SAFETY DATA SHEET

Version #: 29
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture Comma Brake Fluid DOT 4

Registration number -

Synonyms None.

Product code BF4*

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

Identified uses Brake fluid

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name Moove Lubricants ltd.

Address Comma Oil & Chemicals Marketing B.V
Moove Lubricants Netherlands
Herikerbergweg 238, 1101CM, Amsterdam
NL

Division

Telephone Telephone + 31208083061

e-mail technical@uk.moovelub.com

Contact person Not available.

1.4. Emergency telephone number

Asia Pacific	+ (1) 760 476 3960
China	+ (86) 4001 2001 74
Europe	+ (44) 8 08 189 0979
Middle East/Africa	+ (1) 760 476 3959
Ireland National Poisons Info	+353 1 809 2566
Healthcare professionals-24/7 (public, 8am - 10pm, 7/7)	+353 1 809 2166
Access Code	334498

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

Health hazards

Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Reproductive toxicity (the unborn child)	Category 2	H361d - Suspected of damaging the unborn child.

2.2. Label elements

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

UFI:

Austria: EG50-80U7-X00D-R5HW
Belgium: EG50-80U7-X00D-R5HW
Bulgaria: EG50-80U7-X00D-R5HW
Croatia: EG50-80U7-X00D-R5HW
Cyprus: EG50-80U7-X00D-R5HW
Czech Republic: EG50-80U7-X00D-R5HW
Denmark: EG50-80U7-X00D-R5HW
Estonia: EG50-80U7-X00D-R5HW
EU: EG50-80U7-X00D-R5HW
Finland: EG50-80U7-X00D-R5HW
France: EG50-80U7-X00D-R5HW
Germany: EG50-80U7-X00D-R5HW
Great Britain: EG50-80U7-X00D-R5HW
Greece: EG50-80U7-X00D-R5HW
Hungary: EG50-80U7-X00D-R5HW
Iceland: EG50-80U7-X00D-R5HW
Ireland: EG50-80U7-X00D-R5HW
Italy: EG50-80U7-X00D-R5HW
Latvia: EG50-80U7-X00D-R5HW
Lithuania: EG50-80U7-X00D-R5HW
Luxembourg: EG50-80U7-X00D-R5HW
Malta: EG50-80U7-X00D-R5HW
Netherlands: EG50-80U7-X00D-R5HW
Norway: EG50-80U7-X00D-R5HW
Poland: EG50-80U7-X00D-R5HW
Portugal: EG50-80U7-X00D-R5HW
Romania: EG50-80U7-X00D-R5HW
Slovakia: EG50-80U7-X00D-R5HW
Slovenia: EG50-80U7-X00D-R5HW
Spain: EG50-80U7-X00D-R5HW
Sweden: EG50-80U7-X00D-R5HW

Contains: 2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol, Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] Orthoborate

Hazard pictograms

Signal word Warning

Hazard statements

H319 Causes serious eye irritation.
H361d Suspected of damaging the unborn child.

Precautionary statements

Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage Not available.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information None.

2.3. Other hazards This mixture does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII. Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol	20 - < 30	143-22-6 205-592-6	01-2119531322-53	603-183-00-0	
Classification: Eye Dam. 1;H318					
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] Orthoborate	20 - < 30	30989-05-0 250-418-4	01-2119462824-33	-	
Classification: Repr. 2;H361fd					
Butyl Polyglycol	5 - < 10	9004-77-7 500-012-0	01-2119475115-41	-	
Classification: Acute Tox. 4;H302;(ATE: 2000 mg/kg bw), Eye Irrit. 2;H319					
2,2' -oxybisethanol; diethylene glycol	3 - < 5	111-46-6 203-872-2	01-2119457857-21	603-140-00-6	
Classification: Acute Tox. 4;H302					
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	1 - < 3	112-34-5 203-961-6	01-2119475104-44	603-096-00-8	#
Classification: Eye Irrit. 2;H319					
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether	1 - < 3	111-77-3 203-906-6	01-2119475100-52	603-107-00-6	#
Classification: Repr. 2;H361d					
Other components below reportable levels	30 - < 40				

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 IF exposed or concerned: Get medical advice/attention. 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.

