



SAFETY DATA SHEET

Version #: 1,0 Issue date: 11-March-2022 Revision date: 11-March-2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture EMV 35

Registration number -

Synonyms None.

Product code BDS001663AE

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Conduction electric/thermal

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Company name CRC Industries Europe bv

Address Touwslagerstraat 1
9240 Zele
Belgium

Telephone +32(0)52/45.60.11

Fax +32(0)52/45.00.34

E-mail hse@crcind.com

Website www.crcind.com

1.4. Emergency telephone number Tel.: +32(0)52/45.60.11 (office hours: 9-17h CET)

General in EU 112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Austria National Poisons Information Centre +431 406 4343 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Belgium National Poisons Control Center 070 245 245 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Bulgaria National Toxicological Information Centre +359 2 9154233 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Czech Republic National Poisons Information Centre +420 224 919 293, or +420 224 915 402 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)

Denmark National Poisons Control Center +45 82 12 12 12 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Estonia National Poisons Information Centre 16662 or abroad: (+372) 626 9390 (Monday 9:00AM to Saturday 9:00AM (closed on Sundays and on national holidays). SDS/Product information may not be available for the Emergency Service.)

Finland National Poison Information Center (09) 471 977 (direct) or (09) 4711 (exchange) (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

France National Poisons Control Center ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Hungary National Emergency Phone Number 36 80 20 11 99 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Lithuania Neatidėliotina informacija apsinuodijus +370 5 236 20 52 or +37068753378 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)

Malta Accident and Emergency Department 2545 4030 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)

Netherlands National Poisons Information Center (NVIC) 030-274 88 88 (Only for the purpose of informing medical personnel in cases of acute intoxications)

Norway Norwegian Poison Information Center	22 59 13 00 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Portugal Poison Centre	800 250 250 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Romania Număr de telefon care poate fi apelat în caz de urgență:	021 5992300, int. 291 Spitalul Clinic de Urgență București: spital@urgentafloreasca.ro
Romania	0265 212111, 0265 211292, 0265 217235 Spitalul Clinic Județean de Urgență Târgu Mureș: secretariat@spitjudms.ro
Slovakia National Toxicological Information Centre	+421 2 5477 4166 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Sweden National Poison Information Center	112 - and ask for Poison Information (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Switzerland Tox Info Suisse	145 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Aerosols	Category 1	H222 - Extremely flammable aerosol. H229 - Pressurized container: May burst if heated.
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Health hazards

Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.

Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1	H400 - Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term aquatic hazard	Category 2	H411 - Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: 1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER, butanone; ethyl methyl ketone, n-Butyl acetate, Propyl acetate

Hazard pictograms



Signal word

Danger

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurized container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing vapours.
P271	Use only outdoors or in a well-ventilated area.

Response	Not assigned.
Storage	
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental label information	EUH066 - Repeated exposure may cause skin dryness or cracking.
2.3. Other hazards	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Dimethyl ether	25 - 50	115-10-6 204-065-8	01-2119472128-37	603-019-00-8	#
Classification: Flam. Gas 1A;H220, Press. Gas;H280					
copper	<25	7440-50-8 231-159-6	01-2119480154-42	029-024-00-X	
Classification: Aquatic Acute 1;H400, Aquatic Chronic 2;H411					
n-Butyl acetate	<20	123-86-4 204-658-1	01-2119485493-29	607-025-00-1	#
Classification: Flam. Liq. 3;H226, STOT SE 3;H336					
Propyl acetate	<20	109-60-4 203-686-1	01-2119484620-39	607-024-00-6	
Classification: Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336					
1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER	5 - 10	107-98-2 203-539-1	01-2119457435-35	603-064-00-3	#
Classification: Flam. Liq. 3;H226, STOT SE 3;H336					
butanone; ethyl methyl ketone	1 - 5	78-93-3 201-159-0	01-2119457290-43	606-002-00-3	#
Classification: Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336					
isopentyl acetate	<2,5	123-92-2 204-662-3	01-2119548408-32	607-130-00-2	#
Classification: Flam. Liq. 3;H226					
1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro-	<1	95-38-5 202-414-9	01-2119777867-13	-	
Classification: Acute Tox. 4;H302;(ATE: 1265 mg/kg), Skin Corr. 1C;H314, Eye Dam. 1;H318, Aquatic Acute 1;H400(M=10), Aquatic Chronic 1;H410(M=1)					

List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison centre or doctor/physician if you feel unwell.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	In the unlikely event of swallowing contact a physician or poison control centre. Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
4.3. Indication of any immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards	Extremely flammable aerosol.
5.1. Extinguishing media	
Suitable extinguishing media	Alcohol resistant foam. Dry powder. Dry sand. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	Contents under pressure. Pressurised container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Special fire fighting procedures	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapour pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Use water spray to cool unopened containers. In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Wear appropriate protective equipment and clothing during clean-up. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
For emergency responders	Keep unnecessary personnel away. Avoid breathing gas. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. The product is immiscible with water and will sediment in water systems. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Pressurised container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing gas. Avoid contact with eyes. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS). Storage class (TRGS 510): 2B (Aerosol dispensers and lighters)
7.3. Specific end use(s)	Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	Ceiling	187 mg/m3	
		50 ppm	
	MAK	187 mg/m3	
butanone; ethyl methyl ketone (CAS 78-93-3)		50 ppm	
	MAK	295 mg/m3	
		100 ppm	
copper (CAS 7440-50-8)	STEL	590 mg/m3	
		200 ppm	
	MAK	1 mg/m3	Inhalable fraction.
		0,1 mg/m3	Fume and respirable dust.
	STEL	4 mg/m3	Inhalable fraction.
		0,4 mg/m3	Fume and respirable dust.
Dimethyl ether (CAS 115-10-6)	Ceiling	3820 mg/m3	
		2000 ppm	
	MAK	1910 mg/m3	
isopentyl acetate (CAS 123-92-2)		1000 ppm	
	MAK	270 mg/m3	
		50 ppm	
n-Butyl acetate (CAS 123-86-4)	STEL	540 mg/m3	
		100 ppm	
	Ceiling	480 mg/m3	
		100 ppm	
	MAK	241 mg/m3	
		100 ppm	
Propyl acetate (CAS 109-60-4)	Ceiling	420 mg/m3	
		100 ppm	
	MAK	420 mg/m3	
		100 ppm	

Belgium. Exposure Limit Values

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	369 mg/m3	
		100 ppm	
	TWA	184 mg/m3	
butanone; ethyl methyl ketone (CAS 78-93-3)		50 ppm	
	STEL	900 mg/m3	
		300 ppm	
copper (CAS 7440-50-8)	TWA	600 mg/m3	
		200 ppm	
		1 mg/m3	Dust and mist.

