SUBSIDIARY LEGISLATION 424.24

PROTECTION OF THE HEALTH AND SAFETY OF WORKERS FROM THE RISKS RELATED TO CHEMICAL AGENTS AT WORK REGULATIONS*

5th September, 2003

LEGAL NOTICE 227 of 2003, as amended by Legal Notices 353 of 2007, 53 of 2012, 198 of 2015, 57 of 2018 and 356 of 2021 and Act XXXIII of 2024.

Title, scope and applicability. *Amended by: L.N. 198 of 2015; L.N.57 of 2018; L.N. 356 of 2021.*

1. (1) The title of these regulations is the Protection of the Health and Safety of Workers from the Risks related to Chemical Agents at Work Regulations.

(2) The scope of these regulations is to:

(*a*) lay down minimum requirements for the protection of workers from risks to their health and safety arising, or likely to arise, from the effects of chemical agents that are present at the workplace or as a result of any work activity involving chemical agents;

(*b*) implement Directive 2014/27/EU of the European Parliament and of the Council of 26 February 2014 amending Council Directives 92/58/EEC, 92/85/EEC, 94/33/EC, 98/24/EC and Directive 2004/37/EC of the European Parliament and of the Council, in order to align them to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures;

(*c*) implement Commission Directive (EU) 2017/164 of 31 January 2017 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/222/EC, 2000/39/EC and 2009/161/EU;

(d) implement Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directive 2000/39/EC.

(3) These regulations apply where hazardous chemical agents are present or may be present at the workplace, and shall be without prejudice to the provisions for chemical agents to which measures for radiation protection apply pursuant to other regulations as may be prescribed.

(4) These regulations shall apply for carcinogens and mutagens at work without prejudice to more stringent and, or specific provisions contained in any other law or regulation on the

*These regulations have been transferred to Cap. 646. Vide S.L. 646.16 and Act XXXIII of 2024.

protection of workers from the risks related to exposure to carcinogens and mutagens.

(5) As far as the transport of hazardous chemical agents is concerned, the provisions of these regulations shall apply without prejudice to more stringent and, or specific provisions contained in any other law or regulation.

Interpretation.
Amended by:
L.N. 198 of 2015;
XXXIII.2024.
First Schedule.
Cap. 646.

2. In these regulations, unless the context otherwise requires:

"Act" means the Health and Safety at Work Act;

"activity involving chemical agents" means any work in which chemical agents are used, or are intended to be used, in any process, including production, handling, storage, transport or disposal and treatment, or which result from such work;

"Authority" means the Occupational Health and Safety Authority established by virtue of article 4 of the Act;

"biological limit value" means the limit of the concentration in the appropriate biological medium of the relevant agent, its metabolite, or an indicator of effect;

"chemical agent" 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;

"hazard" means the intrinsic property of a chemical agent with the potential to cause harm;

"hazardous chemical agent" means:

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

(*b*) any chemical agent which, whilst not meeting the criteria for classification as hazardous in accordance with paragraph (*a*) may, because of its physic-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 on occupational exposure limit value under regulation 3;

"health surveillance" means the assessment of an individual worker to determine the state of health of that individual, as related to exposure to specific chemical agents at work;

"occupational exposure limit value" means, unless otherwise specified, the limit of the time-weighted average of the concentration of a chemical agent in the air within the breathing zone of a worker in relation to a specified reference period;

"risk" means the likelihood that the potential for harm will be attained under the conditions of use and, or exposure.

Occupational exposure limits and biological limit values.

3. The occupational exposure limit values for chemical agents shall be those listed in Schedule V, and others which may be prescribed from time to time.

Determination and assessment of risk of hazardous chemical agents. *Amended by: L.N. 198 of 2015.*

4. (1) An employer shall determine whether any hazardous chemical agents are present at the workplace, and shall:

(*a*) evaluate the risks to the health and safety of workers, *inter alia* in the choice of work equipment, the chemical substances or preparations used, and the fitting-out of work places, and as necessary:

- assuring an improvement in the level of protection afforded to workers with regard to health and safety,
- be integrated into all the activities of the undertaking and, or establishment and at all hierarchical levels;

(*b*) where he entrusts tasks to a worker, take into consideration the worker's capabilities as regards health and safety;

(*c*) ensure that the planning and introduction of new technologies are the subject of consultation with the workers and, or their representatives, as regards the consequences of the choice of equipment, the working conditions and the working environment for the health and safety of workers;

(*d*) take appropriate steps to ensure that only workers who have received adequate instructions may have access to areas where there is serious and specific danger;

(*e*) be in possession of an assessment of the risks to health and safety at work, including those facing groups of workers exposed to particular risks;

(*f*) decide on the protective measures to be taken and, if necessary, the protective equipment to be used;

(*g*) keep a list of occupational accidents resulting in a worker being unfit for work for more than three working days;

(*h*) draw up reports on occupational accidents suffered by his workers, which shall be forwarded to the Authority without undue delay.

