069-8	431-03-8	0.02	0.07	0.1	0.36	IOELV
1,2-Dichlorobenzene	202-425-9	95-50-1	20	122	50	306	IOELV, Skin
1,4-Dichlorobenzene (p-Dichlorobenzene)	203-400-5	106-46-7	2	12	10	60	IOELV, Skin
1,1-Dichloroethane (Ethylidene dichloride)	200-863-5	75-34-3	100	412	-	-	IOELV, Skin
Diesel Engine Exhaust Emissions (as elemental carbon)				**0.05 (R)**			**Schedule 4** **BOELV**
Diethylamine	203-716-3	109-89-7	5	15	10	30	IOELV
Diethylether (Ether)	200-467-2	60-29-7	100	308	200	616	IOELV
Difluorochloromethane Chlorodifluoromethane	200-871-9	75-45-6	1000	3600			IOELV
Dihydrogen selenide (as Se)	231-978-9	7783-07-5	0.02	0.07	0.05	0.17	IOELV
Diisocyanates (measured as -NCO)	**Shall apply from 9th April 2026 until 31 December 2028**			**0.01**		**0.02**	**BOELV** **Skin**
	Shall apply from 31 December 2028.			**0.006**		**0.012**	**Dermal and respiratory sensitisation**
	Note - Schedule 2 had advisory OELV until 9th April 2026						
N,N'Dimethylacetamide	204-826-4	127-19-5	10	36	20	72	BOELV, Skin, CMR
Dimethylamine	204-697-4	124-40-3	2	3.8	5	9.4	IOELV
Dimethyl ether	204-065-8	115-10-6	1000	1920	-	-	IOELV
N, N Dimethylformamide (DMF)	200-679-5	68-12-2	5	15	10	30	BOELV, Skin, CMR
1,4-Dioxane	204-661-8	123-91-1	20	73	-	-	IOELV, Skin, CMR
Diphenyl ether	202-981-2	101-84-8	1	7	2	14	IOELV
Diphosphorous pentasulphide, (Phosphorous pentasulphide)	215-242-4	1314-80-3		1			IOELV
Diphosphorous pentoxide	215-236-1	1314-56-3	-	1	-	-	IOELV
Epichlorohydrine	203-439-8	106-89-8		1.9	-	-	BOELV, Skin, CMR, Sens,
1,2-Epoxypropane (Propylene oxide)	200-879-2	75-56-9	1	2.4	-	-	BOELV, CMR
Ethylene Glycol (Ethane-1,2-diol)	203-473-3	107-21-1	20	52	40	104	IOELV, Skin
2-Ethoxyethanol (Ethylene glycol monoethyl ether)	203-804-1	110-80-5	2	8	-	-	BOELV, Skin, CMR
2-Ethoxyethyl acetate	203-839-2	111-15-9	2	11	-	-	BOELV, Skin, CMR
Ethyl acetate	205-500-4	141-78-6	200	734	400	1468	IOELV
Ethyl acrylate	205-438-8	140-88-5	5	21	10	42	IOELV, Skin, Sens
Ethylamine	200-834-7	75-04-7	5	9.4	-	-	IOELV

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m^3	ppm	mg/m^3	
Ethylbenzene	202-849-4	100-41-4	100	442	200	884	IOELV, Skin ,
Ethylene dibromide (1,2 Dibromoethane)	203-444-5	106-93-4	0.1	0.8	-	-	BOELV, Skin, CMR
Ethylene dichloride (1,2-Dichloroethane)	203-458-1	107-06-2	2	8.2	-	-	BOELV, Skin, CMR
Ethylene oxide	200-849-9	75-21-8	1	1.8	-	-	BOELV, Skin CMR
2-Ethylhexan-1-ol	203-234-3	104-76-7	1	5.4	-	-	IOELV
Fluorides, inorganic	-	-	-	2.5	-	-	IOELV
Fluorine	231-954-8	7782-41-4	1	1.58	2	3.16	IOELV
Formaldehyde	**200-001-8**	**50-00-0**	**0.3**	**0.37**	**0.6**	**0.74**	**BOELV, CMR** **Dermal sensitisation**
Formic Acid	200-579-1	64-18-6	5	9	-	-	IOELV
Glycerol trinitrate (Nitroglycerin)	200-240-8	55-63-0	0.01	0.095	0.02	0.19	IOELV Skin
Hardwood Dusts	**-**	**-**		**2(I)**			**Schedule 4** **BOELV, Sens**
	If hardwood dusts are mixed with other wood dusts, the limit value shall apply to all wood dusts present in that mixture.						
n-Heptane	205-563-8	142-82-5	500	2085	-	-	IOELV
Heptan-2-one (Methyl-n-amyl-ketone)	203-767-1	110-43-0	50	238	100	475	IOELV, Skin
Heptan-3-one (Ethyl Butyl Ketone)	203-388-1	106-35-4	20	95	-	-	IOELV
n-Hexane	203-777-6	110-54-3	20	72	-	-	IOELV,
Hydrazine	206-114-9	302-01-2	0.01	0.013	-	-	BOELV, Skin, CMR, Sens
Hydrogen bromide	233-113-0	10035-10-6	-	-	2	6.7	IOELV
Hydrogen chloride	231-595-7	7647-01-0	5	8	10	15	IOELV
Hydrogen cyanide (as cyanide)	200-821-6	74-90-8	0.9	1	4.5	5	IOELV, Skin
Hydrogen fluoride (as F)	231-634-8	7664-39-3	1.8	1.5	3	2.5	IOELV, Skin
Hydrogen sulphide	231-977-3	7783-06-4	5	7	10	14	IOELV
Isoamyl alcohol	204-633-5	123-51-3	5	18	10	37	IOELV
Isobutyl acetate	203-745-1	110-19-0	50	241	150	723	IOELV
Isopentylacetate (Isoamyl acetate)	204-662-3	123-92-2	50	270	100	540	IOELV
Lead and its inorganic compounds				**0.03(I)**			**BOELV** **Non-threshold reprotoxic substance**
	See Schedule 5 regarding Biological Limit Value						
Lithium hydride	231-484-3	7580-67-8	-	-	-	0.02 (I)	IOELV
Manganese and inorganic manganese compounds (as Mn)			-	0.2 (I) 0.05 (R)	-	-	IOELV

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m^3	ppm	mg/m^3	
Mercury and divalent inorganic mercury compounds including mercuric oxide and mercuric chloride (measured as mercury)	-	7439-97-6	-	0.02	-	-	BOELV, CMR
Mesitylene (Trimethylbenzenes)	203-604-4	108-67-8	20	100	-	-	IOELV
Methanol (Methyl Alcohol)	200-659-6	67-56-1	200	260	-	-	IOELV, Skin
2-Methoxyethanol (Ethylene glycol monomethyl ether)	203-713-7	109-86-4	1	-	-	-	BOELV,Skin, CMR,
2-(2-Methoxyethoxy) ethanol	203-906-6	111-77-3	10	50.1	-	-	IOELV, Skin
2-Methoxyethyl acetate (Ethylene glycol monomethyl ether acetate)	203-772-9	110-49-6	1	-	-	-	BOELV, Skin, CMR
2-Methoxy-1-methylethylacetate	203-603-9	108-65-6	50	275	100	550	IOELV, Skin
(2-Methoxymethylethoxy) propanol (Dipropylene glycol methyl ether)	252-104-2	34590-94-8	50	308	-	--	IOELV, Skin
Methylacrylate	202-500-6	96-33-3	5	18	10	36	IOELV, Skin, Sens
1-Methylbutylacetate	210-946-8	626-38-0	50	270	100	540	IOELV
4-4'-Methylene-bis (2-chloroaniline) (MOCA) (MBOCA)	202-918-9	101-14-4		0.01			BOELV, CMR, Skin
Methylene Chloride; Dichloromethane (DCM)	200-838-9	75-09-2	100	353	200	706	IOELV, Skin
4,4'-Methylenedianiline (MDA)	202-974-4	101-77-9	-	0.08	-	-	BOELV, Skin, CMR, Sens
Methyl formate	203-481-7	107-31-3	50	125	100	250	IOELV, Skin
5-Methylheptan-3-one (Ethyl amyl ketone)	208-793-7	541-85-5	10	53	20	107	IOELV
5-Methylhexan-2-one (Isoamyl methyl ketone)	203-737-8	110-12-3	20	95	-	-	IOELV
4-Methylpentane-2-one (Methyl isobutyl ketone) (MIBK)	203-550-1	108-10-1	20	83	50	208	IOELV, Skin
Methyl isocyanate (as NCO)	210-866-3	624-83-9	-	-	0.02	-	Sens, IOELV
Methyl methacrylate	201-297-1	80-62-6	50	-	100	-	IOELV, Sens
1-methyl-2-pyrrolidone (NMP) (n-Methyl-2-pyrrolidone)	212-828-1	872-50-4	10	40	20	80	BOELV, Skin
Mineral oils that have been used before in internal combustion engines to lubricate and cool the moving parts within the engine			**-**	**-**	**-**	**-**	**Schedule 4 Skin**
Morpholine	203-815-1	110-91-8	10	36	20	72	IOELV,
Naphthalene	202-049-5	91-20-3	10	50	-	-	IOELV
Nickel compounds (measured as Nickel)	**-**	**-**		**0.01 (R) 0.05 (I)**			**BOELV, Dermal and respiratory sensitisation**
Nicotine	200-193-3	54-11-5	-	0.5	-	-	IOELV, Skin
Nitric Acid	231-714-2	7697-37-2	-	-	1	2.6	IOELV

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m^3	ppm	mg/m^3	
Nitrobenzene	202-716-0	98-95-3	0.2	1	-	-	BOELV, Skin
Nitroethane	201-188-9	79-24-3	20	62	100	312	IOELV, Skin
Nitrogen dioxide	233-272-6	10102-44-0	0.5	0.96	1	1.91	IOELV
Nitrogen Monoxide (Nitric oxide)	233-271-0	10102-43-9	2	2.5	--		IOELV
2-Nitropropane	201-209-1	79-46-9	5	18	-	-	BOELV, CMR
Orthophosphoric acid (Phosphoric acid)	231-633-2	7664-38-2	-	1	-	2	IOELV
Oxalic Acid	205-634-3	144-62-7	-	1	-	-	IOELV
Pentane	203-692-4	109-66-0	1000	3000	-	-	IOELV
iso-Pentane	201-142-8	78-78-4	1000	3000	-	-	IOELV
Neopentane neo-Pentane	207-343-7	463-82-1	1000	3000	-	-	IOELV
Pentylacetate	211-047-3	628-63-7	50	270	100	540	IOELV
3-Pentylacetate	211-047-3	620-11-1	50	270	100	540	IOELV
Phenol	203-632-7	108-95-2	2	8	4	16	IOELV, Skin
2-phenyl-propane (Cumene) (Isopropyl benzene)	202-704-5	98-82-8	10	50	50	250	IOELV, Skin, CMR
2-Phenylpropene	202-705-0	98-83-9	50	246	100	492	IOELV
Phosgene (Carbonyl Chloride)	200-870-3	75-44-5	0.02	0.08	0.1	0.4	IOELV
Phosphine	232-260-8	7803-51-2	0.1	0.14	0.2	0.28	IOELV
Phosphorus pentachloride	233-060-3	10026-13-8	-	1	-	-	IOELV
Phosphoryl trichloride	233-046-7	10025-87-3	0.01	0.064	0.02	0.13	IOELV
	Corrigendum to Commission Directive (EU) 2019/1831						
Picric acid (2,4,6-Trinitrophenol)	201-865-9	88-89-1	-	0.1	-	0.3	IOELV, Skin
Piperazine	203-808-3	110-85-0	-	0.1	-	0.3	IOELV, Sens
Platinum metal	231-116-1	7440-06-4	-	1	-	-	IOELV
Polycyclic aromatic hydrocarbon mixtures, particularly those containing benzo[a] pyrene							Skin
Potassium cyanide	205-792-3	151-50-8		1		5	IOELV, Skin
Propionic acid	201-176-3	79-09-4	10	31	20	62	IOELV
1-Methoxypropanol-2 (Propylene glycol monomethyl ether)	203-539-1	107-98-2	100	375	150	568	IOELV
Pyrethrum (purified of sensitising lactones) (Pyrethrins and Pyrethroids)		8003-34-7		1			IOELV
Pyridine	203-809-9	110-86-1	5	15	10	30	IOELV
Refractory Ceramic Fibres (RCFs) which are carcinogens	-	-	0.3 fibres/ml		-	-	BOELV, CMR
Resorcinol (Dihydroxybenzene)	203-585-2	108-46-3	10	45	-	-	IOELV, Skin
Respirable crystalline silica dust (Cristobalite, Quartz, Tridymite, Tripoli)	**-**	**-**		**0.1(R)**	**-**	**-**	**Schedule 4 BOELV**
Silver (metallic)	231-131-3	7440-22-4	-	0.1	-	-	IOELV