**Belgium. Exposure Limit Values
Components**

Type	Value	Form
	0,2 mg/m3	Fume.
Dimethyl ether (CAS 115-10-6)	1920 mg/m3	
	1000 ppm	
isopentyl acetate (CAS 123-92-2)	540 mg/m3	
	100 ppm	
	270 mg/m3	
	50 ppm	
n-Butyl acetate (CAS 123-86-4)	712 mg/m3	
	150 ppm	
	238 mg/m3	
	50 ppm	
Propyl acetate (CAS 109-60-4)	1055 mg/m3	
	250 ppm	
	847 mg/m3	
	200 ppm	

**Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work
Components**

Type	Value
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	568 mg/m3
	150 ppm
	375 mg/m3
	100 ppm
butanone; ethyl methyl ketone (CAS 78-93-3)	885 mg/m3
	590 mg/m3
copper (CAS 7440-50-8)	0,1 mg/m3
Dimethyl ether (CAS 115-10-6)	1920 mg/m3
	1000 ppm
isopentyl acetate (CAS 123-92-2)	540 mg/m3
	100 ppm
	270 mg/m3
	50 ppm
n-Butyl acetate (CAS 123-86-4)	950 mg/m3
	710 mg/m3

**Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09
Components**

Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	375 mg/m3	
	100 ppm	
	568 mg/m3	
	150 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	600 mg/m3	
	200 ppm	

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09 Components

Type	Value	Form
STEL	900 mg/m3 300 ppm	
copper (CAS 7440-50-8)	MAC 1 mg/m3	
	0,2 mg/m3	Dust.
Dimethyl ether (CAS 115-10-6)	STEL 2 mg/m3 MAC 1920 mg/m3	
isopentyl acetate (CAS 123-92-2)	MAC 1000 ppm 270 mg/m3	
	50 ppm	
	STEL 540 mg/m3	
n-Butyl acetate (CAS 123-86-4)	100 ppm MAC 241 mg/m3	
	50 ppm	
	STEL 723 mg/m3	
Propyl acetate (CAS 109-60-4)	150 ppm MAC 849 mg/m3	
	200 ppm	
	STEL 1060 mg/m3 250 ppm	

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended. Components

Type	Value	Form
copper (CAS 7440-50-8)	TWA 0,2 mg/m3	Fume.
n-Butyl acetate (CAS 123-86-4)	TWA 710 mg/m3	
	150 ppm	
Propyl acetate (CAS 109-60-4)	TWA 840 mg/m3	
	200 ppm	

Czech Republic. OELs. Government Decree 361 Components

Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	Ceiling 550 mg/m3	
	TWA 270 mg/m3	
butanone; ethyl methyl ketone (CAS 78-93-3)	Ceiling 900 mg/m3	
	TWA 600 mg/m3	
copper (CAS 7440-50-8)	Ceiling 2 mg/m3 0,2 mg/m3	Aerosol, inhalable. Respirable aerosol fraction
	TWA 1 mg/m3 0,1 mg/m3	Aerosol, inhalable. Respirable aerosol fraction
Dimethyl ether (CAS 115-10-6)	Ceiling 2000 mg/m3	
	TWA 1000 mg/m3	
isopentyl acetate (CAS 123-92-2)	Ceiling 540 mg/m3	
	TWA 270 mg/m3	

Czech Republic. OELs. Government Decree 361

Components	Type	Value	Form
n-Butyl acetate (CAS 123-86-4)	Ceiling	1200 mg/m3	
	TWA	950 mg/m3	
Propyl acetate (CAS 109-60-4)	Ceiling	1000 mg/m3	
	TWA	800 mg/m3	

Denmark. Exposure Limit Values

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	TLV	185 mg/m3	
		50 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	TLV	145 mg/m3	
		50 ppm	
copper (CAS 7440-50-8)	TLV	1 mg/m3	Dust.
		0,1 mg/m3	Fume.
Dimethyl ether (CAS 115-10-6)	TLV	1920 mg/m3	
		1000 ppm	
isopentyl acetate (CAS 123-92-2)	TLV	271 mg/m3	
		50 ppm	
n-Butyl acetate (CAS 123-86-4)	TLV	710 mg/m3	
		150 ppm	
Propyl acetate (CAS 109-60-4)	TLV	625 mg/m3	
		150 ppm	

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3	
		150 ppm	
	TWA	375 mg/m3	
		100 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	600 mg/m3	
		200 ppm	
copper (CAS 7440-50-8)	TWA	1 mg/m3	Total dust.
		0,2 mg/m3	Fine dust.
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3	
		1000 ppm	
isopentyl acetate (CAS 123-92-2)	STEL	540 mg/m3	
		100 ppm	
	TWA	270 mg/m3	
		50 ppm	
n-Butyl acetate (CAS 123-86-4)	STEL	700 mg/m3	

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Components	Type	Value	Form
	TWA	150 ppm 500 mg/m3 100 ppm	

Finland. Workplace Exposure Limits

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	560 mg/m3	
	TWA	150 ppm 370 mg/m3 100 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	300 mg/m3	
	TWA	100 ppm 60 mg/m3 20 ppm	
copper (CAS 7440-50-8)	TWA	0,02 mg/m3	Respirable dust and/or fume.
		0,02 mg/m3	Respirable.
Dimethyl ether (CAS 115-10-6)	TWA	2000 mg/m3	
		1000 ppm	
isopentyl acetate (CAS 123-92-2)	STEL	540 mg/m3	
	TWA	100 ppm 270 mg/m3 50 ppm	
n-Butyl acetate (CAS 123-86-4)	STEL	725 mg/m3	
	TWA	150 ppm 240 mg/m3 50 ppm	
Propyl acetate (CAS 109-60-4)	STEL	850 mg/m3	
	TWA	200 ppm 420 mg/m3 100 ppm	

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	VLE	375 mg/m3	
Regulatory status:	Regulatory binding (VRC)		
		100 ppm	
Regulatory status:	Regulatory binding (VRC)		
	VME	188 mg/m3	
Regulatory status:	Regulatory binding (VRC)		
		50 ppm	
Regulatory status:	Regulatory binding (VRC)		
butanone; ethyl methyl ketone (CAS 78-93-3)	VLE	900 mg/m3	
Regulatory status:	Regulatory binding (VRC)		