(2) Where chemical agents are present at a workplace, the employer shall assess any risk to the health and safety of workers arising from the presence of those chemical agents, taking into consideration the following:

(*a*) their hazardous properties;

(*b*) information on safety and health shall be provided by the supplier (e.g. the relevant safety data sheet in accordance with Regulation (EC) No 1907/2006 of the European Parliament and of the Council, including the relevant Material Safety Data Sheet, a copy of which shall be kept at the place of work and made available to the workers and, or the Workers' Health and Safety Representatives, and to the persons designated by the employer in terms of regulation 9 of the General Provisions for Health and Safety at Work Places Regulations;

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(*c*) the level, type and duration and frequency of exposure;

(*d*) the circumstances of work involving such agents, including their amount;

(*e*) any occupational exposure limit values or biological limit values established on the territory of Malta;

(*f*) the effect of preventive measures taken or to be taken;

(*g*) where available, the conclusions to be drawn from any health surveillance already undertaken.

(3) The employer shall obtain additional information which is needed for the risk assessment from the supplier or from other readily available sources. Where appropriate, this information shall comprise the specific assessment concerning the risk to users established on the basis of national legislation on chemical agents.

(4) The employer must be in possession of an assessment of the risks mentioned in sub-regulation (1)(*e*) to (*h*), and shall identify which measures have been taken in accordance with regulations 5 and 6. The risk assessment shall be documented in a suitable form according to national law and practice, and may include a justification by the employer that the nature and extent of the risks related to chemical agents make a further detailed risk assessment unnecessary. The risk assessment shall be kept up-to-date, particularly if there have been significant changes which could render it out-of-date, or when the results of health surveillance show it to be necessary.

(5) Certain activities within the undertaking or establishment, such as maintenance, in respect of which it is foreseeable that there is a potential for significant exposure, or which may result in deleterious effects to health and safety for other reasons, even after all technical measures have been taken, shall be included in the risk assessment.

(6) 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.

(7) In the case of a new activity involving hazardous chemical agents, work shall only commence after an assessment of the risk of that activity has been made and any preventive measures identified have been implemented.

General principles for the prevention of risks. *Amended by: XXXIII.2024. First Schedule.*

5. (1) In carrying out his obligation to ensure the health and safety of workers in any activity involving hazardous chemical agents, the employer shall, apart from the measures set out in these regulations, take, within the context of his responsibilities, the measures necessary for the health and safety protection of workers, including prevention of occupational risks and provision of information and training, as well as provision of the necessary organization and means. The employer shall be alert to the need to adjust these measures to take account of changing circumstances and aim to improve existing situations.

(2) An employer shall implement the measures referred to in the first part of sub-regulation (1) on the basis of the requirements of article 12(2) of the Act.

(3) Risks to the health and safety of workers at work involving hazardous chemical agents shall be eliminated or reduced to a minimum by:

(*a*) the design and organisation of systems of work at the workplace,

(*b*) the provision of suitable equipment for work with chemical agents and maintenance procedures which ensure the health and safety of workers at work,

(*c*) reducing to a minimum the number of workers exposed or likely to be exposed,

(*d*) reducing to a minimum the duration and intensity of exposure,

(*e*) appropriate hygiene measures,

(*f*) reducing the quantity of chemical agents present at the workplace to the minimum required for the type of work concerned,

(*g*) suitable working procedures including arrangements for the safe handling, storage and transport within the workplace of hazardous chemical agents and waste containing such chemical agents.

(4) Where the results of the assessment referred to in regulation 4(1) reveal a risk to the health and safety of workers, the specific protection, prevention and monitoring measures laid down in regulations 6, 7 and 10 shall be applied.

(5) Where the results of the risk assessment referred to in regulation 4(1) show that, because of the quantities of a hazardous chemical agent present in the workplace, there is only a slight risk to the health and safety of workers, and the measures taken in accordance with sub-regulations (1) and (2) are sufficient to reduce that risk, the provisions of regulations 6, 7 and 10 shall not apply.

Specific measures.

6. (1) The employer shall ensure that the risk from a hazardous chemical agent to the health and safety of workers at work is eliminated or reduced to a minimum.

(2) (*a*) In applying sub-regulation (1), substitution shall by preference be undertaken, whereby the employer shall avoid the use of a hazardous chemical agent by

replacing it with a chemical agent or process which, under its condition of use, is not hazardous or less hazardous to workers' health and safety, as the case may be.

(*b*) Where the nature of the activity does not permit risk to be eliminated by substitution, having regard to the activity and risk assessment referred to in regulation 4, the employer shall ensure that the risk is reduced to a minimum by application of protection and prevention measures, consistent with the assessment of the risk made pursuant to regulation 4. These will include, in order of priority:

(i) design of appropriate work processes and engineering controls and use of adequate equipment and materials, so as to avoid or minimise the release of hazardous chemical agents which may present a risk to workers' health and safety at the place of work;

(ii) application of collective protection measures at the source of the risk, such as adequate ventilation and appropriate organizational measures;

(iii) where exposure cannot be prevented by other means, application of individual protection measures including personal protective equipment.

(3) The measures referred to in sub-regulation (2) shall be accompanied by health surveillance in accordance with regulation 10 if it is appropriate to the nature of the risk.

