

Pursuant to Article 7, paragraph 2 of the Law on Workplace Safety and Health (Official Gazette of the Republic of Serbia No.101/05),

the Minister of Labour and Social Policy hereby adopts the following

**RULEBOOK ON PREVENTIVE MEASURES FOR SAFE AND HEALTHY
WORK CONCERNING THE AFFECTS OF CHEMICAL AGENTS**

GENERAL PROVISIONS

Article 1

This Rulebook lays down minimum requirements related to safe and healthy work employers shall meet in ensuring application of preventive measures in order to eliminate or reduce risks to the safety and health 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.

Article 2

This Rulebook shall not apply to:

- 1) workstations, where workers are exposed to ionising radiation;
- 2) workstations, where workers are exposed or could be exposed to carcinogens and/or mutagens, except in cases where a higher level of safe and healthy work is required by the law;
- 3) transport of hazardous chemical agents, except in cases where a higher level of safe and healthy work is required by the provisions of this Rulebook.

Article 3

For the purpose of this Rulebook, the terms used shall have the following meanings:

- 1) '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;

2) 'Hazardous chemical agent' means:

- (1) any chemical agent which meets the criteria for classification as a dangerous substance according to special provisions, other than those substances which only meet the criteria for classification as dangerous for the environment;
- (2) any chemical agent which, whilst not meeting the criteria for classification as dangerous in accordance with paragraph 2), subparagraph (1) of this article and 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 assigned an occupational exposure limit value under Article 4.
- (3) '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;
- (4) 'Occupational exposure limit value' means the limit of the time-weighted average of the concentration of a hazardous chemical agent in the air within the breathing zone of a worker under normal microclimatic work conditions and easy manual work in relation to a specified reference period, considered harmless to the health of a worker, if the worker operates in a concentration of a hazardous chemical agent lower or equal to the limit value of hazardous chemical agent eight hours a day, expressed in mg/m³ or ml/m³ [ppm].

The exposure limit value is given for eight-hour exposure.

The exposure limit value is given for the temperature of 20°C and pressure of 1,013 x 10⁵ Pa;

- (5) 'Short term exposure limit value' is the concentration of a hazardous chemical agent which a worker can be exposed to for a short period without a health risk.

The exposure to such a concentration of a hazardous chemical agent can last maximally 15 minutes and shall not be more than four times during a work day. A time period of at least 60 minutes shall pass between two exposures to such a concentration. Values of short term exposure are given in mg/m³ или ml/m³ [ppm];

6) '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;

7) '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;

8) 'Hazard' means the intrinsic property of a chemical agent with the potential to cause harm;

9) 'Risk' means the likelihood that the potential for harm will be attained under the conditions of use and/or exposure.

II Occupational exposure limit values and biological limit values

Article 4

The binding exposure limit values for chemical agents at the workplace are given in Annex 1 of this Rulebook.

The binding biological exposure limit values are given in Annex 2 of this Rulebook.

The binding biological limit values are printed together with this Rulebook as its constituent part.

III. EMPLOYERS' OBLIGATIONS

1. Determination and assessment of risk of hazardous chemical agents

Article 5

The employer shall first determine whether any hazardous chemical agents are present at the workplace. If so, he shall then assess any risk to the safety and health of workers arising from the presence of those chemical agents, taking into consideration the following:

- 1) their hazardous properties,
- 2) information on safety and health that shall be provided by the supplier, (e.g. the relevant safety data sheet),
- 3) the level, type and duration of exposure,
- 4) the circumstances of work involving such agents, including their amount,
- 5) any occupational exposure limit values and/or biological limit values,
- 6) the effect of preventive measures taken or to be taken,
- 7) where available, the conclusions to be drawn from any health surveillance already undertaken.

The employer shall obtain additional information which is needed for the risk assessment from the supplier. Where appropriate, this information shall comprise the specific assessment concerning the risk to users.