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value	Form
		300 ppm	
Regulatory status:	Regulatory binding (VRC)		
	VME	600 mg/m3	
Regulatory status:	Regulatory binding (VRC)		
		200 ppm	
Regulatory status:	Regulatory binding (VRC)		
copper (CAS 7440-50-8)	VLE	2 mg/m3	Dust.
Regulatory status:	Indicative limit (VL)		
	VME	1 mg/m3	Dust.
Regulatory status:	Indicative limit (VL)		
		0,2 mg/m3	Fume.
Regulatory status:	Indicative limit (VL)		
Dimethyl ether (CAS 115-10-6)	VME	1920 mg/m3	
Regulatory status:	Regulatory indicative (VRI)		
		1000 ppm	
Regulatory status:	Regulatory indicative (VRI)		
isopentyl acetate (CAS 123-92-2)	VLE	540 mg/m3	
Regulatory status:	Regulatory binding (VRC)		
		100 ppm	
Regulatory status:	Regulatory binding (VRC)		
	VME	270 mg/m3	
Regulatory status:	Regulatory binding (VRC)		
		50 ppm	
Regulatory status:	Regulatory binding (VRC)		
n-Butyl acetate (CAS 123-86-4)	VLE	940 mg/m3	
Regulatory status:	Indicative limit (VL)		
		200 ppm	
Regulatory status:	Indicative limit (VL)		
	VME	710 mg/m3	
Regulatory status:	Indicative limit (VL)		
		150 ppm	
Regulatory status:	Indicative limit (VL)		
Propyl acetate (CAS 109-60-4)	VME	840 mg/m3	
Regulatory status:	Indicative limit (VL)		
		200 ppm	
Regulatory status:	Indicative limit (VL)		

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	TWA	370 mg/m3	
		100 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	TWA	600 mg/m3	
		200 ppm	
copper (CAS 7440-50-8)	TWA	0,01 mg/m3	Respirable fraction.
Dimethyl ether (CAS 115-10-6)	TWA	1900 mg/m3	
		1000 ppm	

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
isopentyl acetate (CAS 123-92-2)	TWA	270 mg/m3	
		50 ppm	
n-Butyl acetate (CAS 123-86-4)	TWA	480 mg/m3	
		100 ppm	
Propyl acetate (CAS 109-60-4)	TWA	420 mg/m3	
		100 ppm	

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	AGW	370 mg/m3	
		100 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	AGW	600 mg/m3	
		200 ppm	
Dimethyl ether (CAS 115-10-6)	AGW	1900 mg/m3	
		1000 ppm	
isopentyl acetate (CAS 123-92-2)	AGW	270 mg/m3	
		50 ppm	
n-Butyl acetate (CAS 123-86-4)	AGW	300 mg/m3	
		62 ppm	

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	1080 mg/m3	
		300 ppm	
	TWA	360 mg/m3	
		100 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	600 mg/m3	
		200 ppm	
copper (CAS 7440-50-8)	STEL	2 mg/m3	Dust.
	TWA	1 mg/m3	Dust.
		0,2 mg/m3	Fume.
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3	
		1000 ppm	
isopentyl acetate (CAS 123-92-2)	STEL	800 mg/m3	
		150 ppm	
	TWA	530 mg/m3	
		100 ppm	
n-Butyl acetate (CAS 123-86-4)	STEL	950 mg/m3	

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value	Form
Propyl acetate (CAS 109-60-4)	TWA	200 ppm	
		710 mg/m3	
		150 ppm	
	STEL	1050 mg/m3	
		250 ppm	
		840 mg/m3	
	TWA	200 ppm	

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3	
	TWA	375 mg/m3	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3	
	TWA	600 mg/m3	
copper (CAS 7440-50-8)	STEL	0,2 mg/m3	
	TWA	0,1 mg/m3	
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3	
isopentyl acetate (CAS 123-92-2)	STEL	540 mg/m3	
	TWA	270 mg/m3	
n-Butyl acetate (CAS 123-86-4)	STEL	723 mg/m3	
	TWA	241 mg/m3	
Propyl acetate (CAS 109-60-4)	STEL	840 mg/m3	
	TWA	420 mg/m3	

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3	
	TWA	150 ppm 185 mg/m3	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	50 ppm 900 mg/m3	
	TWA	300 ppm 145 mg/m3	
copper (CAS 7440-50-8)	TWA	50 ppm 1 mg/m3	Total dust. Respirable dust.
		0,1 mg/m3	
Dimethyl ether (CAS 115-10-6)	TWA	1885 mg/m3	
isopentyl acetate (CAS 123-92-2)	STEL	1000 ppm	
		540 mg/m3	
		100 ppm	
	TWA	266 mg/m3 50 ppm	

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value	Form
n-Butyl acetate (CAS 123-86-4)	TWA	700 mg/m3	
		150 ppm	
Propyl acetate (CAS 109-60-4)	TWA	625 mg/m3	
		150 ppm	

Ireland. Occupational Exposure Limits

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3	
		150 ppm	
	TWA	375 mg/m3	
		100 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	600 mg/m3	
		200 ppm	
copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0,2 mg/m3	Fume.
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3	
		1000 ppm	
isopentyl acetate (CAS 123-92-2)	STEL	520 mg/m3	
		100 ppm	
	TWA	260 mg/m3	
		50 ppm	
n-Butyl acetate (CAS 123-86-4)	STEL	950 mg/m3	
		200 ppm	
	TWA	710 mg/m3	
		150 ppm	
Propyl acetate (CAS 109-60-4)	STEL	150 ppm	
	TWA	100 ppm	

Italy. Occupational Exposure Limits

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3	
		150 ppm	
	TWA	375 mg/m3	
		100 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	600 mg/m3	
		200 ppm	
copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0,2 mg/m3	Fume.

Italy. Occupational Exposure Limits Components

Components	Type	Value	Form
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3	
		1000 ppm	
isopentyl acetate (CAS 123-92-2)	STEL	540 mg/m3	
		100 ppm	
	TWA	270 mg/m3	
		50 ppm	
n-Butyl acetate (CAS 123-86-4)	STEL	723 mg/m3	
		150 ppm	
	TWA	241 mg/m3	
		50 ppm	
Propyl acetate (CAS 109-60-4)	STEL	150 ppm	
	TWA	100 ppm	

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment Components

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3	
		150 ppm	
	TWA	375 mg/m3	
		100 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	200 mg/m3	
		67 ppm	
copper (CAS 7440-50-8)	STEL	1 mg/m3	
	TWA	0,5 mg/m3	
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3	
		1000 ppm	
isopentyl acetate (CAS 123-92-2)	STEL	540 mg/m3	
		100 ppm	
	TWA	270 mg/m3	
		50 ppm	
n-Butyl acetate (CAS 123-86-4)	STEL	723 mg/m3	
		150 ppm	
	TWA	241 mg/m3	
		50 ppm	
Propyl acetate (CAS 109-60-4)	TWA	200 mg/m3	