(4) Unless the employer clearly demonstrates by other means of evaluation that, in accordance with sub-regulation (2), adequate prevention and protection have been achieved, the employer shall carry out on a regular basis, and when any change occurs in the conditions which may affect workers' exposure to chemical agents, such measurements of chemical agents which may present a risk to workers' health at the workplace as are necessary, in particular in relation to the occupational exposure limit values.

(5) (*a*) The employer shall take into account the results of the procedures referred to in sub-regulation (4) in carrying out the obligations laid down in or resulting as a consequence of regulation 4.

(*b*) In any event, where an occupational exposure limit value prescribed by regulations has been exceeded, the employer shall immediately take steps, taking into account the nature of that limit, to remedy the situation by carrying out preventive and protective measures.

(6) On the basis of the overall assessment of and general principles for the prevention of risks in regulations 4 and 5, the employer shall take technical and, or organisational measures appropriate to the nature of the operation, including storage,

handling and segregation of incompatible chemical agents, providing protection of workers against hazards arising from the physico-chemical properties of chemical agents. In particular he shall take measures, in order of priority, to:

(*a*) prevent the presence at the workplace of hazardous concentrations of inflammable substances or hazardous quantities of chemically unstable substances or, where the nature of the work does not allow that,

(*b*) avoid the presence of ignition sources which could give rise to fires and explosions, or adverse conditions which could cause chemically unstable substances or mixtures of substances to give rise to harmful physical effects, and

(*c*) mitigate the detrimental effects to the health and safety of workers in the event of fire or explosion due to the ignition of inflammable substances, or harmful physical effects arising from chemically unstable substances or mixtures of substances.

(7) Work equipment and protective systems provided by the employer for the protection of workers shall comply with the relevant national provisions on design, manufacture and supply with respect to health and safety.

(8) The employer shall take measures to provide sufficient control of plant, equipment and machinery or provision of explosion suppression equipment or explosion pressure relief arrangements.

Arrangements to deal with accidents, incidents and emergencies.
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7. (1) The first-aid, fire-fighting and evacuation measures as well as the warning and communication systems related to matters covered by these regulations including the Schedules hereto shall take place in accordance with the Work Place (First Aid) Regulations, the Work Place (Minimum Health and Safety Requirements) Regulations, and the Work Place (Provision of Health and, or Safety Signs) Regulations.

(2) Without prejudice to the generality of the foregoing, an employer shall, in order to protect the health and safety of workers from an accident, incident or emergency related to the presence of hazardous chemical agents at the workplace, establish procedures or action plans which can be put into effect when any such event occurs, so that appropriate action is taken. These arrangements shall include any relevant safety drills that are to be performed at regular intervals, as well as the provision of appropriate first aid facilities.

(3) In the case of the occurrence of an event such as is mentioned in the preceding sub-regulation, an employer shall immediately take steps to reduce the effects of the event and to inform the workers concerned thereof. In order to restore the situation to normal, the employer shall implement appropriate measures to remedy the situation as soon as possible, and shall permit only those workers who are essential to the carrying out of repairs or to carry out other necessary work in the affected area.

(4) Workers who are permitted to work in the affected area shall be provided with appropriate protective clothing, personal protective equipment, specialised safety equipment and plant, which they must use as long as the situation persists. An employer shall ensure that such a situation is not allowed to become permanent.

(5) An employer shall take all appropriate steps to ensure that no unprotected persons permitted to remain or to enter in the affected area.

(6) An employer shall take the measures necessary to provide the warning and other communication systems required to signal an increased risk to health and safety whenever such occurs, so as to enable an appropriate response and to launch remedial actions, assistance, escape and rescue operations immediately if the need arises.

(7) An employer shall ensure that information on emergency arrangements involving hazardous chemical agents is available, including to the relevant internal and external accident and emergency services, and for this purpose shall give advance notice of relevant work hazards, hazard identification arrangements, precautions and procedures, so that the emergency services can prepare their own response procedures and precautionary measures. An employer shall also make available information concerning specific hazards arising, or likely to rise, at the time of an accident or emergency, including information on procedures prepared pursuant to this regulation.

Information and training for workers.
Amended by: L.N. 198 of 2015. S.L. 424.18.

8. (1) Without prejudice to the General Provisions for Health and Safety at Work Places Regulations, concerning the information and training of workers, the employer shall ensure that:

(*a*) workers and, or their representatives are provided with:

(i) the data obtained pursuant to regulation 4, and further informed whenever a major alteration at the workplace leads to a change in these data,

(ii) information on the hazardous chemical agents occurring in the workplace, such as the identity of those agents, the risks to health and safety, relevant occupational exposure limit values and other legislative provisions,

(iii) training and information on appropriate precautions and actions to be taken in order to safeguard themselves and other workers at the workplace,

(iv) access to any safety data sheet provided by the supplier in accordance with Article 31 of Regulation (EC) No 1907/2006; and

(*b*) the information is:

(i) provided in a manner appropriate to the outcome of the risk assessment pursuant to regulation 4.

This may vary from oral communication to individual instruction and training supported by information in writing, depending on the nature and degree of the risk revealed by the assessment required by the said regulation,

(ii) updated to take account of changing circumstances.