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m^3	ppm	mg/m^3	
Silver (soluble compounds as Ag)	231-131-3	-	-	0.01	-	-	IOELV
Sodium azide (as NaN3)	247-852-1	26628-22-8	-	0.1	-	0.3	IOELV, Skin
Sodium cyanide (as cyanide)	205-599-4	143-33-9	-	1	-	5	IOELV, Skin
Sulphur dioxide	231-195-2	7446-09-5	0.5	1.3	1	2.7	IOELV
Sulphuric acid (mist) (thoracic fraction for sampling purposes)	231-639-5	7664-93-9	-	0.05 (T)	-	-	IOELV
	When selecting an appropriate exposure monitoring method, account should be taken of potential limitations and interferences that may arise in the presence of other sulphur compounds						
Terphenyl, hydrogenated (Hydrogenated terphenyls)	262-967-7	61788-32-7	2	19	5	48	IOELV
Tetrachloroethylene	204-825-9	127-18-4	20	138	40	275	IOELV, Skin
Sulphotep (O,O,O,O'Tetraethyl dithiopyrophosphate) (TEPD)	222-995-2	3689-24-5	-	0.1	-	-	IOELV, Skin
Tetraethyl orthosilicate, (Ethyl silicate)	201-083-8	78-10-4	5	44	-	-	IOELV
Tetrahydrofuran	203-726-8	109-99-9	50	150	100	300	IOELV, Skin
Tin, as Sn Metal Oxide & inorganic compounds, except tin hydride Organic compounds	231-141-8	7440-31-5	-	 2 2 0.1		 0.2	IOELV
Toluene	203-625-9	108-88-3	50	192	100	384	IOELV, Skin
o-Toluidine	202-429-0	95-53-4	0.1	0.5	-	-	BOELV, Skin, CMR
1,2,4-Trichlorobenzene	204-428-0	120-82-1	2	15.1	5	37.8	IOELV, Skin
1,1,1-Trichloroethane (Methyl chloroform)	200-756-3	71-55-6	100	555	200	1110	IOELV
Trichloroethylene	201-167-4	79-01-6	10	54.7	30	164.1	BOELV, Skin, CMR
Triethylamine	204-469-4	121-44-8	2	8.4	3	12.6	IOELV, Skin
Trimethylamine	200-875-0	75-50-3	2	4.9	5	12.5	IOELV
1,2,3-Trimethylbenzene	208-394-8	526-73-8	20	100	-	-	IOELV,
1,2,4-Trimethylbenzene	202-436-9	95-63-6	20	100	-	-	IOELV
Vinyl acetate	203-545-4	108-05-4	5	17.6	10	35.2	IOELV
Vinyl chloride monomer (VCM)	200-831-0	75-01-4	1	2.6	-	-	BOELV, CMR
Vinylidene chloride; 1,1-Dichloroethylene	200-864-0	75-35-4	2	8	5	20	IOELV
Xylene, mixed isomers	215-535-7	1330-20-7	50	221	100	442	IOELV, Skin,
Xylene, o-isomer	202-422-2	95-47-6	50	221	100	442	IOELV, Skin,
Xylene, m-isomer	203-576-3	108-38-3	50	221	100	442	IOELV, Skin,
Xylene, p-isomer	203-396-5	106-42-3	50	221	100	442	IOELV, Skin

SCHEDULE 2 - List of Advisory Occupational Exposure Limit Values

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Acetaldehyde	200-836-8	75-07-0	-	-	25	45	-
Acetic anhydride	203-564-8	108-24-7	1	2.5	3	10	-
Acetone cyanohydrin as CN	200-909-4	75-86-5	-	-		5	-
Acetophenone	202-708-7	98-86-2	10	49	-	-	-
Acetylene	200-816-9	74-86-2	-	-	-	-	Asphx.
Acetylene Dichloride	208-750-2	540-59-0	200	790	-	-	-
Acetylene Tetrabromide, see 1,1,2,2-Tetrabromoethane							
o-Acetylsalicylic acid, (Aspirin)	200-064-1	50-78-2	-	5	-	-	-
Adipic acid	204-673-3	124-04-9	-	5	-	-	-
Adiponitrile	203-896-3	111-69-3	2	-	-	-	-
Alachlor	240-110-8	15972-60-8	-	1 (IFV)	-	-	-
Aldrin (ISO)	206-215-8	309-00-2	-	0.05 (IFV)	-	-	Skin,
Aliphatic hydrocarbon gases							
Alkanes (C1-C3)							-
Ethane	200-814-8	74-84-0					Asphx.
Methane	200-812-7	74-82-8					Asphx.
Propane	200-827-9	74-98-6					Asphx.
Allyl bromide	203-446-6	106-95-6	0.1	-	0.2	-	Skin,
Allyl chloride	203-457-6	107-05-1	1	3	2	6	Skin,
Allyl 2,3-epoxypropyl ether	203-442-4	106-92-3	5	22	-	-	Sens.
Allyl glycidyl ether (AGE), see Allyl 2,3-epoxypropyl ether							
Allyl propyl disulphide	218-550-7	2179-59-1	0.5	-	-	-	-
Aluminium alkyl compounds	-	-	-	2	-	-	-
Aluminium metal;	231-072-3	7429-90-5	-	1 (R)	-	-	-
Aluminium oxides;	215-691-6	1344-28-1					
total inhalable dust			-	10	-	-	-
respirable dust			-	4	-	-	-
Aluminium salts, soluble	-	-	-	2	-	-	-
Aminodimethylbenzene, see Xylidine							
4-Aminodiphenyl	202-177-1	92-67-1	-	-	-	-	Skin, CMR
2-Aminopyridine	207-988-4	504-29-0	0.5	2			-
Ammonium chloride, fume	235-186-4	12125-02-9	-	10	-	20	-
Ammonium Perflurooctanoate	223-320-4	3825-26-1	-	0.01	-	-	Skin
Ammonium sulphamidate	231-871-7	7773-06-0	-	10	-	-	-
Sec-Amyl acetate, see 1-Methyl butyl acetate							
o-Anisidine	201-963-1	90-04-0	0.1	0.5	-	-	Skin, CMR
p-Anisidine	203-254-2	104-94-9	0.1	0.5	-	-	Skin,
Antimony & compounds (as Sb)	231-146-5	7440-36-0	-	0.5	-	-	-
Antimony hydride (see Stibine)							
Araldite PT 810, see Triglycidyl isocyanurate, (TGIC)							
Argon	231-147-0	7440-37-1	-	-	-	-	Asphx.
Arsine	232-066-3	7784-42-1	0.005	0.02	-	-	-

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Asphalt (Bitumen), petroleum fumes, (inhalable fraction)	232-490-9	8052-42-4	-	0.5	-		-
Aspirin, see o-Acetylsalicylic acid							
Atrazine (ISO)	217-617-8	1912-24-9	-	2	-	-	Sens.
Azinphos-methyl (ISO), see Guthion							
Aziridine, see Ethylenimine							
Azodicarbonamide (C, C'-azodi(formamide))	204-650-8	123-77-3	-	1	-	3	Sens.
Barium sulphate, respirable dust	231-784-4	7727-43-7	-	5	-	-	-
Benomyl (ISO)	241-775-7	17804-35-2	-	10	-		CMR, Sens.
Benz[a]anthracene	200-280-6	56-55-3	-	-	-	-	CMR
Benzenethiol	203-635-3	108-98-5	-	-	-	-	Skin
Benzene-1,2,4-tricarboxylic acid 1,2-anhydride, see Trimelletic anhydride							
Benzidene	202-199-1	92-87-5	-	-	-	-	Skin, CMR
Benzo[β]fluroanthene	205-911-9	205-99-2	-	-	-	-	CMR
Benzo[a]pyrene	200-028-5	50-32-8	-	-	-	-	CMR, Sens.
p-Benzoquinone, see Quinone							
Benzoyl chloride	202-710-8	98-88-4	-	-	0.5	-	-
Benzoyl peroxide, see Dibenzoyl peroxide							
Benzyl acetate	205-399-7	140-11-4	10	-	-	-	-
Benzyl butyl phthalate, see Butyl benzyl phthalate							
Benzyl chloride	202-853-6	100-44-7	1				CMR
γ-BHC (ISO), see γ-Hexachlorocyclohexane							
Biphenyl	202-163-5	92-52-4	0.2	1.5	-	-	-
BCME, see bis(Chloromethyl) ether							
2,2-Bis(p-chlorophenyl)-1,1,1-trichloroethane, see 1,1,1-Trichlorobis (chlorophenyl)ethane							
Bis(2,3-epoxypropyl)ether, see Diglycidyl ether (DGE)							
Bis(2-ethylhexyl) Phthalate, see Di-sec-octyl-phthalate							
2,2Bis(p-methoxyphenyl) -1,1,1-trichloroethane, see Methoxychlor(ISO)							
Bismuth telluride	215-135-2	1304-82-1	-	10	-	-	-
Bismuth telluride, selenium-doped	-	-	-	5	-	-	-
Borate compounds inorganic	215-540-4	1330-43-4 1303-96-4 10043-35-3 12179-04-3		2			CMR
Bornan-2-one	200-945-0	76-22-2	2	12	3	18	-
Boron oxide (diboron trioxide)	215-125-8	1303-86-2	-	10	-		CMR
Boron tribromide	233-657-9	10294-33-4	-	-	1	10	-
Boron trifluoride	231-569-5	7637-07-2	-	-	1	3	-
Bromacil (ISO)	206-245-1	314-40-9	1	10	-	-	-
Bromine pentafluoride	232-157-8	7789-30-2	0.1	0.7	-	-	-
Bromochloromethane	200-826-3	74-97-5	200	1050	-	-	-