4.1. Description of first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

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 Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed 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 No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media Alcohol resistant foam. Powder. Carbon dioxide (CO2).

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 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	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	Wear appropriate personal protective equipment.
For emergency responders	Keep unnecessary personnel away. 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	Use water spray to reduce vapours or divert vapour cloud drift. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. 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. 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	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
7.3. Specific end use(s)	Brake fluid

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
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	MAK	67,5 mg/m3
		10 ppm
	STEL	101,2 mg/m3
		15 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	MAK	50,1 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	MAK	44 mg/m3
		10 ppm
	STEL	176 mg/m3
		40 ppm

Belgium. Exposure Limit Values

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm

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

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	TWA	10 mg/m3

Croatia. OELs (GVI). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and Biological Limit Values, Annex I (NN 91/2018), as amended

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	MAC	67,5 mg/m3
		10 ppm
	STEL	101,2 mg/m3
		15 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	MAC	50,1 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	MAC	101 mg/m3
		23 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	Ceiling	100 mg/m3
	TWA	70 mg/m3
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	Ceiling	100 mg/m3
	TWA	50 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	TLV	68 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TLV	50 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	TLV	11 mg/m3
		2,5 ppm

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

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	TWA	67,5 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	STEL	90 mg/m3
		20 ppm
	TWA	45 mg/m3
		10 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	TWA	68 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50 mg/m3
		10 ppm
Tris[2-[2-(2-methoxyethoxy) ethoxy]ethyl] Orthoborate (CAS 30989-05-0)	TWA	0,5 mg/m3

France. OELs. Indicative Occupational Exposure Limits as Prescribed by Order of 30 June 2004, as amended

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	VLE	101,2 mg/m3
		15 ppm
	VME	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	VME	50,1 mg/m3
		10 ppm

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

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	VLE	101,2 mg/m3

Regulatory status: Regulatory indicative (VRI)

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

Components	Type	Value
		15 ppm
Regulatory status: Regulatory indicative (VRI)		
	VME	67,5 mg/m3
Regulatory status: Regulatory indicative (VRI)		
		10 ppm
Regulatory status: Regulatory indicative (VRI)		
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	VME	50,1 mg/m3
Regulatory status: Regulatory indicative (VRI)		
		10 ppm
Regulatory status: Regulatory indicative (VRI)		

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
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	TWA	67 mg/m3	Vapour and aerosol.
		10 ppm	Vapour and aerosol.
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	TWA	44 mg/m3	Vapour and aerosol.
		10 ppm	Vapour and aerosol.

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

Components	Type	Value	Form
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	AGW	67 mg/m3	Vapour and aerosol.
		10 ppm	Vapour and aerosol.
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	AGW	50 mg/m3	Vapour and aerosol.
		10 ppm	Vapour and aerosol.
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	AGW	44 mg/m3	Vapour and aerosol.
		10 ppm	Vapour and aerosol.

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

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
	TWA	67,5 mg/m3
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3

Iceland. OELs. Regulation 390/2009 on Pollution Limits and Measures to Reduce Pollution at the Workplace, as amended

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	TWA	11 mg/m3
		2,5 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		12 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	TWA	100 mg/m3
		23 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm

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

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3

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

Components	Type	Value
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	TWA	10 mg/m3

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

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	STEL	90 mg/m3
		20 ppm
	TWA	45 mg/m3
		10 ppm
Tris[2-[2-(2-methoxyethoxy) ethoxy]ethyl] Orthoborate (CAS 30989-05-0)	TWA	2 mg/m3

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

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 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
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 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
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm

Netherlands. OELs (binding)

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	100 mg/m3
	TWA	50 mg/m3
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	45 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	TLV	68 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TLV	50 mg/m3
		10 ppm

Poland. Maximum permissible concentrations and intensities of harmful factors in the work environment (Dz.U.Poz. 1286/2018, Annex 1)

Components	Type	Value	Form
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	100 mg/m3	
	TWA	67 mg/m3	
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50 mg/m3	
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	TWA	10 mg/m3	Inhalable fraction.