(2) Where containers and pipes for hazardous chemical agents used at work are not marked in accordance with Work Place (Provision of Health and, or Safety Signs) Regulations, the employer shall, without prejudice to any derogations provided for in any such regulations, ensure that the contents of the containers and pipes, together with the nature of those contents and any associated hazards, are clearly identifiable. S.L. 424.16

9. (1) To prevent the exposure of workers to health risks from certain chemical agents and, or certain activities involving chemical agents, the production, manufacture or use at work of the chemical agents and the activities set out in Schedule III shall be prohibited to the extent specified therein. Prohibitions.

(2) (*a*) The Minister may permit derogations from the requirements of sub-regulation (1) in the following circumstances:

(i) for the sole purpose of scientific research and testing, including analysis,

(ii) for activities intended to eliminate chemical agents that are present in the form of by-products or waste products,

(iii) for the production of the chemical agents referred to in sub-regulation (1) for use as intermediates, and for such use.

(*b*) The exposure of workers to chemical agents referred to in sub-regulation (1) must be prevented, in particular by providing that the production and earliest possible use of such chemical agents as intermediates must take place in a single closed system, from which the aforesaid chemical agents may be removed only to the extent necessary to monitor the process or service the system.

(*c*) The Minister may make regulations providing for systems of individual authorisations.

(3) Derogations pursuant to sub-regulation (2) may be permitted, after the employer submits to the Authority the following information:

(*a*) the reason for requesting the derogation,

(*b*) the quantity of the chemical agent to be used annually,

(*c*) the activities and, or reactions or processes involved,

(*d*) the number of workers liable to be involved,

(*e*) the precautions envisaged to protect the health and safety of workers concerned,

(*f*) the technical and organisational measures taken to prevent the exposure of workers.

(4) The Minister may amend the list of prohibitions under sub-regulation (1), to include further chemical agents or activities.

Health surveillance.

10.(1)(*a*) Without prejudice to each worker's right, if he so wishes, to receive health surveillance at regular intervals, an employer shall make arrangements for carrying out appropriate health surveillance of workers for whom the results of the assessment referred to in regulation 4 reveal a risk to health, and such health and exposure records shall be made available to the Authority.

(*b*) Health surveillance, the results of which shall be taken into account in applying preventive measures in the specific workplace, shall be appropriate where:

(i) the exposure of the worker to a hazardous chemical agent is such that an identifiable disease or adverse health effect may be related to the exposure, and

(ii) there is a likelihood that the disease or effect may occur under the particular conditions of the worker's work, and

(iii) the technique of investigation is of low risk to workers.

(*c*) Furthermore, there shall be valid techniques for detecting indications of the disease or effect.

(*d*) Where a prescribed biological limit value has been set as indicated in Schedule II, health surveillance shall be a compulsory requirement for work with the hazardous chemical agent in question, in accordance with the procedures in that schedule. Workers shall be informed of this requirement before being assigned to the task involving risk of exposure to the hazardous chemical agent indicated.

(2) An employer shall ensure that for each worker who undergoes health surveillance in accordance with the requirements of sub-regulation (1), individual health and exposure records are made and kept up-to-date.

(3) (*a*) Health and exposure records shall contain a summary of the results of health surveillance carried out and of any monitoring data representative of the exposure of the individual. Biological monitoring and related requirements may form part of health surveillance.

(*b*) Health and exposure records shall be kept in a suitable form so as to permit consultation at a later date, taking into account any confidentiality.

(*c*) Copies of the appropriate records shall be supplied to the Authority on request. The individual worker shall, at his request, have access to the health and exposure

records relating to him personally.

(*d*) Where an undertaking ceases to trade, the health and exposure records shall be made available to the Authority, or to the worker concerned as the case may be.

(4) Where, as a result of health surveillance -

(*a*) a worker is found to have an identifiable disease or adverse health effect which is considered by a doctor or other competent person to be the result of exposure at work to a hazardous chemical agent, or

(*b*) a binding biological limit value is found to have been exceeded,

the worker shall be informed by the doctor or other competent person of the result which relates to him personally, including information and advice regarding any health surveillance which he should undergo following the end of the exposure. The employer shall:

(i) review the risk assessment made pursuant to regulation 4(1),

(ii) review the measures provided to eliminate or reduce risks pursuant to regulations 5 and 6,

(iii) take into account the advice of the competent person or the Authority in implementing any measures required to eliminate or reduce risk in accordance with regulation 6, including the possibility of assigning the worker to alternative work where there is no risk of further exposure, and

(iv) arrange continued health surveillance and provide for a review of the health status of any other worker who has been similarly exposed. In such cases the doctor or competent person or the Authority may propose that exposed persons undergo a medical examination.

Consultation and participation of workers.

11. Consultation and participation of workers and, or their representatives on the matters covered by these regulations, including the Schedules hereto, shall take place in accordance with the General Provisions for Health and Safety at Work Places Regulations.

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Onus of proof.

12. In any proceedings for an offence under these regulations consisting of a failure to comply with a duty or requirement to do something, or to do something so far as is reasonably practicable, it shall be for the accused to prove (as the case may be) that it was not practicable or not reasonably practicable to do more than was in fact done to satisfy the duty or requirement, or that there was no better practicable means than was in fact used to satisfy the duty or requirement.

