

Main symptoms Headache. Dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

2.2. Label elements

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

Contains: Ethylene Glycol Monobutyl Ether, Methanol, Propan-2-ol (Isopropyl Alcohol)



Hazard pictograms

Signal word Danger

Hazard statements

H225 Highly flammable liquid and vapor.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H370 Causes damage to organs.

Precautionary statements

Prevention

P260 Do not breathe mist or vapor.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing.
P280 Wear protective gloves/eye protection/face protection.

Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Storage Not available.

Disposal Not available.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Methanol	50 - < 60	67-56-1 200-659-6	-	603-001-00-X	#
Classification:	Flam. Liq. 2;H225, Acute Tox. 3;H301, Acute Tox. 3;H311, Acute Tox. 3;H331, STOT SE 1;H370				
Propan-2-ol (Isopropyl Alcohol)	10 - < 20	67-63-0 200-661-7	-	603-117-00-0	
Classification:	Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336				
Ethylene Glycol Monobutyl Ether	3 - < 5	111-76-2 203-905-0	-	603-014-00-0	#
Classification:	Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Irrit. 2;H315, Eye Irrit. 2;H319, Acute Tox. 4;H332				

Other components below reportable levels 20 - < 30

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

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

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

SECTION 4: First aid measures

General information	Take off immediately all contaminated clothing. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.
4.1. Description of first aid measures	
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
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. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
4.2. Most important symptoms and effects, both acute and delayed	Headache. Dizziness. 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. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards	Highly flammable liquid and vapor.
5.1. Extinguishing media	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. 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	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe the mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

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

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

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
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	MAK	98 mg/m ³
	STEL	20 ppm 200 mg/m ³ 40 ppm
	MAK	260 mg/m ³ 200 ppm
Methanol (CAS 67-56-1)	STEL	1040 mg/m ³ 800 ppm
	MAK	500 mg/m ³
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	200 ppm 2000 mg/m ³ 800 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
	TWA	50 ppm 98 mg/m ³ 20 ppm
	STEL	333 mg/m ³ 250 ppm
Methanol (CAS 67-56-1)	TWA	266 mg/m ³ 200 ppm
	STEL	1000 mg/m ³
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TWA	400 ppm 500 mg/m ³

Belgium. Exposure Limit Values.

Components	Type	Value
		200 ppm

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
		50 ppm
Methanol (CAS 67-56-1)	TWA	98 mg/m ³
		20 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TWA	260 mg/m ³
		200 ppm
	STEL	1225 mg/m ³
	TWA	980 mg/m ³

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	MAC	98 mg/m ³
		20 ppm
Methanol (CAS 67-56-1)	STEL	246 mg/m ³
		50 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	MAC	260 mg/m ³
		200 ppm
	MAC	999 mg/m ³
		400 ppm
	STEL	1250 mg/m ³
		500 ppm

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

Components	Type	Value
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TWA	980 mg/m ³
		400 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	Ceiling	200 mg/m ³
	TWA	100 mg/m ³
Methanol (CAS 67-56-1)	Ceiling	1000 mg/m ³
	TWA	250 mg/m ³
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	Ceiling	1000 mg/m ³
	TWA	500 mg/m ³

Denmark. Exposure Limit Values

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TLV	98 mg/m ³
		20 ppm
Methanol (CAS 67-56-1)	TLV	260 mg/m ³
		200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TLV	490 mg/m ³
		200 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
		50 ppm
	TWA	98 mg/m ³
		20 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value
Methanol (CAS 67-56-1)	STEL	350 mg/m3 250 ppm
	TWA	250 mg/m3 200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	600 mg/m3 250 ppm
	TWA	350 mg/m3 150 ppm

Finland. Workplace Exposure Limits Components

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	250 mg/m3 50 ppm
	TWA	98 mg/m3 20 ppm
Methanol (CAS 67-56-1)	STEL	330 mg/m3 250 ppm
	TWA	270 mg/m3 200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	620 mg/m3 250 ppm
	TWA	500 mg/m3 200 ppm

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	VLE	246 mg/m3 50 ppm
	VME	49 mg/m3 10 ppm
Methanol (CAS 67-56-1)	VLE	1300 mg/m3 1000 ppm
	VME	260 mg/m3 200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	VLE	980 mg/m3 400 ppm