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Bromoethane, see Ethyl bromide							
Bromoform, see Tribromomethane							
Bromomethane	200-813-2	74-83-9	5	20	15	60	Skin
1-Bromopropane (n-Propyl bromide)	203-445-0	106-94-5	0.1				
Bromotrifluoromethane, see Trifluorobromomethane							
Butane, all isomers	203-448-7 200-857-2	106-97-8 75-28-5			1000		
Butanethiol	203-705-3	109-79-5	0.5	1.8	-	-	-
Butan-1-ol	200-751-6	71-36-3	20	-	-	-	-
Butan-2-ol	201-158-5	78-92-2	100	300	150	450	-
tert-Butanol - see 2-Methylpropan-2-ol							
Butenes, all isomers incl. Isobutene		106-98-9 107-01-7 115-11-7 590-18-1 624-64-6 25167-67-3	250	-	-	-	-
trans But-2-enal	204-647-1	123-73-9	2	6	6	18	-
tert-Butyl acetate	208-760-7	540-88-5	200				-
n-Butyl alcohol, see Butan-1-ol							
sec-Butyl alcohol, see Butan-2-ol							
tert-Butyl alcohol, see 2-Methyl propan-2-ol							
n-Butylamine	203-699-2	109-73-9	-	-	5	15	Skin
Butylated hydroxytoluene (BHT) see 2,6-Ditertiary-butyl-para-cresol							
Butyl benzyl phthalate	201-622-7	85-68-7	-	5	-	-	CMR
n-Butyl chloroformate	209-750-5	592-34-7	1	5.6	-	-	-
tert-Butyl chromate		1189-85-1	-	-	-	0.1	-
Butyl-2,3-epoxypropyl ether(BGE)	219-376-4	2426-08-6	3	-	-	-	Skin Sens.
Butyl glycidyl ether, see Butyl-2,3-epoxypropylether							
Butyl lactate	205-316-4	138-22-7	5	25	-	-	-
n-Butyl mercaptan, see Butanethiol							
2-sec- Butylphenol	201-933-8	89-72-5	5	30	-	-	Skin
p-tert Butyltoluene	202-675-9	98-51-1	1	6.1	-	-	-
Caesium hydroxide	244-344-1	21351-79-1	-	2	-	-	-
Calcium carbonate total inhalable dust respirable dust	215-279-6	1317-65-3	 - -	 10 4	 - -	 - -	 - -
Calcium sulphate	231-900-3	7778-18-9	-	10	-	-	-
Camphor, synthetic, see Bornan-2-one							
Captafol (ISO)	219-363-3	2425-06-1	-	0.1	-	-	Skin, CMR , Sens.
Captan (ISO)	205-087-0	133-06-2	-	5	-	-	Sens.

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Carbaryl (ISO)	200-555-0	63-25-2	-	0.5 (IFV)	-	-	-
Carbofuran (ISO)	216-353-0	1563-66-2	-	0.1	-	-	-
Carbon black	215-609-9	1333-86-4	-	3 (I)	-	-	-
Carbon tetrabromide	209-189-6	558-13-4	0.1	1.4	0.3	4	-
Carbonyl fluoride	206-534-2	353-50-4	2	5.4	5	13	-
Carbonyl sulphide	207-340-0	463-58-1	5	-	-	-	-
Catechol	204-427-5	120-80-9	5	20	-	-	Skin CMR
Cellulose			-	10	-	-	-
Cement (Portland) (See Portland cement)							
Chlordane (ISO)	200-349-0	57-74-9	-	0.5	-	-	Skin
Chlorinated biphenyls	215-648-1		-		-	-	Skin
(42% chlorine)		53469-21-9	-	1	-	-	
(54% chlorine)		11097-69-1	-	0.5	-	-	
Chlorinated camphene	232-283-3	8001-35-2	-	0.5	-	-	-
o-Chlorinated diphenyl oxide		31242-93-0	-	0.5	-	-	-
Chlorine dioxide	233-162-8	10049-04-4	-	-	0.1	-	-
Chlorine trifluoride	232-230-4	7790-91-2	-	-	0.1	0.4	-
Chloroacetaldehyde	203-472-8	107-20-0	-	-	1	3	-
Chloroacetone	201-161-1	78-95-5	-	-	1		Skin
2-Chloroacetophenone	208-531-1	532-27-4	0.05	0.3	-	-	-
Chloroacetyl chloride	201-171-6	79-04-9	0.05	0.2	-	-	-
o-Chlorobenzylidene malonitrile	220-278-9	2698-41-1			0.05		Skin
Chlorobromomethane, see Bromochloromethane							
2-Chlorobuta-1,3-diene, see b-Chloroprene							
2-Chloroethanol, see Ethylene chlorohydrin							
Chloroethylene, see Vinyl chloride							
Bis(Chloromethyl) ether	208-832-8	542-88-1	0.001	0.005	-	-	CMR
Chloromethyl methyl ether	203-480-1	107-30-2	-	-	-	-	CMR
1-Chloro-4-nitrobenzene	202-809-6	100-00-5	-	1	-	2	Skin
1-Chloro-1-nitropropane	209-990-0	600-25-9	2	10	-	-	-
Chloropentafluoroethane	200-938-2	76-15-3	1000	6320	-	-	-
Chloropicrin	200-930-9	76-06-2	0.1	0.7	-	-	-
β-Chloroprene	204-818-0	126-99-8	10	36	-	-	CMR, Skin
3-Chloropropene, see Allyl chloride							
1-Chloro-2-propanol	204-819-6	127-00-4	1	-	-	-	-
2-Chloro-1-propanol		78-89-7					
2-Chloropropionic acid	209-952-3	598-78-7	0.1	-	-	-	Skin
o-Chlorostyrene	218-026-8	2039-87-4	50	283	75	425	-
Chlorosulphonic acid	232-234-6	7790-94-5	-	1	-	-	-
a-Chlorotoluene, see Benzyl chloride							
2-Chlorotoluene	202-424-3	95-49-8	50	250	-	-	-
2-Chloro-6-(trichloromethyl) pyridine, see Nitrapyrin							
Chlorpyrifos (ISO)	220-864-4	2921-88-2	-	0.1 (IFV)	-	-	Skin

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Citral	226-394-6	5392-40-5	5 (IFV)	-	-	-	-
Clopidol	221-008-2	2971-90-6	-	3	-	-	-
Coal dust, respirable dust Anthracite Bituminous	-	-	-	 0.4 (R) 0.9 (R)	-	-	-
Coal tar pitch volatiles, (as cyclohexane solubles)	266-028-2	65996-93-2	-	0.2	-	-	CMR
Cobalt & cobalt compounds (as Co)	231-158-0	7440-48-4	-	0.02	-	-	CMR Sens.
Cobalt carbonyl as Co	233-514-0	10210-68-1	-	0.1	-	--	-
Copper (as Cu) Fume Dusts and mists (as Cu)	231-159-6	7440-50-8	 - -	 0.2 1	 - -	 - -	 - -
Cotton dust (raw or waste cotton)	-	-	-	2.5	-	-	-
Coumaphos	-	56-72-4	-	0.05 (IFV)	-	-	-
Crotonaldehyde	224-030-0	4170-30-0	-	-	0.3	-	Skin
Crufomate	206-083-1	299-86-5	-	5	-	-	-
Cryofluorane, see 1,2-Dichlorotetrafluoroethane							
Cyanides, except hydrogen cyanide, cyanogen and cyanogen chloride, (as -CN)		57-12-5	-	5	-	-	Skin
Cyanoacrylates, Ethyl and Methyl		7085-85-0 137-05-3	0.2		1		
Cyanogen	207-306-5	460-19-5	-	-	10		-
Cyanogen bromide	208-051-2	506-68-3	-	-	0.3	-	-
Cyanogen chloride	208-052-8	506-77-4	-	-	0.3	0.6	-
Cyclohexanol	203-630-6	108-93-0	50	200	-	-	-
Cyclohexene	203-807-8	110-83-8	300	1015	-	-	-
Cyclohexylamine	203-629-0	108-91-8	10	40	-	-	-
Cyclonite, see Hexahydro-1,3,5-trinitro-1,3,5 triazine							
Cyclopentadiene	208-835-4	542-92-7	75	203			
Cyclopentane	206-016-6	287-92-3	600	1720	-	-	-
Cyhexatin (ISO), see Tricyclohexyltin hydroxide							
2,4-D (ISO), see 2,4-Dichloro- phenoxyacetic acid							
DDM, see 4-4' Diaminodiphenylmethane							
DDT, see 1,1,1-Trichlorobis (chlorophenyl) ethane							
DDVP, see Dichlorvos (ISO)							
Decaborane	241-711-8	17702-41-9	0.05	0.25	0.15	0.75	Skin
Demeton		8065-48-3	0.01	0.05 (IFV)			Skin
Demeton-S-methyl (methyl demeton)	213-052-6	919-86-8	-	0.05 (IFV)	-		-
2,4-DES, see 2-(2,4-Dichlorophenoxy)ethyl hydrogen sulphate							
Derris, commercial, see Rotenone							
Diacetone alcohol	204-626-7	123-42-2	50	240	-	-	-
Dialkyl 79 phthalate	-	-	-	5	-	-	-

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Diallyl phthalate	205-016-3	131-17-9	-	5	-	-	-
2,2-Diaminodiethylamine, see Diethylene triamine							
1,2-Diaminoethane, see Ethylenediamine							
Diammonium peroxodisulphate (measured as[S2O3]) See Persulphate salts							
Diatomaceous earth, natural, respirable dust	272-489-0	68855-54-9	-	1.2	-	-	-
Diazinon (ISO)	206-373-8	333-41-5	-	0.01 (IFV)	-	-	Skin
Diazomethane	206-382-7	334-88-3	0.2	0.4	-	-	CMR
Dibenzoyl peroxide	202-327-6	94-36-0	-	5	-	-	Sens.
Dibismuth tritelluride, see Bismuth telluride							
Dibismuth tritelluride, selenium doped, see Bismuth telluride selenium doped							
Diborane	242-940-6	19287-45-7	0.1	0.1	-	-	-
Diboron trioxide, see Boron oxide							
Dibrom, see 1,2 Dibromo-2, 2 dichloro ethyl dimethyl phosphate (Naled)							
1,2 Dibromo-2,2 dichloro ethyl dimethyl phosphate	206-098-3	300-76-5	-	0.1 (IFV)	-	6	-
Dibromodifluoromethane, see Difluorodibromomethane							
2-N-Dibutylaminoethanol	203-057-1	102-81-8	0.5	3.5	-	-	Skin
Dibutyl hydrogen phosphate	203-509-8	107-66-4		5 (IFV)	2	10	-
Dibutyl phenyl phosphate	219-772-7	2528-36-1	0.3	3.5	-	-	Skin
Di-n-butyl phosphate, see Dibutyl hydrogen phosphate							
Dibutyl phthalate	201-557-4	84-74-2	-	5	-	10	CMR
Dichloroacetic acid	201-207-0	79-43-6	0.5	-	-	-	-
Dichloroacetylene		7572-29-4	-	-	0.1	0.4	-
3,3-Dichlorobenzidine	202-109-0	91-94-1	-	-	-	-	CMR , Sens.
1,4-Dichloro-2-butene	212-121-8	764-41-0	0.005	0.025	-	-	Skin, CMR
Dichlorodifluoromethane	200-893-9	75-71-8	1000	4950	-	-	-
1,3-Dichloro-5,5-dimethyl-hydantoin	204-258-7	118-52-5	-	0.2	-	0.4	-
Dichlorodiphenyltrichloroethane, see 1,1,1'-Trichlorobis (chlorophenyl) ethane							
1,2-Dichloroethylene (cis:trans isomers 60:40), see Acetylene dichloride							
Dichloroethyl ether	203-870-1	111-44-4	5	29	10	58	Skin
Dichlorofluoromethane	200-869-8	75-43-4	10	40	-	-	-
1,1-Dichloro-1-nitroethane	209-854-0	594-72-9	2	12	-	-	-
2,4-Dichlorophenoxyacetic acid [2,4-D (ISO)]	202-361-1	94-75-7	-	10	-	--	Skin, Sens.
2-(2,4-dichlorophenoxy) ethyl hydrogen sulphate and sodium 2-(2,4-dichlorophenoxy) ethyl sulphate	205-259-5	149-26-8	-	10	-	20	-
1,3-Dichloropropene, cis and trans isomers	208-826-5	542-75-6	1	5	-	-	Skin, Sens.
Dichloropropionic acid	200-923-0	75-99-0	1	5.8	-	-	-
1,2-Dichlorotetrafluoroethane	200-937-7	76-14-2	1000	7000	-	-	-
Dichlorvos (ISO)	200-547-7	62-73-7	0.1	1	0.3	3	Skin, Sens.