Technical guidance.

13. The Authority may draw up practical guidelines of a non-binding nature. These guidelines shall address the topics referred to in regulations 3, 4, 5 and 6, and Schedule II, section 1.

Offences.

14. Any person who knowingly or recklessly interferes with the process of providing a safe and healthy place of work shall be guilty of an offence.

SCHEDULE I

LIST OF BINDING OCCUPATIONAL EXPOSURE LIMIT VALUES

Name of agent	EINECS No (1)	CAS No (2)	Occupational Exposure limit value 8 h (3)		Occupational Exposure limit value Short-term (4)	
			Mg/m^3 (5)	ppm (6)	Mg/m^3	ppm
Inorganic lead and its compounds			0,15			

(1) EINECS: European Inventory of Existing Commercial Chemical Substances.

(2) CAS: Chemical Abstracts Service.

(3) Measured or calculated in relation to a reference period of eight hours, time-weighted average.

(4) A limit value above which exposure should not occur, and which is related to a 15 minute period unless otherwise specified.

(5) mg/m^3 = milligrams per cubic metre of air at 20ºC and 101,3 kPa.

(6) ppm = parts per million by volume in air (ml/m^3).

SCHEDULE II

BINDING BIOLOGICAL LIMIT VALUES AND HEALTH SURVEILLANCE MEASURES

1. Lead and its ionic compounds

1.1 Biolopical monitoring must include measuring the blood-lead level (PbB) using absorption spectrometry or a method giving equivalent results. The binding biological limit value is:

70 µg Pb/100 ml blood

1.2 Medical surveillance is carried out if:

- exposure to a concentration of lead in air is greater than 0,075 mg/m^3, calculated as a time-weighted average over 40 hours per week, or
- a blood-lead level greater than 40 lg Pb/100 ml blood is measured in individual workers.

1.3 Practical guidelines for biological monitoring and medical surveillance must be developed in accordance with regulation 13. These must include recommendations of biological indicators (e.g. ALAU, ZPP, AI.AD) and biological monitoring strategies.

SCHEDULE III

PROHIBITIONS

The production, manufacture or use at work of the chemical agents and activities involving chemical agents set out below are prohibited. The prohibition does not apply if the chemical agent is present in another chemical agent, or as a constituent of waste, provided that its individual concentration therein is less than the limit specified.

(*a*) Chemical Agents

EINECS No ([1])	CAS No ([2])	Name of agent	Concentration limit for exemption
202-080-4	91-59-8	2-naphthylamine and its salts	0,1% w/w
202-177-1	92-67-1	4-aminodiphenyl and its salts	0,1% w/w
202-199-1	92-87-5	Benzidine and its salts	0,1% w/w
202-204-7	92-93-3	4-nitrodiphenyl	0,1% w/w

([1]) EINECS: European Inventory of Existing Commercial Chemical Substances

([2]) CAS: Chemical Abstracts Service

(*b*) Work activities

None.

SCHEDULE IV

DANGEROUS SUBSTANCES

The following chemical agents are to be considered dangerous within the meaning of these regulations:

(*a*) explosive substances and preparations: solid, liquid, pasty or gelatinous substances and preparations which may also react exothermically without atmospheric oxygen thereby quickly evolving gases, and which, under defined test conditions, detonate, quickly deflagrate or upon heating explode when partially confined;

(*b*) oxidising substances and preparations: substances and preparations which give rise to a highly exothermic reaction in contact with other substances, particularly flammable substances;

(*c*) extremely flammable substances and preparations: liquid substances and preparations having an extremely low flash-point and a low boiling-point and gaseous substances and preparations which are flammable in contact with air at ambient temperature and pressure.

(*d*) highly flammable substances and preparations:

- substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any application of energy, or
- solid substances and preparations which may readily catch fire after brief contact with a source of ignition and which continue to burn or to be consumed after removal of the source of ignition, or
- liquid substances and preparations having a very low flash-point, or

- substances and preparations which, in contact with water or damp air, evolve extremely flammable gases in dangerous quantities;

(*e*) flammable substances and preparations: liquid substances and preparations having a low flash-point;

(*f*) very toxic substances and preparations: substances and preparations which in very low quantities cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin;

(*g*) toxic substances and preparations: substances and preparations which in low quantities cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin;

(*h*) harmful substances and preparations: substances and preparations which may cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin;

(*i*) corrosive substances and preparations: substances and preparations which may, on contact with living tissues, destroy them;

(*j*) irritant substances and preparations: non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with the skin or mucous membrane, may cause inflammation;

(*k*) sensitising substances and preparations: substances and preparations which, if they are inhaled or if they penetrate the skin, are capable of eliciting a reaction of hypersensitisation such that on further exposure to the substance of preparation, characteristic adverse effects are produced;

(*l*) carcinogenic substances and preparations: substances or preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce cancer or increase its incidence;

(*m*) mutagenic substances and preparations: substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce heritable genetic defects or increase their incidence;

(*n*) substances and preparations which are toxic for reproduction: substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may produce, or increase the incidence of, non-heritable adverse effects in the progeny and/or an impairment of male or female reproductive functions or capacity.