The employer must be in possession of an written assessment of the risk in accordance with the Law on safe and healthy work and shall identify which measures have been taken in accordance with Articles 6 and 7 of this Rulebook. The risk assessment may include a justification by the employer that the nature and/or 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.

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 safety and health for other reasons, even after all technical measures have been taken, shall be included in the risk assessment.

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.

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.

2. General principles for prevention

Article 6

In carrying out his obligation to ensure the health and safety of workers in any activity involving hazardous chemical agents the employer shall take the necessary preventive measures set out in the Law on safe and healthy work and include the measures set out in this Rulebook.

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

- 1) the design and organisation of systems of work at the workplace,

- 2) the provision of suitable equipment for work with chemical agents and maintenance procedures which ensure the health and safety of workers at work,
- 3) reducing to a minimum the number of workers exposed or likely to be exposed,
- 4) reducing to a minimum the duration and intensity of exposure,
- 5) appropriate hygiene measures,
- 6) reducing the quantity of chemical agents present at the workplace to the minimum required for the type of work concerned,
- 7) 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.

Where the results of the assessment referred to in Article 5 (1) reveal a risk to the safety and health of workers, the specific protection, prevention and monitoring measures laid down in Articles 7, 8 and 11 shall be applied.

Where the results of the risk assessment referred to in Article 5 (1) show that, because of the quantities of a hazardous chemical agent present in the workplace, there is only a slight risk to the safety and health of workers, and the measures taken in accordance with paragraphs 1 and 2 of this Article are sufficient to reduce that risk, the provisions of Articles 7, 8 and 11 shall not apply.

3. Specific prevention measures

Article 7

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

In applying paragraph 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' safety and health, as the case may be.

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 Article 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 Article 5.

These will include, in order of priority:

- 1) 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' safety and health at the place of work;
- 2) application of collective protection measures at the source of the risk, such as adequate ventilation and appropriate organizational measures;
- 3) where exposure cannot be prevented by other means, application of individual protection measures including personal protective equipment.

The measures referred to in paragraph 2, 3 and 4 of this Article shall be accompanied by health surveillance in accordance with Article 11.

The employer shall engage on a regular basis, and when any change occurs in the conditions which may affect workers' exposure to chemical agents, a licensed legal person to perform preventive and periodical analysis of environment conditions which may present a risk to worker's health at the workplace, in particular in relation to the occupational exposure limit values.

The employer shall take into account the results of the procedures referred to in paragraph 6 of this Article in carrying out the obligations laid down in or resulting as a consequence of Article 5.

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

On the basis of the overall assessment of and general principles for the prevention of risks in Articles 5 and 6, the employer shall take technical and/or organizational 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:

- 1) 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,
- 2) 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
- 3) 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.

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

Technical and/or organisational measures taken by the employer shall take account of and be consistent with the equipment group categorisation concerning equipment and protective systems intended for use in potentially explosive atmospheres.

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.

4. Arrangements to deal with accidents, incidents and emergencies

Article 8

The employer shall, in order to protect the safety and health of workers from an accident, incident or emergency related to the presence of hazardous chemical agents at the workplace, establish procedures 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 which are to be performed at regular intervals, and the provision of appropriate first aid facilities.

In the case of the occurrence of an event such as is mentioned in paragraph 1, the employer shall immediately take steps to mitigate the effects of the event and to inform the workers concerned thereof.

In order to restore the situation to normal:

- 1) the employer shall implement appropriate measures to remedy the situation as soon as possible,
- 2) only those workers who are essential to the carrying out of repairs and other necessary work shall be permitted to work in the affected area.

The 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. That situation shall not be permanent.

Unprotected persons shall not be permitted to remain in the affected area.

The employer shall take the measures necessary to provide the warning and other communication systems required to signal an increased risk to safety and health, to enable an appropriate response and to launch remedial actions, assistance, escape and rescue operations immediately if the need arises.

The employer shall ensure that information on emergency arrangements involving hazardous chemical agents is available. The relevant internal and external accident and emergency services shall have access to this information.