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Dicrotophos	205-494-3	141-66-2	-	0.05 (IFV)	-	-	Skin
Dicyclohexyl phthalate	201-545-9	84-61-7	-	5	-	-	-
Dicyclopentadiene	201-052-9	77-73-6	5	30			-
Dicyclopentadienyl iron, see Ferrocene							
Dieldrin (ISO)	200-484-5	60-57-1	-	0.1	-	-	Skin
Diesel fuel/kerosene			-	100	-	-	Skin
Diethanolamine	203-868-0	111-42-2	0.2	1(IFV)	-	-	-
2-Diethylaminoethanol	202-845-2	100-37-8	2	-	-	-	Skin
Diethylene glycol	203-872-2	111-46-6	23	100	-	-	-
Diethylene triamine	203-865-4	111-40-0	1	4	-	-	Skin
Di-(2-ethylhexyl) phthalate, see Di-sec-octyl-phthalate							
N, N-Diethylhydroxylamine	223-055-4	3710-84-7	2	-	-	-	-
Diethyl ketone, see Pentan-3-one							
Diethyl phthalate	201-550-6		-	5	-	10	-
Diethyl sulphate	200-589-6	64-67-5	0.05	-	-	-	CMR
Difluorodibromomethane	200-885-5	75-61-6	100	860	-	-	-
Difluorodichloromethane, see Dichlorodifluoromethane							
Diglycidyl ether (DGE)	218-802-6	2238-07-5	0.01	0.05	-	-	-
o-Dihydroxybenzene, see Catechol							
p-Dihydroxybenzene, see Hydroquinone							
Diisobutyl ketone	203-620-1	108-83-8	25	150	-	-	-
Diisobutyl phthalate	201-553-2	84-69-5	-	5	-	-	CMR
Diisodecyl phthalate	247-977-1	26761-40-0	-	5	-	-	-
Diisononyl phthalate	249-079-5	28553-12-0	-	5	-	-	-
Diisooctyl phthalate	248-523-5	27554-26-3	-	5	-	-	CMR
Diisopropylamine	203-558-5	108-18-9	5	20	-	-	Skin
Diisopropyl ether, see Isopropyl ether							
Di-linear 79 phthalate	-	-	-	5	-	-	-
Dimethoxymethane, see Methylal							
Bis-(2-Dimethylaminoethyl) ether		3033-62-3	0.05	-	0.15	-	-
N,N-Dimethylaniline	204-493-5	121-69-7	5	25	10	50	Skin
1,3-Dimethylbutyl acetate	203-621-7	108-84-9	50	300	-	-	-
Dimethyl carbamoyl chloride	201-208-6	79-44-7	0.005	0.2	-	-	CMR
Dimethyl disulphide	210-871-0	624-92-0	0.5	1.9	-	-	-
N,N-Dimethylethylamine	209-940-8	598-56-1	10	30	15	45	-
2,6-Dimethylheptan-4-one, see Di-isobutyl ketone							
N,N-Dimethylhydrazine	200-316-0	57-14-7	0.01	0.02	-	-	CMR
Dimethyl phthalate	205-011-6	131-11-3	-	5	-	10	-
Dimethyl sulphate	201-058-1	77-78-1	0.1	0.5	0.1	0.5	Skin, CMR, Sens.
Dimethyl sulphide	200-846-2	75-18-3	10	-	-	-	-
Dimethylethoxysilane	238-921-7	14857-34-2	0.5	-	1.5	-	-
Dinitolmide	205-706-4	148-01-6	-	1	-	-	-
Dinitrobenzene, all isomers	246-673-6	25154-54-5	0.15	1	0.5	3	Skin

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Dinitro-o-cresol	208-601-1	534-52-1	-	0.2	-	-	Skin, Sens.
Dinitrotoluene	246-836-1	25321-14-6	-	0.2	-	-	CMR, Skin
Dinonyl phthalate	201-560-0	84-76-4	-	5	-	-	-
Dioxathion (ISO)	201-107-7	78-34-2	-	0.1 (IFV)	-	-	Skin
1,3-Dioxolane	211-463-5	646-06-0	20	-	-	-	-
Diphenyl, see Biphenyl							
Diphenylamine	204-539-4	122-39-4	-	10	-	20	-
Dipotassium peroxodisulphate (measured as $[S_2O_8]$); see Persulphate salts, potassium							
Dipropyl ketone	204-608-9	123-19-3	50	233	-	-	-
Diquat dibromide(ISO)	201-579-4	85-00-7	-	0.5 (I) 0.1 (R)	-	-	Sens.
Di-sec-octyl phthalate	204-211-0	117-81-7	0.3	5	0.6	10	CMR, Skin
Disodium disulphite	231-673-0	7681-57-4	-	5	-	-	-
Disodium peroxodisulphate (measured as S_2O_8); see Persulphate salts, sodium							
Disodium tetraborate, anhydrous, decahydrate & pentahydrate, see Borates (tetra) sodium							
Disulfiram	202-607-8	97-77-8	-	2	-	-	-
Disulfoton (ISO)	206-054-3	298-04-4	-	0.05 (IFV)	-	-	Skin
Disulphur dichloride, see Sulphur monochloride							
Disulphur decafluoride	227-204-4	5714-22-7	-	-	0.01		-
2,6-Ditertiary-butyl-para-cresol	204-881-4	128-37-0	-	2	-	-	-
6,6'-Di-tert-butyl-4,4'-thio-di-m-cresol	202-525-2	96-69-5	-	1 (I)	-	-	-
Diuron (ISO)	206-354-4	330-54-1	-	10	-	-	CMR
Divinylbenzene	203-595-7	108-57-6	10	50	-	-	-
Divanadium pentaoxide as V	215-239-8	1314-62-1	-	0.05(I)	-	-	-
DMDT, see Methoxychlor (ISO)							
Dodecyl mercaptan	203-984-1	112-55-0	0.1	-	-	-	Sens.
Dusts non-specific	-	-					
total inhalable			-	10	-	-	-
respirable			-	4	-	-	-
Emery	-	1302-74-5					
total inhalable dust			-	10	-	-	-
respirable dust			-	4	-	-	-
Endosulfan (ISO)	204-079-4	115-29-7	-	0.1	-	0.3	Skin
Endrin (ISO)	200-775-7	72-20-8	-	0.1	-	-	Skin
Enflurane	237-553-4	13838-16-9	50	380	-	-	-
EPN (O-ethyl O-4-nitrophenyl phenylphosphothioate)	218-276-8	2104-64-5	-	0.1	-	-	-
1,2 Epoxy-4-epoxyethylcyclohexane, see Vinylcyclohexene dioxide							
2,3-Epoxypropyl isopropyl ether, see Isopropyl glycidyl ether							
Ethane (see aliphatic hydrocarbon gases)							
Ethanethiol (ethyl mercaptan)	200-837-3	75-08-1	0.5		-	-	-

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Ethanol	200-578-6	64-17-5	-	-	1000	-	-
Ethion	209-242-3	563-12-2	-	0.05 (IFV)	-	-	-
2-Ethoxy-2-methylpropane	211-309-7	637-92-3	25	-	-	-	-
Ethyl alcohol, see Ethanol							
Ethyl bromide	200-825-8	74-96-4	5	22	-	-	Skin
Ethyl chloroformate	208-778-5	541-41-3	1	4.4	-	-	-
Ethyl cyanoacrylate	230-391-5	7085-85-0	0.2	-	1	-	-
Ethylene	200-815-3	74-85-1	200	-	-	-	Asphx.
Ethylene chlorohydrin	203-459-7	107-07-3	-	-	1	3	Skin
Ethylenediamine	203-468-6	107-15-3	10	25	-	-	Sens.
Ethylene dinitrate, see Ethylene glycol dinitrate							
Ethylene glycol dinitrate	211-063-0	628-96-6	0.05	0.3	-	-	Skin
Ethylenimine	205-793-9	151-56-4	0.05	0.1	-	-	Skin, CMR
Ethyl formate	203-721-0	109-94-4	-	-	100	-	-
Ethyl hexanoic acid	205-743-6	149-57-5	-	5	-	-	-
2-Ethylhexyl chloroformate	246-278-9	24468-13-1	1	7.9	-	-	-
5-Ethylidene-8,9,10-trinorborn-2-ene (Ethylidene norbornene)	240-347-7	16219-75-3	2	-	4	-	-
Ethyl isocyanate	203-717-9	109-90-0	0.02	-	0.06	-	-
Ethyl tert-butyl ether (see 2-ethoxy-2-methylpropane)							
Ethyl mercaptan, see Ethanethiol							
4-Ethylmorpholine	202-885-0	100-74-3	5	23	20	95	Skin
Fenamiphos (ISO)Ethyl-4-methylthio-m-tolyl isopropyl phosporamidate))	244-848-1	22224-92-6	-	0.05	-	-	-
Fenchlorphos (ISO), see Ronnel							
Fensulfothion (ISO) (O,O-Diethyl O-4-methylsulfinylphenyl phosphorothioate)	204-114-3	115-90-2	-	0.01	-	-	-
Fenthion (ISO) (O,O-Dimethyl-O-(4-methylthion-m-tolyl) phosphorothioate	200-231-9	55-38-9	-	0.05	-	-	-
Ferbam (ISO)	238-484-2	14484-64-1	-	5	-	-	-
Ferrocene (Dicyclopentadienyl iron)	203-039-3	102-54-5	-	10	-	-	-
Ferrovanadium Dust	-	12604-58-9	-	1	-	3	-
Flour dust	-	-	-	1	-	-	Sens.
Fluoride (as F)	-	16984-48-8	-	2.5	-	-	-
Fluorodichloromethane, see Dichlorofluoromethane							
Fluorotrichloromethane, see Trichlorofluoromethane							
Fonofos (ISO) (O-Ethyl phenyl ethylphosphonodithioate)	213-408-0	944-22-9	-	0.1 (IFV)	-	-	-
Formamide	200-842-0	75-12-7	10	18	-	-	CMR, Skin
2-Furaldehyde (Furfural)	202-627-7	98-01-1	2	8	5	20	Skin
Furfuryl alcohol	202-626-1	98-00-0	10	40	15	60	Skin