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements Components

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	300 mg/m3	
		75 ppm	
	TWA	190 mg/m3	

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Components	Type	Value	Form
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	50 ppm 900 mg/m3	Inhalable fraction. Respirable fraction.
	TWA	300 ppm 600 mg/m3	
copper (CAS 7440-50-8)	TWA	200 ppm 1 mg/m3	
		0,2 mg/m3	
Dimethyl ether (CAS 115-10-6)	STEL	2280 mg/m3	
	TWA	1500 ppm 1920 mg/m3	
isopentyl acetate (CAS 123-92-2)	STEL	1000 ppm 540 mg/m3	
	TWA	100 ppm 270 mg/m3	
Propyl acetate (CAS 109-60-4)	STEL	50 ppm 800 mg/m3	
	TWA	200 ppm 420 mg/m3 100 ppm	

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Components	Type	Value
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	150 ppm 900 mg/m3
		300 ppm
isopentyl acetate (CAS 123-92-2)	STEL	540 mg/m3
		100 ppm
n-Butyl acetate (CAS 123-86-4)	STEL	723 mg/m3
		150 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Components	Type	Value
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3
	TWA	150 ppm 375 mg/m3 100 ppm
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3
	TWA	300 ppm 600 mg/m3 200 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Components	Type	Value
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3
		1000 ppm
isopentyl acetate (CAS 123-92-2)	STEL	540 mg/m3
		100 ppm
	TWA	270 mg/m3
		50 ppm

Netherlands. OELs (binding)

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	563 mg/m3	
	TWA	375 mg/m3	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3	
	TWA	590 mg/m3	
copper (CAS 7440-50-8)	TWA	0,1 mg/m3	Inhalable fraction.
Dimethyl ether (CAS 115-10-6)	STEL	1500 mg/m3	
	TWA	950 mg/m3	
isopentyl acetate (CAS 123-92-2)	STEL	530 mg/m3	

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	TLV	180 mg/m3	
		50 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	TLV	220 mg/m3	
		75 ppm	
copper (CAS 7440-50-8)	TLV	1 mg/m3	Dust.
		0,1 mg/m3	Fume.
Dimethyl ether (CAS 115-10-6)	TLV	384 mg/m3	
		200 ppm	
isopentyl acetate (CAS 123-92-2)	TLV	260 mg/m3	
		50 ppm	
n-Butyl acetate (CAS 123-86-4)	TLV	355 mg/m3	
		75 ppm	
Propyl acetate (CAS 109-60-4)	TLV	420 mg/m3	
		100 ppm	

Poland. Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817

Components	Type	Value
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	360 mg/m3
		0 ppm

Poland. Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817

Components	Type	Value
butanone; ethyl methyl ketone (CAS 78-93-3)	TWA	180 mg/m3
		0 ppm
	STEL	900 mg/m3
		0 ppm
	TWA	450 mg/m3
		0 ppm
copper (CAS 7440-50-8)	TWA	0,2 mg/m3
		0 ppm
Dimethyl ether (CAS 115-10-6)	TWA	1000 mg/m3
		0 ppm
isopentyl acetate (CAS 123-92-2)	STEL	500 mg/m3
		0 ppm
	TWA	250 mg/m3
		0 ppm
n-Butyl acetate (CAS 123-86-4)	STEL	720 mg/m3
		0 ppm
	TWA	240 mg/m3
		0 ppm
Propyl acetate (CAS 109-60-4)	STEL	400 mg/m3
		0 ppm
	TWA	200 mg/m3
		0 ppm

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

Components	Type	Value
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3
		150 ppm
	TWA	375 mg/m3
		100 ppm
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3
		300 ppm
	TWA	600 mg/m3
		200 ppm
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3
		1000 ppm
isopentyl acetate (CAS 123-92-2)	STEL	540 mg/m3
		100 ppm
	TWA	270 mg/m3
		50 ppm
n-Butyl acetate (CAS 123-86-4)	STEL	723 mg/m3
		150 ppm
	TWA	241 mg/m3

Components

Type

Value

50 ppm

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components

Type

Value

Form

1-METHOXY-2-PROPANOL
; MONOPROPYLENE
GLYCOL METHYL ETHER
(CAS 107-98-2)

STEL

100 ppm

TWA

50 ppm

butanone; ethyl methyl
ketone (CAS 78-93-3)

STEL

300 ppm

TWA

200 ppm

copper (CAS 7440-50-8)

TWA

1 mg/m3

Dust and mist.

0,2 mg/m3

Fume.

isopentyl acetate (CAS
123-92-2)

STEL

100 ppm

TWA

50 ppm

n-Butyl acetate (CAS
123-86-4)

STEL

200 ppm

TWA

150 ppm

Propyl acetate (CAS
109-60-4)

STEL

250 ppm

TWA

200 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components

Type

Value

Form

1-METHOXY-2-PROPANOL
; MONOPROPYLENE
GLYCOL METHYL ETHER
(CAS 107-98-2)

STEL

568 mg/m3

TWA

150 ppm

375 mg/m3

100 ppm

butanone; ethyl methyl
ketone (CAS 78-93-3)

STEL

900 mg/m3

TWA

300 ppm

600 mg/m3

200 ppm

copper (CAS 7440-50-8)

STEL

1,5 mg/m3

Dust.

0,2 mg/m3

Fume.

TWA

0,5 mg/m3

Dust.

Dimethyl ether (CAS
115-10-6)

TWA

1920 mg/m3

STEL

1000 ppm

540 mg/m3

TWA

100 ppm

270 mg/m3

n-Butyl acetate (CAS
123-86-4)

STEL

50 ppm

950 mg/m3

TWA

200 ppm

715 mg/m3

150 ppm

Propyl acetate (CAS
109-60-4)

STEL

600 mg/m3

144 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value	Form
	TWA	400 mg/m3 96 ppm	

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3	
		150 ppm	
	TWA	375 mg/m3 100 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	600 mg/m3 200 ppm	
copper (CAS 7440-50-8)	TWA	1 mg/m3	Inhalable fraction.
		0,2 mg/m3	Respirable fume.
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3	
		1000 ppm	
isopentyl acetate (CAS 123-92-2)	STEL	540 mg/m3	
		100 ppm	
	TWA	270 mg/m3 50 ppm	
n-Butyl acetate (CAS 123-86-4)	STEL	723 mg/m3	
		150 ppm	
	TWA	241 mg/m3 50 ppm	
Propyl acetate (CAS 109-60-4)	STEL	800 mg/m3	
		200 ppm	
	TWA	400 mg/m3 100 ppm	