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TWA	49 mg/m3 10 ppm
	TWA	270 mg/m3 200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TWA	500 mg/m3 200 ppm

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	AGW	49 mg/m3 10 ppm
	AGW	270 mg/m3 200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	AGW	500 mg/m3 200 ppm

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TWA	120 mg/m ³
		25 ppm
Methanol (CAS 67-56-1)	STEL	325 mg/m ³
		250 ppm
	TWA	260 mg/m ³
		200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	1225 mg/m ³
		500 ppm
	TWA	980 mg/m ³
		400 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
	TWA	98 mg/m ³
Methanol (CAS 67-56-1)	TWA	260 mg/m ³
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	2000 mg/m ³
	TWA	500 mg/m ³

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
		50 ppm
	TWA	100 mg/m ³
		20 ppm
Methanol (CAS 67-56-1)	TWA	260 mg/m ³
		200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TWA	490 mg/m ³
		200 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
		50 ppm
	TWA	98 mg/m ³
		20 ppm
Methanol (CAS 67-56-1)	TWA	260 mg/m ³
		200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
		50 ppm
	TWA	98 mg/m ³
		20 ppm
Methanol (CAS 67-56-1)	TWA	260 mg/m ³
		200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³

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

Components	Type	Value
		50 ppm
	TWA	98 mg/m ³
		20 ppm
Methanol (CAS 67-56-1)	TWA	260 mg/m ³
		200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	600 mg/m ³
	TWA	350 mg/m ³

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	100 mg/m ³
		20 ppm
	TWA	50 mg/m ³
		10 ppm
Methanol (CAS 67-56-1)	TWA	260 mg/m ³
		200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	600 mg/m ³
		250 ppm
	TWA	350 mg/m ³
		150 ppm

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
		50 ppm
	TWA	98 mg/m ³
		20 ppm
Methanol (CAS 67-56-1)	TWA	260 mg/m ³
		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
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
		50 ppm
	TWA	98 mg/m ³
		20 ppm
Methanol (CAS 67-56-1)	TWA	260 mg/m ³
		200 ppm

Netherlands. OELs (binding)

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
		100 mg/m ³
	TWA	133 mg/m ³

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TLV	50 mg/m ³
		10 ppm
Methanol (CAS 67-56-1)	TLV	130 mg/m ³
		100 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TLV	245 mg/m ³
		100 ppm

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	200 mg/m3
	TWA	98 mg/m3
Methanol (CAS 67-56-1)	STEL	300 mg/m3
	TWA	100 mg/m3
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	1200 mg/m3
	TWA	900 mg/m3

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m3
	TWA	50 ppm 98 mg/m3
Methanol (CAS 67-56-1)	TWA	20 ppm 260 mg/m3 200 ppm

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TWA	20 ppm
	STEL	250 ppm
Methanol (CAS 67-56-1)	TWA	200 ppm
	STEL	400 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TWA	200 ppm

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	250 mg/m3
	TWA	50 ppm 150 mg/m3 30 ppm
Methanol (CAS 67-56-1)	STEL	5 ppm
	TWA	260 mg/m3 200 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	500 mg/m3
	TWA	203 ppm 200 mg/m3 81 ppm

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m3
	TWA	50 ppm 98 mg/m3 20 ppm
Methanol (CAS 67-56-1)	TWA	260 mg/m3 200 ppm
	STEL	1000 mg/m3
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TWA	400 ppm 500 mg/m3 200 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
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	TWA	98 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
Methanol (CAS 67-56-1)	TWA	20 ppm
		260 mg/m ³
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TWA	200 ppm
		500 mg/m ³
		200 ppm
Spain. Occupational Exposure Limits		
Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	245 mg/m ³
	TWA	50 ppm
Methanol (CAS 67-56-1)	TWA	98 mg/m ³
		20 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	266 mg/m ³
		1000 mg/m ³
	TWA	400 ppm
		500 mg/m ³
		200 ppm
Sweden. Occupational Exposure Limit Values		
Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	100 mg/m ³
	TWA	20 ppm
Methanol (CAS 67-56-1)	STEL	50 mg/m ³
		10 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	350 mg/m ³
		250 ppm
	TWA	250 mg/m ³
		200 ppm
	TWA	600 mg/m ³
		250 ppm
		350 mg/m ³
		150 ppm
Switzerland. SUVA Grenzwerte am Arbeitsplatz		
Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	98 mg/m ³
	TWA	20 ppm
Methanol (CAS 67-56-1)	STEL	49 mg/m ³
		10 ppm
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	STEL	1040 mg/m ³
		800 ppm
	TWA	260 mg/m ³
		200 ppm
	TWA	1000 mg/m ³
		400 ppm
		500 mg/m ³
		200 ppm
UK. EH40 Workplace Exposure Limits (WELs)		
Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m ³
	TWA	50 ppm
Methanol (CAS 67-56-1)	STEL	123 mg/m ³
		25 ppm
		333 mg/m ³