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Germane	231-961-6	7782-65-2	0.2	0.6	0.6	1.8	-
Germanium tetrahydride, see Germane							
Glutaraldehyde	203-856-5	111-30-8	-	-	0.05	0.2	Sens.
Glycidol	209-128-3	556-52-5	2	6	-	-	CMR
Glyoxal	-	107-22-2	-	0.1 (IFV)	-	-	-
Grain dust	-	-	-	4	-	-	Sens.
Graphite (all forms except fibres)	231-955-3	7782-42-5	-	2 (R)	-	-	-
Guthion	201-676-1	86-50-0	-	0.2	-		Skin, Sens.
Gypsum total inhalable dust respirable dust		10101-41-4	 - -	 10 4	 - -	 - -	 - -
Hafnium	231-166-4	7440-58-6	-	0.5	-		-
Halothane	205-796-5	151-67-7	50		-	-	-
γ-HCH (ISO), see g Hexachlorocyclohexane							
Helium	231-168-5	7440-59-7	-	-	-	-	Asphx.
Heptachlor (ISO)	200-962-3	76-44-8	-	0.05	-	-	Skin
Heptachlor epoxide	213-831-0	1024-57-3	-	0.05	-	-	
Hexachlorobutadiene	201-765-5	87-68-3	0.02	0.21	-	-	Skin
γ-Hexachlorocyclohexane	210-168-9	608-73-1	-	0.5	-	1.5	Skin
Hexachlorocyclopentadiene	201-029-3	77-47-4	0.01	0.1	-	-	-
Hexachloroethane vapour	200-666-4	67-72-1	1	10	-	-	-
Hexachloronaphthalene	215-641-3	1335-87-1	-	0.2	-	-	Skin
Hexafluoroacetone	211-676-3	684-16-2	0.1	0.68	-	-	Skin
Hexafluoropropene (Hexafluoropropylene)	204-127-4	116-15-4	0.1	-	-	-	-
Hexahydrophthalic anhydride All isomers (Inhalable)	201-604-9 236-086-3 238-009-9	85-42-7 13149-00-3 14166-21-3	-	-	-	0.005	Sens.
Hexahydro-1,3,5-trinitro-1,3,5-triazine	204-500-1	121-82-4	0.5	-	-	-	Skin
Hexane, all isomers except n-hexane	-	-	500	1800	1000	3600	-
1,6 Hexanediamine	204-679-6	124-09-4	0.5	2.3	-	-	-
Hexan-2-one	209-731-1	591-78-6	5	10	-	-	Skin
1-Hexene	209-753-1	592-41-6	50	-	-	-	-
Hexylene glycol	203-489-0	107-41-5	-	-	25	125	-
Hydrazoic acid (as vapour)	231-965-8	7782-79-8	-	-	0.1	-	-
Hydrogen	215-605-7	1333-74-0	-	-	-	-	Asphx.
Hydrogen peroxide	231-765-0	7722-84-1	1	1.5	2	3	-
Hydroquinone	204-617-8	123-31-9	-	0.5	-	-	Sens.
4-Hydroxy-4-methyl-pentan-2-one, see Diacetone alcohol							
2-Hydroxypropyl acrylate	213-663-8	999-61-1	0.5	3	-	-	Skin, Sens.

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
2,2'-Iminodiethanol, see Diethanol amine							
2,2'-Iminodi (ethylamine), see Diethylene triamine							
Indene	202-393-6	95-13-6	5	24	-	-	-
Indium & Compounds (as In)	231-180-0	7440-74-6	-	0.1	-	0.3	-
INN, see 1,2-Dichlorotetrafluoroethane							
Iodine and Iodides	231-442-4	7553-56-2	0.01(IFV) 0.01 IFV)		0.1		-
Iodoform	200-874-5	75-47-8	0.2 (IFV)				-
Iodomethane, see methyl iodide							
Iron oxide, fume (as Fe)	215-168-2	1309-37-1	-	5	-	10	-
Iron pentacarbonyl, see Pentacarbonyl iron (as Fe)							
Iron salts (as Fe)	-	-	-	1	-	2	-
Isobutyl alcohol (2 methypropan-1-ol)	201-148-0	78-83-1	150	700			
Isobutyl nitrite	208-819-7	542-56-3		-	1	-	-
Isocyanates, All, (as -NCO) except Methyl isocyanate (CAS No. 624-83-9)	-	-	-	0.02	-	0.07	Sens.
Isoflurane	247-897-7	26675-46-7	50	380	-	-	-
Isoctyl alcohol (mixed isomers)	248-133-5	26952-21-6	50	270	-	-	-
Isophorone, see 3,5,5-trimethyl cyclohex-2-enone							
Isopropoxyethanol	203-685-6	109-59-1	25	106	-	-	Skin
Isopropyl alcohol	200-661-7	67-63-0	200	-	400	-	Skin
Isopropylamine	200-860-9	75-31-0	5	12	10	24	-
n-Isopropylaniline	212-196-7	768-52-5	2	11	-	-	Skin
Isopropyl chloroformate	203-563-2	108-23-6	1	5	-	-	-
Isopropyl ether	203-560-6	108-20-3	250	1050	310	1320	-
Isopropyl glycidyl ether (IGE)	223-672-9	4016-14-2	50	240	75	360	-
Kaolin,respirable dust	-	1332-58-7	-	2	-	-	-
Kerosene see Diesel fuel							
Ketene	207-336-9	463-51-4	0.5	0.9	1.5	3	-
Lindane, see γ hexachlorocyclohexane							
Lithium hydroxide	215-183-4	1310-65-2	-	-	-	1	-
Magnesium oxide respirable dust fume total inhalable dust	215-171-9	1309-48-4	 - - -	 4 5 10	 - - -	 - 10 -	 - - -
Malathion (ISO)	204-497-7	121-75-5	-	1 (IFV)	-	-	Skin, Sens.
Maleic anhydride	203-571-6	108-31-6	0.01(IFV)	-	-	-	Sens.
Manganese, fume (as Mn)	231-105-1	7439-96-5	-	0.2 (I) 0.02 (R)	-	3	
Manganese cyclopentadienyl tricarbonyl	235-142-4	12079-65-1	-	0.1	-	0.3	Skin
Manganese tetraoxide, see Trimanganese tetraoxide							

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Machine made mineral fibre (excluding refractory ceramic fibres) (MMMF)	-	-	1 fibres / ml of air	5	-	-	-
Marble, see Calcium carbonate							
Mequinol, see 4-methoxyphenol							
Mercaptoacetic acid	200-677-4	68-11-1	1	5	-	-	-
Mercury alkyls (as Hg)	-	-	-	0.01	-	0.03	Skin
Mesityl oxide	205-502-5	141-79-7	15	60	25	100	-
Methacrylic acid	201-204-4	79-41-4	20	70	40	140	-
Methacrylonitrile	204-817-5	126-98-7	1	2.8	-	-	Skin
Methane (see aliphatic hydrocarbon gases)							
Methanethiol	200-822-1	74-93-1	0.5	1	-	-	-
Methomyl (ISO)	240-815-0	16752-77-5	-	0.2	-	-	Skin
Methoxychlor (ISO)	200-779-9	72-43-5	-	10	-	-	-
4-Methoxyphenol	205-769-8	150-76-5	-	5	-	-	-
Methyl acetate	201-185-2	79-20-9	200	610	250	760	-
Methyl acetylene	200-828-4	74-99-7	1000	1610	-	-	-
Methyl acetylene-propadiene mixture		59355-75-8	1000	-	1250	-	-
Methylacrylonitrile, see methacrylonitrile							
Methylal	203-714-2	109-87-5	1000	3100	-	-	-
Methylamine	200-820-0	74-89-5	5	6	15	19	-
N-Methylaniline	202-870-9	100-61-8	0.5	2	-	-	Skin
Methyl bromide, See Bromomethane							
3-Methylbutan-1-ol, see Isoamyl alcohol							
Methyl chloride, See Chloromethane							
Methylcyclohexane	203-624-3	108-87-2	400	1600	-	-	-
Methylcyclohexanol	247-152-6	25639-42-3	50	235	-	-	-
2-Methylcyclohexanone	209-513-6	583-60-8	50	230	75	345	Skin
Methylcyclopentadienyl manganese, tricarbonyl (as Mn), see Tricarbonyl (methylcyclopentadienyl) manganese							
2-Methyl-4, 6-dinitrophenol, see Dinitro-o-cresol							
Methyl ethyl ketone peroxides (MEKP)	215-661-2	1338-23-4	-	-	0.2	1.5	-
Methyl ethyl ketoxime	202-496-6	96-29-7	3	10	10	33	Sens.
Methylhydrazine	200-471-4	60-34-4	0.01	0.02	-	-	Skin, CMR
Methyl iodide	200-819-5	74-88-4	2	11	-	-	Skin
Methyl isobutyl carbinol	203-551-7	108-11-2	25	100	40	160	Skin
Methyl isopropyl ketone	209-264-3	563-80-4	20	70.5	-	-	-
Methyl mercaptan, see Methanethiol							
1-Methylnaphthalene 2-Methylnaphthalene	201-966-8 202-078-3	90-12-0 91-57-6	0.5	-	-	-	-
Methyl parathion, see Parathion-methyl (ISO)							
2-Methylpentane-2,4-diol, see Hexylene glycol							
4-Methylpentan-2-ol, see Methyl isobutyl carbinol							
4-Methylpent-3-en-2-one, see Mesityl oxide							

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
2-Methylpropan-1-ol, see Isobutyl alcohol							
2-Methylpropan-2-ol	200-889-7	75-65-0	100	300	-	-	-
Methyl propyl ketone, see Pentan-2-one							
Methyl silicate	211-656-4	681-84-5	1	6	-	-	-
Methyl styrene, all isomers	246-562-2	25013-15-4	50	242	10	483	
Methyl vinyl ketone	201-160-0	78-94-4	-	-	0.2	-	Skin, Sens.
Metribuzin	244-209-7	21087-64-9	-	5	-	-	-
Mevinphos (ISO)	232-095-1	7786-34-7	0.01	0.1	-	-	Skin
Mica	-	12001-26-2	-	3 (R)	-	-	-
Mineral oil Pure, Highly & Severely Refined (Inhalable)	-	-	-	 5	-	-	-
Mineral wool	-	-	2 fibres /ml of air	5	-	-	-
Molybdenum compounds (as Mo), soluble compounds insoluble compounds	231-107-2	7439-98-7	-	0.5 (R) 10 (I) 3 (R)		-	
Monochloroacetic acid	201-178-4	79-11-8	0.5(IFV)	2	-	-	Skin
Monocrotophos	230-042-7	6923-22-4	-	0.05	-	-	Skin
Naled (ISO), see 1,2 dibromo-2, 2 dichloro ethyl dimethyl phosphate							
Naphtha (rubber solvent)	232-443-2	8030-30-6	-	-	-	-	CMR
β-Napthylamine	202-080-4	91-59-8	-	-	-	-	CMR
Natural Rubber Latex (as inhalable allergenic proteins)	232-689-0	9006-04-6	-	0.0001	-	-	-
Neon	231-110-9	7440-01-9	-	-	-	-	Asphx.
Nitrapyrin	217-682-2	1929-82-4	-	10	-	20	-
4-Nitroaniline	202-810-1	100-01-6	-	3	-	-	Skin
4-Nitrodiphenyl	202-204-7	92-93-3	-	-	-	-	Skin, CMR
Nitrogen	231-783-9	7727-37-9	-	-	-	-	Asphx.
Nitrogen trifluoride	232-007-1	7783-54-2	10	30	-	-	-
Nitromethane	200-876-6	75-52-5	20	50	-	-	-
1-Nitropropane	203-544-9	108-03-2	25	90	-	-	-
2-Nitrotoluene	201-853-3	88-72-2	2	11	-	-	CMR
3-Nitrotoluene	202-728-6	99-08-1	2	11	-	-	-
4-Nitrotoluene	202-808-0	99-99-0	2	-	-	-	-
Nitro-o-toluidine	202-765-8	99-55-8	-	1	-	-	-
Nitrous oxide	233-032-0	10024-97-2	50	90	-	-	-
Nonane, all isomers	203-913-4	111-84-2	200	1050	-	-	-
Octachloronaphthalene	218-778-7	2234-13-1	-	0.1	-	0.3	Skin
n-Octane	203-892-1	111-65-9	300	1450	-	-	-
Osmium tetraoxide (as Os)	244-058-7	20816-12-0	0.0002	0.002	0.0006	0.006	-
Oxalonitrile, see Cyanogen							
4,4'-Oxydi (benzenesulphonohydrazide)	201-286-1	80-51-3	-	0.1	-	-	-