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

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm

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

Components	Type	Value	Form
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	TWA	10 ppm	Inhalable fraction and vapour.

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

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	STEL	800 mg/m3
		184 ppm
	TWA	500 mg/m3
		115 ppm

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

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	STEL	90 mg/m3
		20 ppm
	TWA	44 mg/m3
		10 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
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	TWA	44 mg/m3
		10 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3

Spain. Occupational Exposure Limits

Components	Type	Value
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm

Sweden. OELs (Annex 1). Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1), as amended

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	Ceiling	101 mg/m3
		15 ppm
	TWA	68 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50 mg/m3
		10 ppm
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	STEL	90 mg/m3
		20 ppm
	TWA	45 mg/m3
		10 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value	Form
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101 mg/m3	Vapour and aerosol.
		15 ppm	Vapour and aerosol.
	TWA	67 mg/m3	Vapour and aerosol.
		10 ppm	Vapour and aerosol.
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	STEL	176 mg/m3	Vapour and aerosol.
		40 ppm	Vapour and aerosol.
	TWA	44 mg/m3	Vapour and aerosol.
		10 ppm	Vapour and aerosol.

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	TWA	101 mg/m3
		23 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
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	TWA	50,1 mg/m3
		10 ppm

Biological limit values

Croatia. BELs (BGV). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and BELs, Annex IV (NN 91/2018), as amended

Components	Value	Determinant	Specimen	Sampling Time
2-(2-methoxyethoxy)ethanol ; diethylene glycol monomethyl ether (CAS 111-77-3)	15 mg/g	Methoxyacetic acid	Creatinine in 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
Butyl Polyglycol (CAS 9004-77-7)			
Long-term, Systemic, Dermal	125 mg/kg bw/day	40	Repeated dose toxicity
Long-term, Systemic, Inhalation	117 mg/m3	10	Repeated dose toxicity
Long-term, Systemic, Oral	12,5 mg/kg bw/day	40	Repeated dose toxicity
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] Orthoborate (CAS 30989-05-0)			
Long-term, Systemic, Dermal	10 mg/kg bw/day	100	Repeated dose toxicity
Long-term, Systemic, Oral	10 mg/kg bw/day	100	Repeated dose toxicity

Workers

Components	Value	Assessment factor	Notes
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)			
Long-term, Local, Inhalation	67,5 mg/m3		respiratory tract irritation
Long-term, Systemic, Dermal	83 mg/kg bw/day	24	Repeated dose toxicity
Long-term, Systemic, Inhalation	67,5 mg/m3		respiratory tract irritation
Short-term, Local, Inhalation	101,2 mg/m3		respiratory tract irritation
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)			
Long-term, Systemic, Dermal	2,22 mg/kg bw/day	18	Repeated dose toxicity
Long-term, Systemic, Inhalation	50,1 mg/m3		
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)			
Long-term, Local, Inhalation	60 mg/m3	2	respiratory tract irritation
Long-term, Systemic, Dermal	43 mg/kg bw/day	105	Repeated dose toxicity
Long-term, Systemic, Inhalation	44 mg/m3		respiratory tract irritation
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (CAS 143-22-6)			
Long-term, Local, Dermal	5,65 mg/cm2	5	Repeated dose toxicity
Long-term, Local, Inhalation	30,5 mg/m3	5	Repeated dose toxicity
Long-term, Systemic, Dermal	1005 mg/kg bw/day	5	Repeated dose toxicity
Long-term, Systemic, Inhalation	24 mg/m3	5	Repeated dose toxicity
Short-term, Local, Dermal	8,35 mg/cm2	5	Acute toxicity
Short-term, Local, Inhalation	96 mg/m3	5	Acute toxicity

Short-term, Systemic, Inhalation	96 mg/m3	5	Acute toxicity
Butyl Polyglycol (CAS 9004-77-7)			
Long-term, Systemic, Dermal	208 mg/kg bw/day	24	Repeated dose toxicity
Long-term, Systemic, Inhalation	195 mg/m3	6	Repeated dose toxicity
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] Orthoborate (CAS 30989-05-0)			
Long-term, Systemic, Dermal	16,7 mg/kg bw/day	60	Repeated dose toxicity