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working
(Official Gazette of the Republic of Slovenia)**

Components	Type	Value
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	TWA	375 mg/m3
		100 ppm
butanone; ethyl methyl ketone (CAS 78-93-3)	TWA	600 mg/m3
		200 ppm
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3
		1000 ppm
isopentyl acetate (CAS 123-92-2)	TWA	270 mg/m3
		50 ppm
n-Butyl acetate (CAS 123-86-4)	TWA	300 mg/m3

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working
(Official Gazette of the Republic of Slovenia)**

Components	Type	Value	
		62 ppm	
Spain. Occupational Exposure Limits			
Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	568 mg/m3	
		150 ppm	
	TWA	375 mg/m3	
		100 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	600 mg/m3	
		200 ppm	
copper (CAS 7440-50-8)	TWA	0,1 mg/m3	Respirable fraction.
Dimethyl ether (CAS 115-10-6)	TWA	1920 mg/m3	
		1000 ppm	
isopentyl acetate (CAS 123-92-2)	STEL	540 mg/m3	
		100 ppm	
	TWA	270 mg/m3	
		50 ppm	
n-Butyl acetate (CAS 123-86-4)	STEL	965 mg/m3	
		200 ppm	
	TWA	724 mg/m3	
		150 ppm	
Propyl acetate (CAS 109-60-4)	STEL	1060 mg/m3	
		250 ppm	
	TWA	849 mg/m3	
		200 ppm	

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	Ceiling	568 mg/m3	
		150 ppm	
	STEL	300 mg/m3	
		75 ppm	
	TWA	190 mg/m3	
		50 ppm	
butanone; ethyl methyl ketone (CAS 78-93-3)	Ceiling	900 mg/m3	
		300 ppm	
	TWA	150 mg/m3	
		50 ppm	
copper (CAS 7440-50-8)	TWA	0,01 mg/m3	Respirable dust.
Dimethyl ether (CAS 115-10-6)	STEL	1500 mg/m3	

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Components	Type	Value	Form
isopentyl acetate (CAS 123-92-2)	TWA	800 ppm	
		950 mg/m3	
	Ceiling	500 ppm	
		540 mg/m3	
n-Butyl acetate (CAS 123-86-4)	TWA	100 ppm	
		270 mg/m3	
	Ceiling	50 ppm	
		723 mg/m3	
Propyl acetate (CAS 109-60-4)	STEL	150 ppm	
		700 mg/m3	
	TWA	150 ppm	
		500 mg/m3	
	STEL	100 ppm	
		800 mg/m3	
	TWA	200 ppm	
		400 mg/m3	
		100 ppm	

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value	Form
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	STEL	720 mg/m3	
butanone; ethyl methyl ketone (CAS 78-93-3)	TWA	200 ppm	
		360 mg/m3	
	STEL	100 ppm	
copper (CAS 7440-50-8)	TWA	590 mg/m3	
		200 ppm	
	STEL	590 mg/m3	
Dimethyl ether (CAS 115-10-6)	TWA	200 ppm	
		0,2 mg/m3	Inhalable fraction.
isopentyl acetate (CAS 123-92-2)	TWA	0,1 mg/m3	Inhalable fraction.
		1910 mg/m3	
	STEL	1000 ppm	
n-Butyl acetate (CAS 123-86-4)	TWA	260 mg/m3	
		1000 ppm	
	STEL	50 ppm	
Propyl acetate (CAS 109-60-4)	TWA	260 mg/m3	
		50 ppm	
	STEL	720 mg/m3	
	TWA	150 ppm	
		240 mg/m3	
	STEL	50 ppm	
	TWA	840 mg/m3	
		200 ppm	
	TWA	420 mg/m3	

Switzerland. SUVA Grenzwerte am Arbeitsplatz
Components **Type**

Value **Form**

100 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components **Type**

Value **Form**

1-METHOXY-2-PROPANOL
; MONOPROPYLENE
GLYCOL METHYL ETHER
(CAS 107-98-2)

STEL

560 mg/m3

TWA

150 ppm

375 mg/m3

butanone; ethyl methyl
ketone (CAS 78-93-3)

STEL

100 ppm

899 mg/m3

TWA

300 ppm

600 mg/m3

copper (CAS 7440-50-8)

STEL

200 ppm

2 mg/m3

Inhalable dusts and mists.

TWA

1 mg/m3

Inhalable dusts and mists.

0,2 mg/m3

Fume.

Dimethyl ether (CAS
115-10-6)

STEL

958 mg/m3

TWA

500 ppm

766 mg/m3

isopentyl acetate (CAS
123-92-2)

STEL

400 ppm

541 mg/m3

TWA

100 ppm

270 mg/m3

n-Butyl acetate (CAS
123-86-4)

STEL

50 ppm

966 mg/m3

TWA

200 ppm

724 mg/m3

Propyl acetate (CAS
109-60-4)

STEL

150 ppm

1060 mg/m3

TWA

250 ppm

849 mg/m3

200 ppm

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU

Components **Type**

Value

1-METHOXY-2-PROPANOL
; MONOPROPYLENE
GLYCOL METHYL ETHER
(CAS 107-98-2)

STEL

568 mg/m3

TWA

150 ppm

375 mg/m3

100 ppm

butanone; ethyl methyl
ketone (CAS 78-93-3)

STEL

900 mg/m3

TWA

300 ppm

600 mg/m3

Dimethyl ether (CAS
115-10-6)

TWA

200 ppm

1920 mg/m3

Components	Type	Value
isopentyl acetate (CAS 123-92-2)	STEL	1000 ppm 540 mg/m3
	TWA	100 ppm 270 mg/m3
n-Butyl acetate (CAS 123-86-4)	STEL	50 ppm 723 mg/m3
	TWA	150 ppm 241 mg/m3 50 ppm

Biological limit values**Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)**

Components	Value	Determinant	Specimen	Sampling Time
butanone; ethyl methyl ketone (CAS 78-93-3)	2,6 mg/g	methyl ethyl ketone	Creatinine in urine	*
	4,08 mmol/mol	methyl ethyl ketone	Creatinine in urine	*

* - For sampling details, please see the source document.

France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)

Components	Value	Determinant	Specimen	Sampling Time
butanone; ethyl methyl ketone (CAS 78-93-3)	2 mg/l	Méthyléthylcétone	Urine	*

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling Time
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	15 mg/l	1-Methoxypropan-2-ol	Urine	*
butanone; ethyl methyl ketone (CAS 78-93-3)	2 mg/l	2-Butanon	Urine	*

* - For sampling details, please see the source document.

Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices

Components	Value	Determinant	Specimen	Sampling Time
butanone; ethyl methyl ketone (CAS 78-93-3)	2 µg/l	MEK	Urine	*
	28 µmol/l	MEK	Urine	*

* - For sampling details, please see the source document.

Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

Components	Value	Determinant	Specimen	Sampling Time
butanone; ethyl methyl ketone (CAS 78-93-3)	2 mg/l	Metiletilcetona	Urine	*

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Determinant	Specimen	Sampling Time
1-METHOXY-2-PROPANOL ; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	20 mg/l	1-METHOXYPROPANOL-2	Urine	*
butanone; ethyl methyl ketone (CAS 78-93-3)	2 mg/l	2-Butanon (MEK)	Urine	*

* - For sampling details, please see the source document.

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Components	Value	Determinant	Specimen	Sampling Time
butanone; ethyl methyl ketone (CAS 78-93-3)	70 umol/l	Butan-2-one	Urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs)
General Population

Components	Value	Assessment factor	Notes
1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)			
Long-term, Systemic, Dermal	78 mg/kg bw/day	16,8	Repeated dose toxicity
Long-term, Systemic, Inhalation	43,9 mg/m3		Repeated dose toxicity
Long-term, Systemic, Oral	33 mg/kg bw/day	28	Repeated dose toxicity
butanone; ethyl methyl ketone (CAS 78-93-3)			
Long-term, Systemic, Dermal	412 mg/kg bw/day	2	Repeated dose toxicity
Long-term, Systemic, Inhalation	106 mg/m3	2	Repeated dose toxicity
copper (CAS 7440-50-8)			
Short-term, Systemic, Dermal	273 mg/kg bw/day	50	Repeated dose toxicity
Dimethyl ether (CAS 115-10-6)			
Long-term, Systemic, Inhalation	471 mg/m3	25	Repeated dose toxicity
isopentyl acetate (CAS 123-92-2)			
Long-term, Systemic, Dermal	1,47 mg/kg bw/day	200	Repeated dose toxicity
Long-term, Systemic, Inhalation	5,1 mg/m3		Repeated dose toxicity
n-Butyl acetate (CAS 123-86-4)			
Long-term, Local, Inhalation	35,7 mg/m3	12	irritation respiratory tract
Short-term, Local, Inhalation	300 mg/m3		irritation respiratory tract
Short-term, Systemic, Dermal	6 mg/kg bw/day	100	Neurotoxicity
Propyl acetate (CAS 109-60-4)			
Long-term, Local, Inhalation	210 mg/m3	2	Skin irritation/corrosion
Short-term, Local, Inhalation	420 mg/m3	2	Skin irritation/corrosion

Workers

Components	Value	Assessment factor	Notes
1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro- (CAS 95-38-5)			
Short-term, Systemic, Dermal	2 mg/kg bw/day	10	Repeated dose toxicity
Short-term, Systemic, Inhalation	14 mg/m3	2,5	Repeated dose toxicity
1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)			
Long-term, Systemic, Dermal	183 mg/kg bw/day	10,08	Repeated dose toxicity
Long-term, Systemic, Inhalation	369 mg/m3		Repeated dose toxicity
Short-term, Local, Inhalation	553,5 mg/m3		Neurotoxicity
Short-term, Systemic, Inhalation	553,5 mg/m3		Neurotoxicity
butanone; ethyl methyl ketone (CAS 78-93-3)			
Long-term, Systemic, Dermal	1161 mg/kg bw/day	1	Repeated dose toxicity
Long-term, Systemic, Inhalation	600 mg/m3	1	Repeated dose toxicity
copper (CAS 7440-50-8)			
Short-term, Systemic, Dermal	273 mg/kg bw/day	50	Repeated dose toxicity
Dimethyl ether (CAS 115-10-6)			
Long-term, Systemic, Inhalation	1894 mg/m3	12,5	Repeated dose toxicity
isopentyl acetate (CAS 123-92-2)			
Long-term, Systemic, Dermal	2,95 mg/kg bw/day	100	Repeated dose toxicity
Long-term, Systemic, Inhalation	20,8 mg/m3	25	Repeated dose toxicity
n-Butyl acetate (CAS 123-86-4)			
Long-term, Local, Inhalation	300 mg/m3	6	irritation respiratory tract
Long-term, Systemic, Dermal	7 mg/kg bw/day	25	Repeated dose toxicity
Short-term, Systemic, Dermal	11 mg/kg bw/day	50	Neurotoxicity
Short-term, Systemic, Inhalation	600 mg/m3		irritation respiratory tract
Propyl acetate (CAS 109-60-4)			
Long-term, Local, Inhalation	420 mg/m3	1	Skin irritation/corrosion
Short-term, Local, Inhalation	840 mg/m3	1	Skin irritation/corrosion

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro- (CAS 95-38-5)			
Freshwater	0 mg/l	1000	
Sediment (freshwater)	0,376 mg/kg		
Soil	0,075 mg/kg		
STP	0,27 mg/l	100	
1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)			
Freshwater	10 mg/l	100	
Sediment (freshwater)	52,3 mg/kg		
Soil	4,59 mg/kg		
STP	100 mg/l	10	
butanone; ethyl methyl ketone (CAS 78-93-3)			
Freshwater	55,8 mg/l	1	Oral
Secondary poisoning	1000 mg/kg	30	
Sediment (freshwater)	284,74 mg/kg		
Soil	22,5 mg/kg	1	
copper (CAS 7440-50-8)			
Freshwater	7,8 µg/l	1	
Sediment (freshwater)	87 mg/kg	1	
Soil	65 mg/kg	1	
STP	230 µg/l	1	
Dimethyl ether (CAS 115-10-6)			
Freshwater	0,155 mg/l	1000	
Sediment (freshwater)	0,681 mg/kg		
Soil	0,045 mg/kg		
STP	160 mg/l	10	
isopentyl acetate (CAS 123-92-2)			
Freshwater	0,022 mg/l	1000	
STP	100 mg/l	1	
n-Butyl acetate (CAS 123-86-4)			
Freshwater	0,18 mg/l	100	
Sediment (freshwater)	0,981 mg/kg		
Soil	0,09 mg/kg		
Propyl acetate (CAS 109-60-4)			
Freshwater	0,06 mg/l	1000	
Sediment (freshwater)	0,16 mg/kg		
Soil	0,021 mg/kg		
STP	1 mg/l	10	

Exposure guidelines**Austria MAK: Skin designation**

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	Can be absorbed through the skin.
butanone; ethyl methyl ketone (CAS 78-93-3)	Can be absorbed through the skin.