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
2,2'-Oxydiethanol, see Diethylene glycol							
Oxygen difluoride	231-996-7	7783-41-7	0.05	0.11	0.05	0.11	-
Ozone	233-069-2	10028-15-6					
Heavy work			0.05	-	-	-	-
Moderate work			0.08	-	-	-	-
Light work			0.10	-	-	-	-
Heavy, moderate or light workloads (≤2 hrs)			0.20	-	-	-	-
Paracetamol, total inhalable dust	203-157-5	103-90-2	-	10	-	-	-
Paraffin wax, fume	232-315-6	8002-74-2	-	2	-	6	-
Paraquat	225-141-7	4685-14-7	-	0.05 (I)	-	-	-
Paraquat dichloride (ISO) respirable dust	217-615-7	1910-42-5	-	0.08	-	-	-
Parathion (ISO)	200-271-7	56-38-2	-	0.05 (IFV)	-	-	Skin
Parathion-methyl (ISO)	206-050-1	298-00-0	-	0.02 (IFV)	-	-	Skin
Pentaborane	243-194-4	19624-22-7	0.005	0.01	0.015	0.039	-
Pentachloronapthalene	215-320-8	1321-64-8	-	0.5	-	-	Skin
Pentachloronitrobenzene	201-435-0	82-68-8	-	0.5	-	-	Sens.
Pentacarbonyl iron (as Fe)	236-670-8	13463-40-6	0.1	-	0.2	-	-
Pentachlorophenol	201-778-6	87-86-5	-	0.5	-	-	Skin
Pentaerythritol	204-104-9	115-77-5					
total inhalable dust			-	10	-	20	-
respirable dust			-	4	-	-	-
2,4-Pentanedione	204-634-0	123-54-6	25	-	-	-	-
Pentan-2-one	203-528-1	107-87-9	200	700	250	875	-
Pentan-3-one	202-490-3	96-22-0	200	700	250	875	-
Peracetic acid	201-186-8	79-21-0	-	-	0.4 (IFV)	-	
Perchloroethylene, see Tetrachloroethylene							
Perchloromethyl mercaptan	209-840-4	594-42-3	0.1	0.76	-	-	-
Perchloryl fluoride	231-526-0	7616-94-6	3	14	6	28	-
Perfluorobutyl ethylene (3,3,4,4,5,5,6,6,6, -nonafluorohexene)	243-053-7	19430-93-4	100	-	-	-	-
Perfluoroisobutylene	-	382-21-8	0.01	0.082	0.01	0.082	-
Persulphate salts, inorganic;			-		-	-	
Ammonium persulphate	231-786-5	7727-54-0		0.1			Sens.
Potassium persulphate	231-781-8	7727-21-1		0.1			Sens.
Sodium persulphate	231-892-1	7775-27-1		0.1			Sens.
Petrol (Gasoline)	86290-81-5	86290-81-5	300	-	500	-	-
Phenacyl chloride, see 2-Chloroacetophenone							
Phenothiazine	202-196-5	92-84-2	-	5	-	-	-
m-Phenylenediamine	203-584-7	108-45-2	-	0.1	-	-	-
p-Phenylenediamine	203-404-7	106-50-3	-	0.1	-	-	Skin
Phenyl-2,3-epoxypropyl ether	204-557-2	122-60-1	0.1	0.6	-	-	CMR
Phenylethylene, see Styrene							

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Phenyl glycidyl ether, see Phenyl-2,3-epoxypropyl ether							
Phenylhydrazine	202-873-5	100-63-0	0.1	0.44	-	-	CMR, Skin
Phenyl isocyanate	203-137-6	103-71-9	0.005	-	0.015	-	-
Phenyl mercaptan, see Benzenethiol							
Phenylphosphine	211-325-4	638-21-1	-	-	0.05	-	-
Phorate (ISO)	206-052-2	298-02-2	-	0.05	-	0.2	Skin
Phosdrin, see Mevinphos (ISO)							
Phosphorus, yellow	231-768-7	7723-14-0	-	0.1	-	0.3	-
Phosphorus trichloride	231-749-3	7719-12-2	0.2	1.5	0.5	3	-
Phthalic anhydride	201-607-5	85-44-9	1	-	-	12	Sens.
m-Phthalodinitrile (Benzene-1,3-dicarbonitrile)	210-933-7	626-17-5	-	5 (IFV)	-	-	-
o-Phthalodinitrile	202-044-8	91-15-6	-	1 (IFV)	-	-	-
Picloram (ISO)	217-636-1	1918-02-1	-	10	-	20	-
Piperidine	203-813-0	110-89-4	1	3.5	-	-	Skin
Pindone (ISO) (2-pivaloylindan-1,3-dione)	201-462-8	83-26-1	-	0.1	-	-	-
Plaster of Paris total inhalable dust respirable dust	-	26499-65-0	 - -	 10(I) 4(R)	 - -	 - -	 - -
Platinum salts, soluble (as Pt)	231-116-1	7440-06-4	-	0.002	-	-	.
Polychlorinated biphenyls (PCBs), see Chlorinated biphenyls							
Polyvinyl chloride (PVC) total inhalable dust respirable dust	-	9002-86-2	 - -	 10(I) 1(R)	 - -	 - -	 - -
Portland Cement	266-043-4	65997-15-1	-	1 (R	-	-	-
Potassium hydroxide	215-181-3	1310-58-3	-	-	-	2	-
Propane (see aliphatic hydrocarbon gases)							
Propane-1,2-diol total (vapour and particulates) particulates	200-338-0	57-55-6	 150 -	 470 10	 - -	 - -	 - -
1,3-Propane sultone	214-317-9	1120-71-4	-	-	-	-	CMR
n-Propanol	200-746-9	71-23-8	100	-	-	-	Skin
Propan-1-ol see n-Propanol							
Propan-2-ol, see Isopropyl alcohol							
Propargyl alcohol, see 2-Propyn-ol							
Propiolactone	200-340-1	57-57-8	0.5	1.5	-	-	CMR
Propionaldehyde (Propanal)	204-623-0	123-38-6	20	-	-	-	-
Propoxur (ISO)	204-043-8	114-26-1	-	0.5	-	2	-
Propyl acetate isomers [n-propyl acetate & Isopropyl acetate]	203-686-1	109-60-4 108-21-4	100		150		-
n-Propyl alcohol, see n-Propanol							
Propylene	204-062-1	115-07-1	500	-	-	-	Asphx.
Propylene dinitrate (PGDN)	229-180-0	6423-43-4	0.05	0.3	-	-	Skin

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Propylene dichloride	201-152-2	78-87-5	10	46	-	-	CMR
Propylene glycol, see propane-1,2-diol							
Propylene glycol dinitrate, see propylene dinitrate							
Propyleneimine	200-878-7	75-55-8	0.2	-	0.4	-	CMR
n-Propyl nitrate	210-985-0	627-13-4	25	107	40	172	-
2-Propyn-1-ol	203-471-2	107-19-7	1	2	3	6	Skin
Pulverised fuel ash	-	-					
total inhalable dust			-	10	-	-	-
respirable			-	4	-	-	-
2-Pyridylamine, see 2-Amino pyridine							
Pyrocatechol, see Catechol							
Quinone	203-405-2	106-51-4	0.1	0.4	-	-	-
RDX, see hexahydro-1,3,5- trinitro-1,3,5-triazine							
Rhodium (as Rh),	231-125-0	7440-16-6					.
metal fume and dust			-	0.1	-	0.3	-
soluble salts			-	0.001	-	0.003	-
Ronnel	206-082-6	299-84-3	-	5	-	-	-
Rosin core solder pyrolysis products (as airborne total resin acid)	-	-	-	0.05	-	0.15	Sens.
Rotenone (ISO)	201-501-9	83-79-4	-	5	-	-	-
Rouge	215-168-2	1309-37-1					
total inhalable dust			-	10	-	-	-
respirable dust			-	4	-	-	-
Rubber	-	-					
fume			-	0.6	-	-	-
process dust			-	6	-	-	-
Rubber solvent (naphtha), see Naphtha (rubber solvent)							
Selenium and compounds, except hydrogen selenide (as Se)	231-957-4	7782-49-2	-	0.1	-	-	-
Selenium hexafluoride		7783-79-1	0.05	0.16	-	-	-
Sesone, see Sodium 2-(2,4- dichlorphenoxy) ethyl sulphate							
Silane	232-263-4	7803-62-5	5	-	-	-	-
Silica, amorphous	-	-					-
total inhalable dust			-	6	-	-	
respirable dust			-	2.4	-	-	
Silica, fused respirable dust	-	60676-86-0	-	0.08	-	-	-
Silicon Si	231-130-8	7440-21-3					
total inhalable dust			-	10	-	-	-
respirable dust			-	4	-	-	-

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Silicon carbide	206-991-8	409-21-2					CMR
total inhalable dust			-	10	-	-	
respirable dust			-	3	-	-	
Fibrous				0.1 fibre/cm³			
Silicon tetrahydride, see Silane							
Simazine	204-535-2	122-34-9	-	0.5	-	-	-
Sodium bisulfite	231-548-0	7631-90-5	-	5	-	-	-
Sodium 2-(2,4- dichlorphenoxy) ethyl sulphate	205-259-5	136-78-7	-	10	-	20	-
Sodium fluoroacetate	200-548-2	62-74-8	-	0.05	-	-	Skin
Sodium hydrogensulphite, see Sodium bisulfite							
Sodium hydroxide	215-185-5	1310-73-2	-	-	-	2	-
Sodium metabisulphite, see Disodium disulphite							
Starch	232-679-6	9005-25-8					
total inhalable dust			-	10	-	-	-
respirable dust			-	4	-	-	-
Stearates (except lead stearate)	-	-	-	10	-	-	-
Stibine		7803-52-3	0.1		-	-	-
Stoddard solvent	232-489-3	8052-41-3	100	573	-	-	CMR
Strontium chromate	232-142-6	7789-06-2	-	-	-	-	CMR
Strychnine	200-319-7	57-24-9	-	0.15	-	-	-
Styrene	202-851-5	100-42-5	20	85	40	170	
Subtilisins (proteolytic enzymes as 100% pure cystalline enzyme)	232-752-2	9014-01-1	-	0.00006	-	0.00006	Sens.
Sucrose	200-334-9	57-50-1	-	10	-	20	-?
Sulfometuron methyl [Methyl 2[[[[(4,6-dimethyl-2-pyrimidinyl) amino]carbonyl]amino] sulphonyl]benzoate]	277-780-6	74222-97-2	-	5	-	-	-
Sulphur hexafluoride	219-854-2	2551-62-4	1000	6000	1250	7500	-
Sulphur monochloride	233-036-2	10025-67-9	-	-	1	6	-
Sulphur pentafluoride, see Disulphur decafluoride							
Sulphur tetrafluoride	232-013-4	7783-60-0	0.1	0.4	0.3	1	-
Sulphuryl difluoride	220-281-5	2699-79-8	5	20	10	40	-
Sulprofus	252-545-0	35400-43-2	-	0.1 (IFV)	-	-	-
2,4,5-T (ISO)2,4,5- Trichloro-phenoxyacetic acid)	202-273-3	93-76-5	-	10	-	20	-
TEPP (ISO), see O,O,O',O'- Tetraethyl pyrophosphate							
TNT, see 2,4,6- trinitrotoluene							
Talc	238-877-9	14807-96-6					-
total inhalable dust			-	10	-	-	
respirable dust			-	0.8	-	-	
Tantalum	231-135-5	7440-25-7	-	5	-	10	-
Tellurium & compounds, except hydrogen telluride, (as Te)	236-813-4	13494-80-9	-	0.1	-	-	-