It shall include the following:

- 1) 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; and
- 2) any 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 Article.

5. Information and training for workers

Article 9

The employer shall ensure that workers and/or their representatives for safety and health are provided with:

- 1) the data obtained based on the risk evaluation act pursuant to Article 5 of this Rulebook, and further informed about modifications and amendments of the risk evaluation act whenever a major alteration at the workplace leads to a change in these data,
- 2) information on the hazardous chemical agents occurring in the workplace, such as the identity of those agents, the risks to safety and health, relevant occupational exposure limit values and other legislative provisions,
- 3) training and information on appropriate precautions and actions to be taken in order to safeguard themselves and other workers at the workplace,
- 4) access to any safety data sheet provided by the supplier, and that the information is:
 - provided in a manner appropriate to the outcome of the risk assessment pursuant to Article 5 of this Rulebook. 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;
 - updated to take account of changing circumstances.

Where containers and pipes for hazardous chemical agents used at work are not marked in accordance with the relevant legislation on the labelling of chemical agents and on safety signs at the workplace, the employer shall ensure that the contents of the containers and pipes, together with the nature of those contents and any associated hazards, are clearly identifiable.

Employers may, preferably from the producer or supplier, obtain on request all information on hazardous chemical agents needed to apply risk assessment pursuant to Article 5 (1) of this Rulebook,

MISCELLANEOUS PROVISIONS

1. Prohibitions

Article 10

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 Annex III shall be prohibited to the extent specified therein.

The list of chemical agents and/or activities, which production, manufacture or use at work shall be prohibited, is given in Annex III, printed together with this Rulebook and representing its constituent part.

Derogations from requirements of paragraph 1 can be permitted in the following circumstances:

- 1) for the sole purpose of scientific research and testing, including analysis,
- 2) for activities intended to eliminate chemical agents that are present in the form of by-products or waste products,
- 3) for the production of the chemical agents referred to in paragraph 1 for use as intermediates, and for such use.

The exposure of workers to chemical agents referred to in paragraph 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.

When derogations are permitted pursuant to paragraph 2, before using chemical agents listed in Annex 3 the employer shall submit the following information to the competent authority:

- 1) the reason for requesting the derogation,
- 2) the quantity of the chemical agent to be used annually,
- 3) the activities and/or reactions or processes involved,
- 4) the number of workers liable to be involved,
- 5) the precautions envisaged to protect the safety and health of workers concerned,
- 6) the technical and organisational measures taken to prevent the exposure of workers.

2. Health surveillance

Article 11

Employers shall introduce arrangements for carrying out appropriate health surveillance of workers for whom the results of the assessment referred to in Article 5 of this Rulebook reveal a risk to health.

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

- 1) 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
- 2) there is a likelihood that the disease or effect may occur under the particular conditions of the worker's work, and
- 3) the technique of investigation is of low risk to workers.
- 4) furthermore, there shall be valid techniques for detecting indications of the disease or effect.

Where a binding biological limit value has been set as indicated in Annex II, health surveillance shall be a compulsory requirement for work with the hazardous chemical agent in question, in accordance with the procedures in that Annex.

Workers shall be informed of this requirement before being assigned to the task involving risk of exposure to the hazardous chemical agent indicated.

Employers shall establish arrangements to ensure that for each worker who undergoes health surveillance in accordance with the requirements of paragraph 1, individual health and exposure records are made and kept up-to-date.

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.

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. The individual worker shall, at his request, have access to the health and exposure records relating to him personally.

Copies of the appropriate records shall be supplied to the competent authority on request.

Where an undertaking ceases to trade, the health and exposure records shall be made available to the competent authority.