SCHEDULE V

Substituted by:
L.N. 353 of 2007;
L.N. 53 of 2012;
L.N.57 of 2018;
L.N. 356 of 2021.

OCCUPATIONAL EXPOSURE LIMIT VALUES

EC No (1)	CAS No (2)	Name of agent	Limit values				Notation (3)
			Eight hours (4)		Short-term (5)		
			mg/m3 (6)	ppm (7)	mg/m3 (6)	ppm (7)	
200-193-3	54-11-5	Nicotine	0.5	-	-	-	skin
200-240-8	55-63-0	Glycerol trinitrate	0.095	0.01	0.19	0.02	skin
200-262-8	56-23-5	Carbon tetrachloride; Tetrachloromethane	6.4	1	32	5	skin
200-467-2	60-29-7	Diethylether	308	100	616	200	-
200-521-5	61-82-5	Amitrole	0.2	-	-	-	-
200-539-3	62-53-3	Aniline ([15])	7.74	2	19.35	5	skin
200-579-1	64-18-6	Formic acid	9	5	-	-	-
200-580-7	64-19-7	Acetic acid	25	10	50	20	-
200-659-6	67-56-1	Methanol	260	200	-	-	skin
200-662-2	67-64-1	Acetone	1210	500	-	-	-
200-663-8	67-66-3	Chloroform	10	2	-	-	skin
200-679-5	68-12-2	N,N-Dimethylformamide	15	5	30	10	skin
200-756-3	71-55-6	1,1,1-Trichloroethane	555	100	1100	200	-
200-817-4	74-87-3	Chloromethane	42	20	-	-	-
200-821-6	74-90-8	Hydrogen cyanide (as cyanide)	1	0.9	5	4.5	skin
200-830-5	75-00-3	Chloroethane	268	100	-	-	-
200-834-7	75-04-7	Ethylamine	9.4	5	-	-	-
200-835-2	75-05-8	Acetonitrile	70	40	-	-	skin
200-838-9	75-09-2	Methylene chloride; Dichloromethane	353	100	706	200	skin
200-843-6	75-15-0	Carbon disulphide	15	5	-	-	skin
200-863-5	75-34-3	1,1-Dichloroethane	412	100	-	-	skin
200-864-0	75-35-4	Vinylidene chloride; 1,1- Dichloroethylene	8	2	20	5	-
200-870-3	75-44-5	Phosgene	0.08	0.02	0.4	0.1	-
200-871-9	75-45-6	Chlorodifluoromethane	3600	1000	-	-	-
200-875-0	75-50-3	Trimethylamine	4.9	2	12.5	5	-
201-083-8	78-10-4	Tetraethyl orthosilicate	44	5	-	-	-

201-142-8	78-78-4	Isopentane	3000	1000	-	-	-
201-159-0	78-93-3	Butanone	600	200	900	300	-
201-176-3	79-09-4	Propionic acid	31	10	62	20	-
201-177-9	79-10-7	Acrylic acid; Prop-2-enoic acid	29	10	59([8])	20([8])	-
201-188-9	79-24-3	Nitroethane	62	20	312	100	skin
201-245-8	80-05-7	Bisphenol A; 4,4'-Isopropylidenediphenol	2([9])	-	-	-	-
201-297-1	80-62-6	Methyl methacrylate	-	50	-	100	-
201-865-9	88-89-1	Picric acid	0.1	-	-	-	-
202-049-5	91-20-3	Naphtalene	50	10	-	-	-
202-422-2	95-47-6	*o*-Xylene	221	50	442	100	skin
202-425-9	95-50-1	1,2-Dichlorobenzene	122	20	306	50	skin
202-436-9	95-63-6	1,2,4-Trimethylbenzene	100	20	-	-	-
202-500-6	96-33-3	Methyl acrylate	18	5	36	10	-
202-704-5	98-82-8	2-Phenyl-propane (Cumene) ([15])	50	10	250	50	skin
202-705-0	98-83-9	2-Phenylpropene	246	50	492	100	-
202-716-0	98-95-3	Nitrobenzene	1	0.2	-	-	skin
202-849-4	100-41-4	Ethylbenzene	442	100	884	200	skin
202-981-2	101-84-8	Diphenyl ether	7	1	14	2	-
203-234-3	104-76-7	2-Ethylhexan-1-ol	5.4	1	-	-	-
203-300-1	105-46-4	sec-Butylacetate	241	50	723	150	-
203-313-2	105-60-2	ε-Caprolactam (dust and vapour)	10	-	40	-	-
203-388-1	106-35-4	Heptan-3-one	95	20	-	-	-
203-396-5	106-42-3	p-Xylene	221	50	442	100	skin
203-400-5	106-46-7	1,4-Dichlorobenzene; p- Dichlorobenzene	12	2	60	10	skin
203-403-1	106-49-0	4-aminotoluene	4.46	1	8.92	2	skin
203-453-4	107-02-8	Acrolein; Acrylaldehyde; Prop-2-enal	0.05	0.02	0.12	0.05	-
203-470-7	107-18-6	Allyl alcohol	4.8	2	12.1	5	skin
203-473-3	107-21-1	Ethylene glycol	52	20	104	40	skin
203-481-7	107-31-3	Methyl formate	125	50	250	100	skin
203-539-1	107-98-2	1-Methoxy-2-propanol	375	100	568	150	skin
203-545-4	108-05-4	Vinyl acetate	17.6	5	35.2	10	skin
203-550-1	108-10-1	4-Methylpentan-2-one	83	20	208	50	-
203-576-3	108-38-3	*m*-Xylene	221	50	442	100	skin
203-585-2	108-46-3	Resorcinol	45	10	-	-	skin
203-603-9	108-65-6	2-Methoxy-1-methylethyl acetate	275	50	550	100	skin