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Tellurium hexafluoride	-	7783-80-4	0.02	-	-	-	-
Temephos	222-191-1	3383-96-8	-	1	-	-	-
Terbufos (ISO) (S-tert-Butylthiomethyl O,O-diethylphosphorodithioate)	235-963-8	13071-79-9	-	0.01 (IFV)	-	-	-
Terephthalic acid	202-830-0	100-21-0	-	10	-	-	-
Terphenyls, all isomers	247-477-3	26140-60-3	-	-	0.5	5	-
1,1,2,2-Tetrabromoethane	201-191-5	79-27-6	0.1 (IFV)	-	-	-	Skin
Tetrabromomethane, see Carbon tetrabromide							
Tetracarbonylnickel (as Ni), see nickel carbonyl							
1,1,1,2-Tetrachloro-2,2-difluoroethane	200-934-0	76-11-9	100	834	100	834	-
1,1,2,2-Tetrachloro-1,2-difluoroethane	200-935-6	76-12-0	50	417	-	-	-
1,1,2,2, Tetrachloroethane	201-197-8	79-34-5	1	6.9	-	-	Skin
Tetrachloronaphthalenes, all isomers	215-642-9	1335-88-2	-	2	-	-	-
O,O,O'O'-Tetraethyl pyrophosphate(ISO)	203-495-3	107-49-3	0.0008	0.01	-	-	Skin
Tetraethyl lead	201-075-4	78-00-2	-	0.10	-	-	Skin
Tetrafluorodichloroethane, see 1,2-Dichlorotetrafluoroethane							
Tetrafluoroethylene	204-126-9	116-14-3	2	--	-	-	-
Tetrakis (hydroxymethyl) phosphonium chloride	204-707-7	124-64-1	-	2	-	-	-
Tetrakis (hydroxymethyl) phosphonium sulphate	-	55566-30-8	-	2	-	-	-
Tetramethyl lead	200-897-0	75-74-1	-	0.15	-	-	Skin, CMR
Tetramethyl orthosilicate, see Methyl silicate							
Tetramethyl succinonitrile	-	3333-52-6	0.5	3	-	-	Skin
Tetranitromethane	208-094-7	509-14-8	0.005	0.040	-	-	-
Tetrasodium pyrophosphate	231-767-1	7722-88-5	-	5	-	-	-
Tetryl	207-531-9	479-45-8	-	1.5	-	3	Skin
Thallium and compounds (as Tl)	231-138-1	7440-28-0	-	0.02	-	-	Skin
4,4'-Thiobis (6-tert-butyl-m-cresol), see 6,6'-Di-tert-butyl-4,4'-thio-di-m-cresol							
Thioglycollic acid, see Mercaptoacetic acid							
Thionyl chloride	231-748-8	7719-09-7	-	-	0.2	1.0	-
Thiram (ISO)	205-286-2	137-26-8	-	0.05 (IFV)	-	-	
Titanium dioxide total inhalable dust respirable dust	236-675-5	13463-67-7	 - -	 10 4	 - -	 - -	-
o-Tolidine	204-358-0	119-93-7	-	-	-	-	Skin, CMR
p-Toluenesulphonyl chloride	202-684-8	98-59-9	-	-	-	5	-
m-Toluidine	203-583-1	108-44-1	0.2	0.9	-	-	Skin
1,4,7-Tri-(aza)-heptane, see Diethylene triamine							
Tribromomethane	200-854-6	75-25-2	0.5	5	-	-	Skin

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Tributyl phosphate, all isomers	204-800-2	126-73-8	-	5	-	-	-
Tricarbonyl (etacyclopenta-dienyl) manganese (as Mn), see Manganese cyclopentadienyl tricarbonyl							
Tricarbonyl (methylcyclo-pentadienyl) manganese (as Mn)	235-166-5	12108-13-3	-	0.2	-	-	Skin
Trichloroacetic acid	200-927-2	76-03-9	0.5	-	-	-	-
1,1,1-Trichlorobis (chlorophenyl) ethane	200-024-3	50-29-3	-	1	-	-	-
1,1,2-Trichloroethane	201-166-9	79-00-5	10	45	-	-	Skin
Trichlorofluoromethane	200-892-3	75-69-4	-	-	1000	5619	-
Trichloronaphthalene	215-321-3	1321-65-9	-	5	-	-	Skin
Trichloronitromethane, see Chloropicrin							
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T(ISO))	202-273-3	93-76-5	-	10	-	-	-
1,2,3-Trichloropropane	202-486-1	96-18-4	0.005	-	-	-	CMR
1,1,2-Trichlorotrifluoroethane	200-936-1	76-13-1	1000	7600	1250	9500	-
Tricyclohexyltin hydroxide (Cyhexatin)	236-049-1	13121-70-5	-	5	-	-	-
Triethanolamine	203-049-8	102-71-6	-	5	-	-	-
Trifluorobromomethane	200-887-6	75-63-8	1000	6100	-	-	-
Triglycidyl isocyanurate, TGIC	219-514-3	2451-62-9	-	0.05	-	-	CMR
Trimanganese tetraoxide	215-266-5	1317-35-7	-	0.5	-	-	-
Trimellitic anhydride	209-008-0	552-30-7	-	0.0005	-	0.002	Sens.
Trimetacresyl phosphate	209-241-8	563-04-2	-	0.05 (IFV)	-	-	-
Triorthocresyl phosphate	201-103-5	78-30-8	-	0.02 (IFV)	-	-	-
Triparacresyl phosphate	201-105-6	78-32-0	-	0.05 (IFV)	-	-	-
3,5,5-Trimethylcyclohex-2-enone	201-126-0	78-59-1	-	-	5	25	-
Trimethyl phosphite	204-471-5	121-45-9	2	10	-	-	-
2,4,6-Trinitrotoluene	204-289-6	118-96-7	-	0.1	-	-	Skin
Triorthocresyl phosphate, see Tri-o-tolyl phosphate,							
Triphenyl phosphate	204-112-2	115-86-6	-	3	-	-	-
Tri-o-tolyl phosphate	201-103-5	78-30-8	-	0.1	-	0.3	-
Tungsten (as W), Metal and insoluble compounds Soluble compounds	231-143-9	7440-33-7	 - -	 5 1	 - -	 10 3	 - -
Turpentine	232-350-7	8006-64-2	20	112	150	840	Sens.
Uranium compounds, natural, soluble (as U)	231-170-6	7440-61-1	-	0.2	-	0.6	-
n-Valeraldehyde	203-784-4	110-62-3	50	176	-	-	Sens.
Vanadium pentoxide, see Divanadium pentaoxide							
Vinyl benzene, see Styrene							
4-Vinylcyclohexene	202-848-9	100-40-3	0.1	0.4	-	-	-
4-Vinylcyclohexene dioxide	203-437-7	106-87-6	0.1	0.6	-	-	-
Vinyl fluoride	200-832-6	75-02-5	1	-	-	-	-
Vinylidene fluoride	200-867-7	75-38-7	500	-	-	-	CMR
N-Vinyl -2-pyrrolidone	201-800-4	88-12-0	0.05	-	-	-	-

Substance			Occupational Exposure Limit Value (8 hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
	EC No.	CAS No.	ppm	mg/m³	ppm	mg/m³	
Vinyl toluene, all isomers, see Methylstyrene							
VM and P Naptha	232-453-7	8032-32-4	-	-	-	-	CMR
Warfarin (ISO)	201-377-6	81-81-2	-	0.1	-	0.3	CMR
White spirit, see Stoddard solvent							Sens.
Wood dust, (soft wood)	-	-	-	5	-	-	-
m-Xylene α,α'-diamine (m-phenylenebis(methylamine))	216-032-5	1477-55-0	-	0.1	-	-	Skin
Xylidine, all isomers	215-091-4	1300-73-8	0.5 (IFV)	2.5	-	-	-
Yttrium	231-174-8	7440-65-5	-	1	-	3	-
Zinc chloride, fume	231-592-0	7646-85-7	-	1	-	2	CMR
Zinc distearate total inhalable dust respirable dust	209-151-9	557-05-1	- -	10 4	- -	20 -	-
Zinc oxide, fume	215-222-5	1314-13-2	-	2 (R)	-	10	-
Zirconium compounds (as Zr)	231-176-9	7440-67-7	-	5	-	10	-

SCHEDULE 3 - List of chemical agents for which it is the intention of the Health and Safety Authority to introduce, review or change an Occupational Exposure Limit Value (OELV) or Biological Limit Value (BLV) or Notations or scope of OELV

Comments concerning any of the limit values proposed may be made in writing to the Health and Safety Authority, Programme Manager, Occupational Health Division, Metropolitan Building, James Joyce Street, Dublin 1, Lo call: 0818 289 389 or e-mail contactus@hsa.ie

Changes proposed under Directive 2004/37/EC

- CMRD6 - COM (2025) 418 Proposal for a Directive Of The European Parliament And Of The Council amending Directive 2004/37/EC as regards the addition of substances and setting limit values in its Annexes I, III and IIIa https://eur-lex.europa.eu/procedure/EN/2025_232

Substance	EC No.	CAS No.	2024 OELV (8 hour)	New OELV (8 Hour)	Notes
1,4 Dioxane	204-661-8	123-91-1	OEL 20ppm, 73mg/m^3	OEL 7.3mg/m^3, (2ppm) STEL 73mg/m^3, (20ppm)	Skin BLV
Cobalt and inorganic cobalt compounds	231-158-0	7440-48-4	0.02mg/m^3,	0.01 mg /m^3 (I) 0.0025 mg / m^3 (R) (measured as Cobalt)	Dermal and Respiratory Sensitisation, Carc.1B, Repr.1B
	Limit value of 0,02(I) and 0,0042(R) for six years after the date of entry into force of the amending Directive				
Isoprene	201-143-3	78-79-5		8.5 3mg/m^3 3 pppm	Part of draft Committee Report
Mercury and divalent inorganic mercury compounds that fall under the scope of CMRD (measured as mercury)	Various	Various	0.02 mg/m^3 (measured as Mercury)	0.02 mg/m^3 (measured as Mercury)	Replaces “mercury and divalent inorganic mercury compounds including mercuric oxide and mercuric chloride”
Polycyclic Aromatic Hydrocarbons (particularly those containing benzo[a] pyrene, which are carcinogens, mutagens or reprotoxicants	Various	Various	0.00007 mg/m^3 (measured as benzo[a]pyrene)		Skin
	Limit value 0,00014 until six years after the date of entry into force of the amending Directive limited to the following sectors: (1) steel and iron foundries, which includes ferroalloy manufacturers, (2) aluminium manufacturers, (3) carbon and graphite electrode manufacturers, (4) coking plants, (5) coal tar distillation, (6) refractory products manufacturers, (7) welding of train tracks, (8) other non-ferrous metallurgical processes, and (9) casting of metals.				