Where, as a result of health surveillance:

- 1) a worker is found to have an identifiable disease or adverse health effect which is considered by a doctor or occupational health-care professional to be the result of exposure at work to a hazardous chemical agent, or
- 2) a binding biological limit value is found to have been exceeded, the worker shall be informed by the doctor or other suitably qualified 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, and the employer shall:

- 1) review the risk assessment made pursuant to Article 5 (1) of this Rulebook,
- 2) review the measures provided to eliminate or reduce risks pursuant to Articles 6 and 7 of this Rulebook,
- 3) take into account the advice of the occupational health-care professional or other suitably qualified person or the competent authority in implementing any measures required to eliminate or reduce risk in accordance with Article 7 of this Rulebook, including the possibility of assigning the worker to alternative work where there is no risk of further exposure, and arrange continued health surveillance
- 4) provide for a review of the health status of any other worker who has been similarly exposed. In such cases the competent doctor or occupational health-care professional or the competent authority may propose that exposed persons undergo a medical examination.

3. Consultation and participation of workers

Article 12

Employers shall ensure consultation and participation of workers and/or their representatives for safety and health on all matters related to exposure to chemical agents.

V. Transitional and final provision

Article 13

This Rulebook shall enter into force the eight day from the date of its publication in the Official Gazette of the Republic of Serbia and shall be applied from January 1-th 2013.

Belgrade, 3 December 2009

Minister
Rasim Ljajić

ANNEX I

LIST OF BINDING OCCUPATIONAL EXPOSURE LIMIT VALUES

EINECS No: Identification number from European Inventory of Existing Commercial Chemical Substances.

CAS No. : Identification number - Chemical Abstracts Service.

The concentration of a certain hazardous agent in air is the quantity of this agent in an air volume unit in mg/m³ или ml/m³ [ppm]. The concentration of gases or steam in mg/m³ can be calculated in ml/m³ [ppm] or reverse based on following equations:

$$1 \text{ ppm} = 1 \text{ ml/m}^3 = 1 \text{ cm}^3/\text{m}^3$$

$$c[\text{mg/m}^3] = c[\text{ppm}] \times M/24,04$$

$$c[\text{ppm}] = c[\text{mg/m}^3] \times 24,04/M$$

c = concentration

M = chemical agents molecular mass

Molar volume of a gas amounts to 24,04 l/mol at a temperature of 20°C and pressure of 1,013 x 10⁵ Pa.

OELV - occupational exposure limit value

ST-OELV - short-term occupational exposure limit value

The dust exposure limit value is given as total dust.

Carc. cat. 1 – chemical agents - proven carcinogenic to humans.

Carc. cat. 2 – chemical agents - probably carcinogenic to humans.

Carc. cat. 3 – chemical agents - concerns about potential carcinogenic impact to humans.

Mut. cat. 1 – chemical agents - proven mutagenic to humans.

Mut. cat. 2 – chemical agents - probably mutagenic to humans.

Mut. cat. 3 – chemical agents - concerns about potential mutagenic impact to humans.

Repr. cat. 1 – chemical agents with proven impact of reduction of reproduction ability to humans and/or agents with proven toxic impact to humans during the process of growth and development.

Repr. cat. 2 – chemical agents likely to have impact of reduction of reproduction ability to humans and/or agents likely to have toxic impact to humans during the process of growth and development.

Repr. cat. 3 – chemical agents assumed to have impact of reduction of reproduction ability to humans and/or agents assumed to have toxic impact to humans during the process of growth and development.

EU0 – Comment - chemical agents with defined binding exposure limit values pursuant to the Directives 1999/38/EC and 98/24/E3.

EU – Comment - chemical agents with defined indicative exposure limit values pursuant to the Directive 91/322/EEC.

EU* – Comment - chemical agents with defined indicative exposure limit values pursuant to the Directive 2000/39/EC (first list).

EU** – Comment - chemical agents with defined indicative exposure limit values pursuant to the Directive 2006/15/EC (second list).

K – Comment- chemical agent may have deleterious effect to skin.