203-604-4	108-67-8	Mesitylene (Trimethylbenzes)	100	20	-	-	-
203-625-9	108-88-3	Toluene	192	50	384	100	skin
203-628-5	108-90-7	Monochlorobenzene	23	5	70	15	-
203-631-1	108-94-1	Cyclohexanone	40.8	10	81.6	20	skin
203-632-7	108-95-2	Phenol	8	2	16	4	skin
203-692-4	109-66-0	Pentane	3000	1000	-	-	-
203-713-7	109-86-4	2-Methoxyethanol	-	1	-	-	skin
203-716-3	109-89-7	Diethylamine	15	5	30	10	-
203-726-8	109-99-9	Tetrahydrofuran	150	50	300	100	skin
203-737-8	110-12-3	5-Methylhexan-2-one	95	20	-	-	-
203-745-1	110-19-0	Isobutyl acetate	241	50	723	150	-
203-767-1	110-43-0	Heptan-2-one	238	50	475	100	skin
203-772-9	110-49-6	2-Methoxyethyl acetate	-	1	-	-	skin
203-777-6	110-54-3	n-Hexane	72	20	-	-	-
203-788-6	110-65-6	But-2-yne-1,4-diol	0.5	-	-	-	-
203-804-1	110-80-5	2-Ethoxyethanol	8	2	-	-	skin
203-806-2	110-82-7	Cyclohexane	700	200	-	-	-
203-808-3	110-85-0	Piperazine	0.1	-	0.3	-	-
203-809-9	110-86-1	Pyridine	15	5	-	-	-
203-815-1	110-91-8	Morpholine	36	10	72	20	-
203-839-2	111-15-9	2-Ethoxyethyl acetate	11	2	-	-	skin
203-905-0	111-76-2	2-Butoxyethanol	98	20	246	50	skin
203-906-6	111-77-3	2-(2-Methoxyethoxy)ethanol	50.1	10	-	-	skin
203-933-3	112-07-2	2-Butoxyethyl acetate	133	20	333	50	skin
203-961-6	112-34-5	2-(2-Butoxyethoxy)ethanol	67.5	10	101.2	15	-
204-065-8	115-10-6	Dimethylether	1920	1000	-	-	-
204-428-0	120-82-1	1,2,4-Trichlorobenzene	15.1	2	37.8	5	skin
204-469-4	121-44-8	Triethylamine	8.4	2	12.6	3	skin
204-633-5	123-51-3	Isoamyl alcohol	18	5	37	10	-
204-658-1	123-86-4	*n*-Butyl acetate	241	50	723	150	-
204-661-8	123-91-1	1,4-Dioxane	73	20	-	-	-
204-662-3	123-92-2	Isopentylacetate	270	50	540	100	-
204-696-9	124-38-9	Carbon dioxide	9000	5000	-	-	-
204-697-4	124-40-3	Dimethylamine	3.8	2	9.4	5	-
204-825-9	127-18-4	Tetrachloroethylene	138	20	275	40	skin
204-826-4	127-19-5	N,N-Dimethylacetamide	36	10	72	20	skin
205-438-8	140-88-5	Ethyl acrylate	21	5	42	10	-
205-480-7	141-32-2	*n*-Butyl acrylate	11	2	53	10	-