Substance	EC No.	CAS No.	2024 OELV (8 hour)	New OELV (8 Hour)	Notes
Work involving exposure to fumes from welding processes containing substances or mixture which meets the criteria for classification as a category 1A or 1B carcinogen, mutagen or reprotoxic set out in Annex I to Regulation (EC) No 1272/2008	-	-	Limit values for metals involved		Addition as Item 9 to Schedule 4

- CMRD7 –The European Commission has contracted a consortium to support possible amendments of Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens, mutagens or reprotoxic substances at work (the CMRD). The work involves assessing the impacts of establishing, or revising, Occupational Exposure Limit values (OELs). See OEL7-introduction-letter.pdf.

Substance	EC No.	CAS No.	2024 OELV (8 hour)	Notes
1,2-dichloropropane (1,2-DCP) (Propylene dichloride)	201-152-2	78-87-5	10ppm, 46 mg/m^3	non-threshold carcinogen, Skin ERR https://echa.europa.eu/oels-activity-list/-/substance-rev/69511/term
1,2,3-trichloropropane (1,2,3-TCP)	202-486-1	96-18-4	0.005 ppm,	non-threshold carcinogen, Skin ERR https://echa.europa.eu/oels-activity-list/-/substance-rev/69510/term
2-chloro-1,3-butadiene (Chloroprene)	204-818-0	126-99-8	10ppm, 36 mg/m^3	non-threshold carcinogen, Skin, ERR, 15-min STEL to protect from local irritation. https://echa.europa.eu/documents/10162/433aa419-d778-0d30-2205-7487d6c2n62e5
2,3-epoxypropyl methacrylate (Glycidyl methacrylate or GMA)	203-441-9	106-91-2	-	non-threshold carcinogen, Skin, Dermal Sensitisation, ERR, 15-min STEL to protect from irritation https://echa.europa.eu/documents/10162/98fc025a-522d-5f89-0091-5963147359f1

Substance	EC No.	CAS No.	2024 OELV (8 hour)	Notes
Nitrosamines N-Nitrosodiethylamine (diethylnitrosamine) (N-Nitrosodimethylamine (dimethylnitrosamine) N-Nitroso di-n-propylamine N-Nitrosodiethanoamine (2,2'-(Nitrosoimino) bisethanol) N-Nitrosomorpholine (NMor)	200-226-1 200-549-8 210-698-0 214- 237-4 627-564-6	55-18-5 62-75-9 621-64-7 1116-54-7 59-89-2	-	Skin, ERR https://echa.europa.eu/documents/10162/26e5f323-cbd5-a2ae-71d0-b00815f6f30c
Respirable crystalline silica (RCS)			0.1 mg/m^3	The Commission shall evaluate the need to modify the limit value for respirable crystalline silica dust.
Chromium VI compounds (Cr(VI))	various	various	0.005 mg/m^3	https://chem.echa.europa.eu/100.389.558/activities/restrictionProcess/061b8d0ab83a370d59346b8f9ad38de6?searchText=Chromium(VI)

Other changes under Review

A review of Schedule 2 of this Code of Practice will be undertaken by the HSA.

The table below provides some information on the activities planned, ongoing or completed by ECHA in relation to its work on occupational exposure limits. Check for latest edition https://echa.europa.eu/oels-activity-list and Other OELs under review.

Substance	EC No.	CAS No.	2024 OELV (8 hour)	New OELV (8 Hour)	Notes
1,2-Dihydroxybenzene (Pyrocatechol)	204-427-5	120-80-9			non-threshold carcinogen, Skin, ERR
1,3-Butadiene	203-450-8	106-99-0			
1,3-propanesultone	214-317-9	1120-71-4			
4,4-Isopropylidenediphenol (Bisphenol A)	201-245-8	80-05-7	2mg/m^3 (I)		
Anthraquinone	205-549-0	84-65-1			
Boron and its compounds	233-139-2 215-575-5 215-540-4 215-125-8	10043-35-3 1332-77-0 1330-43-4 1303-86-2			

Substance	EC No.	CAS No.	2024 OELV (8 hour)	New OELV (8 Hour)	Notes
Ethylene dibromide (EDB) or 1,2-Dibromoethane	203-444-5	106-93-4	0.1ppm 0.8 mg/m^3		
Lithium compounds: Lithium carbonate Lithium chloride Lithium hydroxide	209-062-5 231-212-3 215-183-4	554-13-2 7447-41-8 1310-65-2	I mg/m^3 (STEL)		
N-(hydroxymethyl) acrylamide	213-103-2	924-42-5			Skin, ERR, CMR
Organotin compounds					
Oximes: Butanone oxime Acetone oxime	202-496-6 204-820-1	96-29-7 127-06-0			
Poorly soluble low toxicity particulates (PSLTs)					
Silicon carbide fibres	206-991-8	409-21-2 308076-74-6			
Acetonitrile	200-835-2	75-05-8	40ppm, 70mg/m^3		Under review
4-tert-Butylbenzoic acid	202-696-3	98-73-7	None	0.1mg/m^3 (I)	Skin, Repr. 1B
Cyclopentadiene	208-835-4	542-92-7	75ppm, 203mg/m^3	Withdraw OELV	Include with Dicyclopentadiene
Dicyclopentadiene including Cyclopentadiene	201-052-9 208-835-4	77-73-6 542-92-7	5ppm, 30mg/m^3	0.05ppm 1ppm(STEL)	Include with Cyclopentadiene
Cyclohexene	203-807-8	110-83-8	300ppm, 1015mg/m^3	20ppm	
Di(2-ethylhexyl) phthalate (Di-sec-octyl phthalate)	204-211-0	117-81-7	5mg/m^3, 0.3ppm STEL 10mg/m^3, 0.6ppm	0.03ppm Remove STEL	Skin, Repr. 1B
Formamide	200-842-0	75-12-7	10ppm, 18mg/m^3	1ppm	Skin, Repr. 1B
Hexamethylenetetramine	202-905-8	100-97-0	None	1mg/m^3(I)	Sens
Hexazinone	257-074-4	51235-04-2	None	3mg/m^3(I)	
Isoflurane	247-897-7	26675-46-7	50ppm, 380mg/m^3	5ppm	
Methyl isobutyl carbinol	203-551-7	108-11-2	25ppm, 100mg/m^3 STEL 40ppm, 160mg/m^3	20ppm STEL same	Skin

Substance	EC No.	CAS No.	2024 OELV (8 hour)	New OELV (8 Hour)	Notes
Styrene	202-851-5	100-42-5	20ppm, 85mg/m^3 STEL 40ppm, 170mg/m^3	10ppm STEL 20ppm	
Styrene oxide	202-476-7	96-09-3	None	1ppm	Skin, Sens
Sulphur pentafluoride (Disulphur decaflouride)	227-204-4	5714-22-7	0.01ppm STEL	0.001ppm STEL	
Thiodicarb	261-848-7	59669-26-0	None	0.1mg/m^3 (IFV)	Sens
Titanium tetrachloride	231-441-9	7550-45-0	None	STEL 0.5ppm	

BLVs

Substance	EC No.	CAS No.	BLV
1,4 Dioxane	204-661-8	123-91-1	The binding biological limit value is 45 mg HEAA (2-Hydroxyethoxy)acetic acid in urine/g creatinine, measured at the end of exposure or shift in accordance with national laws and /or practice.'

Note

As part of the process for establishing occupational exposure limits (OELs), ECHA prepares a scientific report for consideration by the Committee for Risk Assessment (RAC). With the information provided during the consultations, ECHA's report forms the annex of the RAC opinion discussed in the RAC plenary meetings. Consultations are held to allow parties to comment on the report and to support RAC in adopting an opinion on occupational exposure limits.

Consultations on OEL recommendations are available on the ECHA Website - https://www.echa.europa.eu/oels-pc-on-oel-recommendation

The table https://echa.europa.eu/oels-activity-list provides up-to-date information on the activities planned, ongoing or completed by ECHA in relation to its work on occupational exposure limits.

SCHEDULE 4 - List of Carcinogenic and Mutagenic Substances, Mixtures and Processes as well as Carcinogenic and Mutagenic substances or mixtures released by the process

1. Manufacture of auramine
2. Work involving exposure to polycyclic aromatic hydrocarbons present in coal soot, coal tar or coal pitch.
3. Work involving exposure to dusts, fumes and sprays produced during the roasting and electro-refining of cupro-nickel mattes.
4. Strong acid process in the manufacture of isopropyl alcohol.
5. Work involving exposure to hardwood dusts
6. Exposure to respirable crystalline silica dust generated by a work process.
7. Work involving dermal exposure to mineral oils that have been used before in internal combustion engines to lubricate and cool moving parts within the engine.
8. Work involving exposure to diesel engine exhaust emissions.

SCHEDULE 5 - Health Surveillance and Biological Limit Values

A Practical Recommendations for the Health Surveillance of Employees

1. The health surveillance of employees must include at least the following measures:
   a. keeping records of an employee's medical and occupational history,
   b. a personal interview,
   c. where appropriate, biological monitoring, as well as detection of early and reversible effects.

   Further tests may be decided upon for each employee under health surveillance, in the light of the most recent knowledge available to occupational medicine.
2. The health surveillance of employees, where carried out by a responsible medical practitioner, must be carried out in accordance with the principles and practices of occupational medicine.
3. The responsible medical practitioner must be familiar with the exposure conditions or circumstances of each employee.

B Binding Biological Limit Values

Health surveillance shall be mandatory for employees when a biological limit value for a hazardous chemical agent is listed here and it shall be the duty of the employer to ensure that employees are informed of this requirement before being assigned to a task involving risk of exposure to a hazardous chemical agent for which a biological limit value is listed.

Lead and its inorganic compounds.

Biological monitoring must include measuring the blood-lead level (PbB) using absorption spectrometry or a method giving equivalent results.

Until the 9 April 2026, the binding biological limit value was 70 µg Pb/100 ml blood.

Dates and Limits	Explanatory Notes
From 10 April 2026 until 31 December 2028, the binding biological limit value is 30µg Pb/100ml blood.	For workers whose blood lead level exceeds the biological limit value of 30µg Pb/100ml blood due to exposure which has occurred before 9 April 2026, but is below 70µg Pb/100ml blood, health surveillance is carried out on a regular basis. If a declining trend towards the limit value of 30µg Pb/100ml blood is established in those workers, they may be allowed to continue with work involving exposure to lead.
From 1 January 2029, the binding biological limit value is 15µg Pb/100ml blood.	For workers whose blood lead level exceeds the biological limit value of 15µg Pb/100ml blood due to exposure which has occurred before 9 April 2026 but is below 30µg Pb/100ml blood, health surveillance is carried out on a regular basis. If a declining trend towards the limit value of 15µg Pb/100ml blood is established in those workers, they may be allowed to continue with work involving exposure to lead.

Health surveillance is carried out if:

- exposure to a concentration of lead in air is greater than 0,015mg/m^3, calculated as a time-weighted average over 40 hours per week, or
- a blood lead level greater than 9µg Pb/100ml blood is measured in individual workers.

Health surveillance is also carried out with regard to female workers of childbearing age whose blood lead level exceeds 4.5µgPb/100ml blood.

C. Recommended Biological Guidance Value

It is recommended that the blood lead level in women of childbearing age does not exceed the Biological Guidance Value of 4,5 µg/100 ml.

Our Vision:

To deliver healthy and safe working lives and contribute to productive enterprises

HSA

An tÚdarás Sláinte agus Sábháilteachta
Health and Safety Authority

Health and Safety Authority

Tel: 0818 289 389

www.hsa.ie

HSA Part No. 0547

ISBN 978-1-84496-324-9