No	EINECS No.	CAS No.	Agent	Limit values				Carc. cat.
				OELV		ST-OELV		
				mg/m ³	ppm	mg/m ³	ppm	
1	200-662-2	67-64-1	acetone; propanoic acid	1 210	500			
2	200-835-2	75-05-8	acetylnitryle; cyanomethane	70	40			
3	203-470-7	107-18-6	alil-alcohol	4.8	2	12.1	5	
4		625-16-1	amilacetate, terciarine; 1,1-dimethylpropylacetat	270	50	540	100	
5	205-483-3	141-43-5	2-aminoethanol; ethanolamin	2.5	1	7.6	3	
6	231-635-3	7664-41-7	ammonia, anhydrite	14	20	36	50	
7	233-271-0	10102-43-9	NO	30	25			
8	231-714-2	7697-37-2	HNO3			2.6	1	
9		80-05-7	bisphenol	10				
10			barium (soluble units like Ba)	0.5				
11	200-753-7	71-43-2	C6H6	3.25	1			
12	231-778-1	7726-95-6	bromine	0.7	0.1			
13	201-159-0	78-93-3	butanone; methyl ethyl ketone	600	200	900	300	
14	205-480-7	141-32-2	n-butyl acrylate	11	2	53	10	
15	203-905-0	111-76-2	2-Butoxyethanol	98	20	246	50	
16	203-933-3	112-07-2	2-Butoxyethyl Acetate; butyl glycol acetate	133	20	333	50	
17	203-961-6	112-34-5	2-(2-butoxyethoxy)ethanol; diethylene-glycol monobutyl-ether	67.5	10	101.2	15	
18	206-992-3	420-04-2	cyanamide	1	0.58			
19	203-806-2	110-82-7	cyclohexane	700	200			
20	203-631-1	108-94-1	cyclohexanone	40.8	10	81.6	20	
21	203-716-3	109-89-7	diethylamine	15	5	30	10	
22	200-467-2	60-29-7	diethylether; ether	308	100	616	200	
23	202-425-9	95-50-1	1,2-dichlorobenzene; o-dichlorobenzene	122	20	306	50	
24	203-400-5	106-46-7	1,4- dichlorobenzene; p-dichlorobenzene	122	20	306	50	3

25	200-863-5	75-34-3	1,1-dichloroethane	412	100			
26		68-12-2	N,N-dimethylformamide - dimethylformamide	15	5	30	10	
27	204-826-4	127-19-5	H,H- dimethylacetamide	36	10	72	20	
28	204-697-4	124-40-3	dimethylamine	3.8	2	9.4	5	
29	204-065-8	115-10-6	dimethylether	1 920	1 000			
30		1634-04-4	tert-butyl methyl ether	183.5	50	367	100	
31	200-834-7	75-04-7	ethylamine	9.4	5			
32		140-88-5	ethyl acrylate	21	5	42	10	
33	202-849-4	100-41-4	ethylbenzene	442	100	884	200	
34	203-473-3	107-21-1	ethylene glycol; ethanediol	52	20	104	40	
35		110-80-5	2-ethoxyethanol	8	2			
36		111-15-9	2-ethoxyethylacetate	11	2			
37	202-705-0	98-83-9	2-phenylpropene; alpha-methylstyrene	246	50	492	100	
38	203-632-7	108-95-2	phenol	8	2	16	4	
39	231-954-8	7782-41-4	fluorine	1.58	1	3.16	2	
40			fluorides, inorganic	2.5				
41	232-260-8	7803-51-2	phosphorus; phosphoric	0.14	0.1	0.28	0.2	
42	231-633-2	7664-38-2	phosphoric acid; orthophosphoric acid	1		2		
43	215-242-4	1314-80-3	phosphorus pentasulfide	1				
44	233-060-3	10026-13-8	phosphorus pentachloride	1				
45	215-236-1	1314-56-3	phosphorus pentoxide 2- phosphorus pentoxide	1	0.2			
46	200-870-3	75-44-5	phosgene; carbonyl chloride	0.08	0.02	0.4	0.1	
47	231-959-5	7782-50-5	chlorine			1.5	0.5	
48	203-628-5	108-90-7	chlorinated benzene; monochlorinated benzene	23	5	70	15	
49	200-871-9	75-45-6	chlorodifluoromethane	3 600	1 000			
50	200-830-5	75-00-3	chloroethane	268	100			3
51	200-663-8	67-66-3	chloroform; trichloromethane	10	2			3
52	203-777-6	110-54-3	i-hexane	72	20			
53	205-563-8	142-82-5	i-heptane	2 085	500			
54	203-767-1	110-43-0	heptane-2-oh	238	50	475	100	
55	203-388-1	106-35-4	heptane-3-oh; butyl ethyl ketone	95	20			