205-483-3	141-43-5	2-Aminoethanol	2.5	1	7.6	3	skin
205-500-4	141-78-6	Ethyl acetate	734	200	1468	400	-
205-563-8	142-82-5	*n*-Heptane	2085	500	-	-	-
205-599-4	143-33-9	Sodium cyanide (as cyanide)	1	-	5	-	skin
205-634-3	144-62-7	Oxalic acid	1	-	-	-	-
205-792-3	151-50-8	Potassium cyanide (as cyanide)	1	-	5	-	skin
206-992-3	420-04-2	Cyanamide	1	0.58	-	-	skin
207-069-8	431-03-8	Diacetyl; Butanedione	0.07	0.02	0.36	0.1	-
207-343-7	463-82-1	Neopentane	3000	1000	-	-	-
208-394-8	526-73-8	1,2,3-Trimethylbenzene	100	20	-	-	-
208-793-7	541-85-5	5-Methylheptan-3-one	53	10	107	20	-
210-866-3	624-83-9	Methyl isocyanate	-	-	-	0.02	-
210-946-8	626-38-0	1-Methylbutyl acetate	270	50	540	100	-
211-047-3	628-63-7	Pentyl acetate	270	50	540	100	-
211-128-3	630-08-0	Carbon monoxide	23	20	117	100	-
212-828-1	872-50-4	n-Methyl-2-pyrrolidone	40	10	80	20	skin
215-137-3	1305-62-0	Calcium dihydroxide	1([10])	-	4([10])	-	-
215-138-9	1305-78-8	Calcium oxide	1([10])	-	4([10])	-	-
215-236-1	1314-56-3	Diphosphorus pentaoxide	1	-	-	-	-
215-242-4	1314-80-3	Diphosphorus pentasulphide	1	-	-	-	-
215-293-2	1319-77-3	Cresols (all isomers)	22	5	-	-	-
215-535-7	1330-20-7	Xylene, mixed isomers, pure	221	50	442	100	skin
216-653-1	1634-04-4	Tert-Butyl methyl ether	183.5	50	367	100	-
222-995-2	3689-24-5	Sulphotep	0.1	-	-	-	skin
231-116-1	7440-06-4	Platinum (metallic)	1	-	-	-	-
231-131-3	7440-22-4	Silver, metallic	0.1	-	-	-	-
231-131-3		Silver (soluble compounds as Ag)	0.01	-	-	-	-
231-195-2	7446-09-5	Sulphur dioxide	1.3	0.5	2.7	1	-
231-484-3	7580-67-8	Lithium hydride	-	-	0.02([9])	-	-
231-595-7	7647-01-0	Hydrogen chloride	8	5	15	10	-
231-633-2	7664-38-2	Orthophosphoric acid	1	-	2	-	-
231-634-8	7664-39-3	Hydrogen fluoride	1.5	1.8	2.5	3	-
231-635-3	7664-41-7	Ammonia, anhydrous	14	20	36	50	-

231-639-5	7664-93-9	Sulphuric acid mist (11)(12)	0.05	-	-	-	-
231-714-2	7697-37-2	Nitric acid	-	-	2.6	1	-
231-778-1	7726-95-6	Bromine	0.7	0.1	-	-	-
231-954-8	7782-41-4	Fluorine	1.58	1	3.16	2	-
231-959-5	7782-50-5	Chlorine	-	-	1.5	0.5	-
231-977-3	7783-06-4	Hydrogen sulphide	7	5	14	10	-
231-978-9	7783-07-5	Dihydrogen selenide	0.07	0.02	0.17	0.05	-
232-260-8	7803-51-2	Phosphine	0.14	0.1	0.28	0.2	-
232-319-8	8003-34-7	Pyrethrum (purified of sensitising lactones)	1	-	-	-	-
233-046-7	10025-87-3	Phosphoryl trichloride	0.064	0.01	0.12	0.02	-
233-060-3	10026-13-8	Phosphorus pentachloride	1	-	-	-	-
233-113-0	10035-10-6	Hydrogen bromide	-	-	6.7	2	-
233-271-0	10102-43-9	Nitrogen monoxide([13])	2.5	2	-	-	-
233-272-6	10102-44-0	Nitrogen dioxide	0.96	0.5	1.91	1	-
247-852-1	26628-22-8	Sodium azide	0.1	-	0.3	-	skin
252-104-2	34590-94-8	(2-Methoxy-methylethoxy)-propanol	308	50	-	-	skin
262-967-7	61788-32-7	Terphenyl, hydrogenated	19	2	48	5	-
	620-11-1	3-Pentylacetate	270	50	540	100	-
	625-16-1	Amylacetate, tert	270	50	540	100	-
		Fluorides, inorganic	2.5	-	-	-	-
		Barium (soluble compounds as Ba)	0.5	-	-	-	-
		Chromium Metal, Inorganic Chromium (II) Compounds and Inorganic Chromium (III) Compounds (insoluble)	2	-	-	-	-
		Tin (inorganic compounds as Sn)	2	-	-	-	-
		Mercury and divalent inorganic mercury compounds including mercuric oxides and mercuric chloride (measured as mercury) ([14])	0.02				

		Manganese and inorganic manganese compounds (as manganese)	0.2 ([9]) 0.05([10])				

([1]) EC No: European Community (EC) number, the numerical identifier for substances within the European Union.

([2]) CAS No: Chemical Abstract Service Registry Number.

([3]) A skin notation assigned to the occupational exposure limit value indicates the possibility of significant uptake through the skin.

([4]) Measured or calculated in relation to a reference period of eight-hours as a time-weighted average.

([5]) Short-term exposure limit (STEL). A limit value above which exposure should not occur and is related to a 15-minute period, unless otherwise specified.

([6]) mg/m 3: milligrams per cubic metre of air at 20 °C and 101.3 KPa.

([7]) ppm: parts per million by volume in air (ml/m3).

([8]) Short-term exposure limit value in relation to a reference period of 1 minute.

([9]) Inhalable fraction.

([10])Respirable fraction.

([11])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.

([12])The mist is defined as the thoracic fraction.

([13])Established in accordance with the Annex to Directive.

([14])During exposure monitoring for mercury and its divalent inorganic compounds, account should be taken of relevant biological monitoring techniques that complement the OELV.

([15])During exposure monitoring, account should be taken of relevant biological monitoring values as suggested by the Scientific Committee on Occupational Exposure Limits for Chemical Agents (SCOEL).