Belgium OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	Can be absorbed through the skin.
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Bulgaria OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	Can be absorbed through the skin.
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Czech Republic PELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	Can be absorbed through the skin.
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Denmark GV: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	Can be absorbed through the skin.
butanone; ethyl methyl ketone (CAS 78-93-3)	Can be absorbed through the skin.

Estonia OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	Can be absorbed through the skin.
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EU Exposure Limit Values: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)	Can be absorbed through the skin.
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Finland Exposure Limit Values: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)
butanone; ethyl methyl ketone (CAS 78-93-3)

Can be absorbed through the skin.

Can be absorbed through the skin.

France INRS: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)
butanone; ethyl methyl ketone (CAS 78-93-3)

Can be absorbed through the skin.

Can be absorbed through the skin.

Germany DFG MAK (advisory): Skin designation

butanone; ethyl methyl ketone (CAS 78-93-3)

Can be absorbed through the skin.

Germany TRGS 900 Limit Values: Skin designation

butanone; ethyl methyl ketone (CAS 78-93-3)

Can be absorbed through the skin.

Greece OEL: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Can be absorbed through the skin.

Hungary OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)
butanone; ethyl methyl ketone (CAS 78-93-3)
Propyl acetate (CAS 109-60-4)

Can be absorbed through the skin.

Can be absorbed through the skin.

Can be absorbed through the skin.

Iceland OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)
butanone; ethyl methyl ketone (CAS 78-93-3)

Can be absorbed through the skin.

Can be absorbed through the skin.

Ireland Exposure Limit Values: Skin designation

butanone; ethyl methyl ketone (CAS 78-93-3)

Can be absorbed through the skin.

Italy OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Danger of cutaneous absorption

Latvia OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Can be absorbed through the skin.

Lithuania OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Can be absorbed through the skin.

Luxembourg OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Can be absorbed through the skin.

Malta OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Can be absorbed through the skin.

Netherlands OELs (binding): Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)
butanone; ethyl methyl ketone (CAS 78-93-3)

Can be absorbed through the skin.

Can be absorbed through the skin.

Norway Exposure Limit Values: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Can be absorbed through the skin.

Romania OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Can be absorbed through the skin.

Slovakia OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Can be absorbed through the skin.

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)
butanone; ethyl methyl ketone (CAS 78-93-3)

Can be absorbed through the skin.

Can be absorbed through the skin.

Spain OELs: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Can be absorbed through the skin.

Sweden Threshold Limit Values: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE
GLYCOL METHYL ETHER (CAS 107-98-2)

Can be absorbed through the skin.

Switzerland SUVA Limit Values at the Workplace: Skin designation

butanone; ethyl methyl ketone (CAS 78-93-3) Can be absorbed through the skin.

UK EH40 WEL: Skin designation

1-METHOXY-2-PROPANOL; MONOPROPYLENE Can be absorbed through the skin.

GLYCOL METHYL ETHER (CAS 107-98-2)
butanone; ethyl methyl ketone (CAS 78-93-3) Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

General information

Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

Wear safety glasses with side shields (or goggles). Use eye protection conforming to EN 166.

Skin protection

- Hand protection

When handling the product wear chemical-resistant gloves (standard EN 374). The breakthrough time of the glove should be longer than the total duration of product use. If work lasts longer than the breakthrough time, gloves should be changed part-way through. Nitrile gloves are recommended. Suitable gloves can be recommended by the glove supplier.

- Other

Not available.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapour cartridge and full facepiece. (Filter type A)

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

Hygiene measures

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls

Inform appropriate managerial or supervisory personnel of all environmental releases. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Aerosol.
Colour	Copper.
Odour	Solvent.
Melting point/freezing point	-95 °C (-139 °F) estimated
Boiling point or initial boiling point and boiling range	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	1 % estimated
Explosive limit – upper (%)	10 % estimated
Flash point	< 0 °C (< 32,0 °F) Closed cup
Auto-ignition temperature	> 150 °C (> 302 °F)
Decomposition temperature	Not available.
pH	Not applicable.
Solubility(ies)	
Solubility (water)	Insoluble in water
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1,3 g/cm ³
Relative density temperature	20 °C (68 °F)
Particle characteristics	Not available.

9.2. Other information

9.2.1. Information with regard to physical hazard classes No relevant additional information available.

9.2.2. Other safety characteristics

Explosive properties	Not explosive.
Heat of combustion (NFPA 30B)	15,87 kJ/g estimated
Oxidising properties	Not oxidising.
VOC	738 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Avoid high temperatures.
10.5. Incompatible materials	Strong acids. Nitrates.
10.6. Hazardous decomposition products	Carbon oxides.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Based on available data, the classification criteria are not met.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

11.1. Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test Results
1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro- (CAS 95-38-5)		
<u>Acute</u>		
Oral		
LD50	Rat	1265 mg/kg
1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	13 g/kg
Inhalation		
LC50	Rat	54,6 mg/l, 4 Hours
Oral		
LD50	Rat	5,71 g/kg
butanone; ethyl methyl ketone (CAS 78-93-3)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 8000 mg/kg
Oral		
LD50	Rat	2300 - 3500 mg/kg
copper (CAS 7440-50-8)		
<u>Acute</u>		
Dermal		
LD50	Rat	> 2000 mg/kg

Components	Species	Test Results
Oral LD50	Rat	> 2500 mg/kg
Dimethyl ether (CAS 115-10-6)		
<u>Acute</u> Inhalation LC50	Rat	308,5 mg/l, 4 Hours
isopentyl acetate (CAS 123-92-2)		
<u>Acute</u> Dermal LD50	Rabbit	> 5000 mg/kg
Oral LD50	Rabbit	7400 mg/kg
n-Butyl acetate (CAS 123-86-4)		
<u>Acute</u> Dermal LD50	Rabbit	14122 mg/kg
Inhalation LC50	Rat	23,4 mg/l/4h
Oral LD50	Rat	14000 mg/kg
Propyl acetate (CAS 109-60-4)		
<u>Acute</u> Dermal LD50	Rabbit	> 17800 mg/kg
Oral LD50	Rat	8700 mg/kg
Skin corrosion/irritation	Based on available data, the classification criteria are not met.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory sensitisation	Based on available data, the classification criteria are not met.	
Skin sensitisation	Based on available data, the classification criteria are not met.	
Germ cell mutagenicity	Based on available data, the classification criteria are not met.	
Carcinogenicity	Based on available data, the classification criteria are not met.	
Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)		
Not listed.		
Reproductive toxicity	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness.	
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.	
Aspiration hazard	Not likely, due to the form of the product.	
Mixture versus substance information	Not available.	
11.2. Information on other hazards		
Endocrine disrupting properties	The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.	
Other information	Not available.	
SECTION 12: Ecological information		
12.1. Toxicity	Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.	