56			chromium metal, inorganic chromium units (II) and inorganic chromium units (III) (insoluble)	2				
57	201-142-8	78-78-4	isopentane; 2-methylbutane	3 000	1 000			
58	204-662-3	123-92-2	isopentyl acetate	270	50	540	100	
59	215-137-3	1305-62-0	calcium hydroxide	5				
60			tin, inorganic units	2				
61	203-313-2	105-60-2	ε-caprolactam (dust and steam)	10		40		
62	215-293-2	1319-77-3	cresol (all isomers)	22	5			
63	215-535-7	1330-20-7	xylene, mixed isomers, clear	221	50	442	100	
64	203-576-3	108-38-3	m-xylene	221	50	442	100	
65	202-422-2	95-47-6	o-xylene	221	50	442	100	
66	203-396-5	106-42-3	p-ксилен	221	50	442	100	
67	202-704-5	98-82-8	cumene	100	20	250	50	
68	231-484-3	7580-67-8	lithiumhydride	0.025				
69	200-659-6	67-56-1	methanol	260	200			
70	208-394-8	526-73-8	1,2,3-trimethylbenzene	100	20			
71		96-33-3	methyl acrylate	18	5	36	10	
72		80-62-6	methyl-methacrylate	200	50		100	
73		624-83-9	methyl isocyanate				0.02	
74	210-946-8	626-38-0	1-methyl butyle acetate	270	50	540	100	
75	203-737-8	110-12-3	5-methylhexane-2-on; isoamyle-methyl-ketone	95	20			
76	208-793-7	541-85-5	5-methylheptane-3-on	53	10	107	20	
77	203-550-1	108-10-1	4-methylpentane-2-on; isobutyle-methyl-ketone	83	20	208	50	
78		872-50-4	N-methyl-2-pyrolidine	40	10	80	20	
79	203-906-6	111-77-3	2-(2-methoxyethoxy)ethanole; Diethylenglycolmonomethylether	50.1	10			
80		109-86-4	2-metoxy ethanol	3	1			
81	203-603-9	108-65-6	2-metoxy-1-methylethyl acetat	275	50	550	100	
82		110-49-6	2-metoxy-ethyl acetat	5	1			
83	252-104-2	34590-94-8	(2-methoxy-methylethoxy)- propanol	308	50			
84	203-539-1	107-98-2	1-methoxy-propanol-2	375	100	568	150	
85	203-604-4	108-67-8	mesytilene (trimethylbenzene)	100	20			
86	200-579-1	64-18-6	formic acid	9	5			
87	203-815-1	110-91-8	morpholine	36	10	72	20	
88	202-049-5	91-20-3	naphthalene	50	10			3