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	TWA	250 ppm	
		266 mg/m3	
		200 ppm	
	STEL	1250 mg/m3	
		TWA	500 ppm
			999 mg/m3
400 ppm			

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

Components	Type	Value
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
Methanol (CAS 67-56-1)	TWA	20 ppm
		260 mg/m3
		200 ppm

Biological limit values

Czech Republic. Limit Values for Indicators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.

Components	Value	Determinant	Specimen	Sampling Time
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (with hydrolysis)	Creatinine in urine	*
	0,17 mmol/mmol	Butoxyacetic acid (with hydrolysis)	Creatinine in urine	*
Methanol (CAS 67-56-1)	15 mg/l	Methanol	Urine	*
	0,47 mmol/l	Methanol	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
Methanol (CAS 67-56-1)	15 mg/l	Méthanol	Urine	*

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

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

Components	Value	Determinant	Specimen	Sampling Time
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	100 mg/l	Butoxyessigsäure	Urine	*
Methanol (CAS 67-56-1)	30 mg/l	Methanol	Urine	*
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	25 mg/l	Aceton	Blood	*
	25 mg/l	Aceton	Urine	*

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

Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

Components	Value	Determinant	Specimen	Sampling Time
Methanol (CAS 67-56-1)	20 mg/g	Methanol	Creatinine in urine	*
	30 mg/l	Methanol	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
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	200 mg/g	Ácido butoxiacético, con hidrólisis	Creatinine in urine	*
Methanol (CAS 67-56-1)	15 mg/l	Metanol	Urine	*
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	40 mg/l	Acetona	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
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	200 mg/l	Gesamt-Butoxyessigsäure	Urine	*
	100 mg/l	Butoxyessigsäure	Urine	*
Methanol (CAS 67-56-1)	30 mg/l	Methanol	Urine	*
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)	25 mg/l	Aceton	Urine	*
	25 mg/l	Aceton	Blood	*

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

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Components	Value	Determinant	Specimen	Sampling Time
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	240 mmol/mol	Butoxyacetic acid	Creatinine in urine	*

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

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

Exposure guidelines

EU Exposure Limit Values: Skin designation

Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	Can be absorbed through the skin.
Methanol (CAS 67-56-1)	Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) 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. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

General information Wear chemical protective equipment that is specifically recommended by the manufacturer. 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 Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

- Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

- Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using do not smoke. Keep away from food and drink. 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 Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear.
Physical state	Liquid.
Form	Liquid.
Color	Orange
Odor	Ammonia
Odor threshold	Not available.
pH	10
Melting point/freezing point	-138,1 °F (-94,5 °C) estimated

Initial boiling point and boiling range	165,96 °F (74,42 °C) estimated
Flash point	65,0 °F (18,3 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	6,2 % estimated
Flammability limit - upper (%)	30,6 % estimated
Vapor pressure	96,81 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	524,96 °F (273,87 °C) estimated
Decomposition temperature	Not available.
Viscosity	5 cP
Viscosity temperature	68 °F (20 °C)
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
9.2. Other information	
Density	7,23 lbs/gal
Kinematic viscosity	5,765 cSt
Kinematic viscosity temperature	68 °F (20 °C)
VOC (Weight %)	70,3 % w/w By Weight estimated

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 heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Acids. Strong oxidizing agents. Isocyanates. Chlorine.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of exposure	
Inhalation	Toxic if inhaled. May cause damage to organs by inhalation.
Skin contact	Toxic in contact with skin.
	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Eye contact	Causes serious eye irritation.
Ingestion	Toxic if swallowed.
Symptoms	Headache. Dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
11.1. Information on toxicological effects	
Acute toxicity	Toxic if inhaled. Toxic in contact with skin. Toxic if swallowed.