Components	Species		Test Results
1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro- (CAS 95-38-5)			
Aquatic			
Acute			
Algae	EC50	Algae	0,03 mg/l, 72 hours
Crustacea	EC50	Daphnia	0,163 mg/l, 48 hours
Fish	LC50	Fish	0,3 mg/l, 96 hours
1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)			
Aquatic			
Acute			
Algae	EC50	Algae	> 1000 mg/l, 72 h
Crustacea	EC50	Daphnia	> 1000 mg/l, 48 h
Fish	LC50	Oncorhynchus mykiss	> 1000 mg/l, 96 h
copper (CAS 7440-50-8)			
Aquatic			
Acute			
Algae	EC50	Algae	> 0,1 - <= 1 mg/l, 72 hours
Crustacea	EC50	Daphnia	> 0,1 - <= 1 mg/l, 48 hours
Fish	LC50	Fish	0,193 mg/l, 96 hours
Chronic			
Crustacea	NOEC	Daphnia	> 0,1 - <= 1 mg/l, 21 days
Fish	NOEC	Fish	0,188 mg/l, 30 days
Dimethyl ether (CAS 115-10-6)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	4,4 mg/l
Fish	LC50	Fish	4,1 mg/l
isopentyl acetate (CAS 123-92-2)			
Aquatic			
Acute			
Algae	EC50	Algae	450 mg/l, 72 hours
Crustacea	EC50	Daphnia	42 mg/l, 48 hours
Fish	LC50	Fish	> 22 - < 46 mg/l, 96 hours
n-Butyl acetate (CAS 123-86-4)			
Aquatic			
Acute			
Algae	EC50	Algae	675 mg/l, 72 h
Crustacea	EC50	Daphnia	73 mg/l, 24 h
Fish	LC50	Fish	62 mg/l, 96 h
Propyl acetate (CAS 109-60-4)			
Aquatic			
Acute			
Algae	EC50	Algae	450 mg/l, 72 hours
Crustacea	EC50	Daphnia	318 mg/l, 24 hours
Fish	LC50	Fish	56 - 64 mg/l, 96 hours
12.2. Persistence and degradability		No data is available on the degradability of any ingredients in the mixture.	
12.3. Bioaccumulative potential			
Partition coefficient			
n-octanol/water (log Kow)			
1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER	-0,49		
butanone; ethyl methyl ketone	0,29		
Dimethyl ether	0,1		
isopentyl acetate	2,25		

n-Butyl acetate	1,78
Propyl acetate	1,24
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.
12.6. Endocrine disrupting properties	The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.7. Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential. GWP: 0
Substance Global Warming Potential per (Annex IV), Regulation 517/2014/EU on fluorinated greenhouse gases, as amended	
Dimethyl ether (CAS 115-10-6)	1
12.8. Additional information	
Estonia Dangerous substances in soil Data	
butanone; ethyl methyl ketone (CAS 78-93-3)	Chemical pesticides (As the total sum of the active substances) 0,5 mg/kg Chemical pesticides (As the total sum of the active substances) 20 mg/kg Chemical pesticides (As the total sum of the active substances) 5 mg/kg
copper (CAS 7440-50-8)	Copper (Cu) 100 mg/kg Copper (Cu) 150 mg/kg Copper (Cu) 500 mg/kg

SECTION 13: Disposal considerations

13.1. Waste treatment methods	
Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR	
14.1. UN number	UN1950
14.2. UN proper shipping name	AEROSOLS, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Hazard No. (ADR)	Not available.
Tunnel restriction code	D
14.4. Packing group	Not available.
14.3. Transport hazard class(es)	
ADR/RID - Classification code:	5F
14.5. Environmental hazards	yes
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
IATA	
14.1. UN number	UN1950

14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
14.4. Packing group	Not available.
14.5. Environmental hazards	yes
ERG Code	10L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

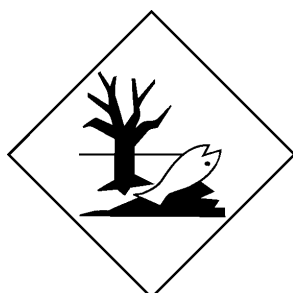
14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable, MARINE POLLUTANT
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
14.4. Packing group	Not available.
14.5. Environmental hazards	
Marine pollutant	Yes
EmS	F-D, S-U
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

14.7. Maritime transport in bulk according to IMO instruments Not applicable.

ADR; IATA; IMDG



Marine pollutant



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

copper (CAS 7440-50-8)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

butanone; ethyl methyl ketone (CAS 78-93-3)

Dimethyl ether (CAS 115-10-6)

Propyl acetate (CAS 109-60-4)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER (CAS 107-98-2)

butanone; ethyl methyl ketone (CAS 78-93-3)

copper (CAS 7440-50-8)

Dimethyl ether (CAS 115-10-6)

isopentyl acetate (CAS 123-92-2)

n-Butyl acetate (CAS 123-86-4)

Propyl acetate (CAS 109-60-4)

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.

AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).

ATE: Acute Toxicity Estimate according to REGULATION (EC) No 1272/2008 (CLP).

CAS: Chemical Abstract Service.

Ceiling: Short Term Exposure Limit Ceiling value.

CEN: European Committee for Standardization.

CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.

GWP: Global Warming Potential.

IATA: International Air Transport Association.

IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.

IMDG: International Maritime Dangerous Goods.

MAC: Maximum Allowed Concentration.

MAK: Threshold limit values Germany (Maximale Arbeitsplatzkonzentration - DFG).

MARPOL: International Convention for the Prevention of Pollution from Ships.

PBT: Persistent, bioaccumulative and toxic.

REACH: Registration, Evaluation and Authorization of Chemicals (REGULATION (EC) No 1907/2006 concerning Registration, Evaluation Authorization and Restriction of Chemicals).

RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

STEL: Short term exposure limit.

TLV: Threshold Limit Value.

TWA: Time Weighted Average.

VLE: Exposure Limit Value.
VME: Exposure Average Value.
VOC: Volatile organic compounds.
vPvB: Very persistent and very bioaccumulative.
STEL: Short-term Exposure Limit.

Not available.

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

References

Information on evaluation method leading to the classification of mixture

Full text of any H-statements not written out in full under Sections 2 to 15

H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

Revision information

Training information

Disclaimer

None.

Follow training instructions when handling this material.

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