89	247-852-1	26628-22-8	natrium-azide	0.1		0.3		
90	207-343-7	463-82-1	neopentane: 2,2-dimethylpropan	3 000	1 000			
91	200-193-3	54-11-5	nicotine (HCO)	0.5				
92	202-716-0	98-95-3	nitrobenzene	1	0.2			3
93	205-634-3	144-62-7	oxalic acid	1				
94		123-91-1	1.4-dioxane	73	20			
95			lead and his inorganic compounds	0.15				
96	203-692-4	109-66-0	pentane	3 000	1 000			
97	211-047-3	628-63-7	pentyl acetate	270	50	540	100	
98		620-11-1	3-penty acetate	270	50	540	100	
99	201-865-9	88-89-1	picric acid; 2,4,6-trintirophenole	0.1				
100	203-808-3	110-85-0	piperazine	0.1		0.3		
101	231-116-1	7440-06-4	platinum, metallic	1				
102	232-319-8	8003-34-7	piretrum (cleaned from sensitive lactons)	1				
103	203-809-9	110-86-1	pyridine	15	5			
104			hard wood dust	5				1
105	201-176-3	79-09-4	propionic acid	31	10	62	20	
106	203-585-2	108-46-3	resorcinol	45	10	92	20	
107	200-580-7	64-19-7	acetic acid	25	10			
108		7664-93-9	sulfuric acid (stem)	0.05				
109	231-131-3	7440-22-4	silver, metallic	0.1				
110			silver (soluble compounds like silver)	0.01				
111	222-995-2	3689-24-5	sulfotep (ISO)	0.1				
112	203-726-8	109-99-9	tetrahydrofuran	150	50	300	100	
113	203-625-9	108-88-3	toluene	192	50	384	100	
114	204-469-4	121-44-8	triethylamine	8.4	2	12.6	3	
115	204-428-0	120-82-1	1,2,4-trichlorobenzene	15.1	2	37.8	5	
116	200-756-3	71-55-6	1,1,1-trichloroethane; methyl-chloroform	555	100	1 110	200	
117	202-436-9	95-63-6	1,2,4-trimethylbenzene	100	20			
118	204-696-9	124-38-9	carbon dioxide	9 000	5 000			
119		75-15-0	carbon disulfide	15	5			
120		108-05-4	vinyl acetate	17.6	5	35.2	10	
121	200-831-0	75-01-4	vinyl chloride monomer; chloroethylene	7.77	3			1

122	233-113-0	10035-10-6	hydrogen bromide, bromidehydrogen			6.7	2	
123	231-634-8	7664-39-3	hydrogen fluoride, fluoridehydrogen	1.5	1.8	2.5	3	
124	231-595-7	7647-01-0	hydrogen chloride	8	5	15	10	
125		7783-06-4	hydrogen sulfide	7	5	14	10	
126	231-978-9	7783-07-5	hydrogen selenide	0.07	0.02	0.17	0.05	
127		7439-97-6	mercury and twovalent inorganic mercury compounds (measured as mercury)	0.02				
		21908-53-2	mercury oxide (measured as mercury)	0.02				
		7487-94-7	mercury chloride	0.02				

ANNEX II

**BINDING BIOLOGICAL LIMIT VALUES AND HEALTH SURVEILLANCE
MEASURES**

Hazardous chemical agent	Significant indicator	Biological specimen	Time of specimen	Biological limit value
lead (elementary and inorganic compounds)	lead	blood	insignificant	70µg Pb/100ml blood**
		urine	one urine specimen collected during 24 hours	43,68 µmol/mol creatinine* (80 µg/g creatinine*)

дехидратаза δ-аминолевулинске киселине	blood	insignificant	15 U/LE
protoporphyrin in eritrocits	urine	after exposure during 2-3 months (protect specimen from light exposure)	2,67 μmol/LE (1,50 mg/LE)
proportion between tiocianate in urine (mg/g creatinine) and carboxyhemoglobin in blood (%)	urine and blood	urine and blood collected at the end of the workshift	< 3

* For all results indicated on creatinine, concentrations of creatinine < 0.5g/L и >3,0g/L can not be considered.

** Health surveillance shall be performed when the limit value of lead in the workers blood is > 40 μg/100ml of blood.

EU – limit value according to the EU-Directive

ANNEX III

LIST OF CHEMICAL AGENTS AND/OR ACTIVITIES WHICH PRODUCTION, MANUFACTURE OR USE AT WORK IS PROHIBITED

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.

The terms in Annex 3 have the following meaning:

EINECS No: Identification number from European Inventory of Existing Commercial Chemical Substances.

CAS No. : Identification number - Chemical Abstracts Service.

a) Chemical Agents

b) Work activities

None.

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