Components	Species	Test Results
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	400 mg/kg
Inhalation		
LC50	Mouse	700 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
Oral		
LD50	Guinea pig	1,2 g/kg
	Mouse	1,2 g/kg
	Rabbit	0,32 g/kg
	Rat	560 mg/kg
Methanol (CAS 67-56-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	15800 mg/kg
Inhalation		
LC50	Rat	64000 ppm, 4 Hours
		87,5 mg/l, 6 Hours
Oral		
LD50	Mouse	7300 mg/kg
	Rabbit	14,4 g/kg
	Rat	5628 mg/kg
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)		
<u>Acute</u>		
Oral		
LD50	Mouse	4,5 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Due to partial or complete lack of data the classification is not possible.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.
Skin sensitization	Due to partial or complete lack of data the classification is not possible.
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

Ethylene Glycol Monobutyl Ether (CAS 111-76-2)	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Causes damage to organs.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Mixture versus substance information	No information available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Components	Species	Test Results
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)		
Aquatic		
Fish	LC50	Inland silverside (<i>Menidia beryllina</i>) 1250 mg/l, 96 hours
Methanol (CAS 67-56-1)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) > 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 100 mg/l, 96 hours
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)		
Aquatic		
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>) > 1400 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability No data is available on the degradability of this product.

12.3. Bioaccumulative potential

Partition coefficient

n-octanol/water (log Kow)

Ethylene Glycol Monobutyl Ether	0,83
Methanol	-0,77
Propan-2-ol (Isopropyl Alcohol)	0,05

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not available.

assessment

12.6. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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.
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. 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	UN1993
14.2. UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa)
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Hazard No. (ADR)	33
Tunnel restriction code	D/E
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN1993
14.2. UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)

14.3. Transport hazard class(es)
Class 3
Subsidiary risk -
Label(s) 3
14.4. Packing group II
14.5. Environmental hazards No.
14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.
for user

ADN

14.1. UN number UN1993
14.2. UN proper shipping name Flammable Liquid, ([vapour pressure at 50 °c not more than 110 kpa])
14.3. Transport hazard class(es)
Class 3
Subsidiary risk -
Label(s) 3
14.4. Packing group II
14.5. Environmental hazards No.
14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.
for user

IATA

14.1. UN number UN1993
14.2. UN proper shipping name Flammable liquid, n.o.s.
14.3. Transport hazard class(es)
Class 3
Subsidiary risk -
14.4. Packing group II
14.5. Environmental hazards No.
ERG Code 3H
14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.
for user
Other information
Passenger and cargo aircraft Allowed.
Cargo aircraft only Allowed.

IMDG

14.1. UN number UN1993
14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S.
14.3. Transport hazard class(es)
Class 3
Subsidiary risk -
14.4. Packing group II
14.5. Environmental hazards
Marine pollutant No.
EmS F-E, S-E
14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.
for user

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

ADN; ADR; IATA; IMDG; RID



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 (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended
Not listed.
- Regulation (EC) No. 689/2008 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
Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
Not listed.

Authorizations

- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
Not listed.

Restrictions on use

- 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.
- Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended
Not listed.
- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed.

Other EU regulations

- Directive 2012/18/EU on major accident hazards involving dangerous substances
Methanol (CAS 67-56-1)
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)
- Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)
Methanol (CAS 67-56-1)
Propan-2-ol (Isopropyl Alcohol) (CAS 67-63-0)
- Directive 94/33/EC on the protection of young people at work, as amended
Methanol (CAS 67-56-1)

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. 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. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

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

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

H225 Highly flammable liquid and vapor.

H301 Toxic if swallowed. H302
Harmful if swallowed. H311
Toxic in contact with skin.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H370 Causes damage to organs.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.

Training information

Follow training instructions when handling this material.

Disclaimer

Malco Automotive cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.