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)			
Freshwater	12 mg/l	100	
Intermittent releases	12 mg/l	100	
Marine water	1,2 mg/l	1000	
Secondary poisoning	0,09 g/kg	200	Oral
Sediment (freshwater)	44,4 mg/kg		
Sediment (marine water)	0,44 mg/kg		
Soil	2,1 mg/kg		
STP	10000 mg/l	1	
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)			
Freshwater	10 mg/l	10	
Marine water	1 mg/l	100	
Sediment (freshwater)	20,9 mg/kg		
Sediment (marine water)	2,09 mg/kg		
Soil	1,53 mg/kg		
STP	199,5 mg/l	10	
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (CAS 143-22-6)			
Freshwater	100 mg/l	10	
Intermittent releases	22 mg/l	100	
Marine water	142,57 mg/l	100	
Secondary poisoning	525,5 mg/kg	10	Oral
Sediment (freshwater)	11,115 mg/kg	10	
Sediment (marine water)	1,111 mg/kg	10	
Soil	11,51 mg/kg	10	
STP	199,5 mg/l	10	
Butyl Polyglycol (CAS 9004-77-7)			
Freshwater	4,5 mg/l	100	
Marine water	0,31 mg/l	1000	
Secondary poisoning	333 mg/kg	30	Oral
Sediment (freshwater)	6,6 mg/kg	1000	
Sediment (marine water)	0,66 mg/kg	10000	
Soil	1,02 mg/kg		
STP	500 mg/l	10	
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] Orthoborate (CAS 30989-05-0)			
Freshwater	0,211 mg/l	1000	
Intermittent releases	2,112 mg/l	100	
Marine water	0,021 mg/l	10000	
Sediment (freshwater)	0,76 mg/kg		
Sediment (marine water)	0,076 mg/kg		
Soil	0,028 mg/kg		
STP	100 mg/l	10	

Exposure guidelines

Austria MAK: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Belgium OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Bulgaria OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Croatia ELVs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Czech Republic PELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Denmark GV: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Estonia OELs: Skin designation

2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	Can be absorbed through the skin.

EU Exposure Limit Values: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Finland Exposure Limit Values: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

France Indicative OELs: Skin Designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

France INRS: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Germany TRGS 900 Limit Values: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Greece OEL: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Iceland OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Ireland Exposure Limit Values: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Italy OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Danger of cutaneous absorption

Latvia OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Lithuania OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	Can be absorbed through the skin.

Luxembourg OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Malta OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Netherlands OELs (binding): Skin designation

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)	Can be absorbed through the skin.
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Norway Exposure Limit Values: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Portugal OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Romania OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Slovakia OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	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)

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Spain OELs: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.

Sweden Threshold Limit Values: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	Can be absorbed through the skin.
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)	Can be absorbed through the skin.

UK EH40 WEL: Skin designation

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	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: Chemical respirator with organic vapour cartridge and full facepiece.

Skin protection

- Hand protection: Wear appropriate chemical resistant gloves.

- Other: Wear suitable protective clothing. Use of an impervious apron is recommended.

Respiratory protection: Chemical respirator with organic vapour cartridge and full facepiece.

Thermal hazards: Wear appropriate thermal protective clothing, when necessary.

Hygiene measures: Observe any medical surveillance requirements. 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: 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: Liquid.

Colour: Yellow-orange.

Odour: Characteristic.

Melting point/freezing point: -35,2 °C (-31,36 °F) estimated
<-50 °C (<-58 °F)

Boiling point or initial boiling point and boiling range: >260 °C (>500 °F)

Flammability: Not applicable.

Flash point: 143,3 °C (290,0 °F)
143,0 °C (289,4 °F) estimated

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

pH: > 9 - < 10

Kinematic viscosity: Not available.

Solubility

Solubility (water): Not available.

Partition coefficient (n-octanol/water) (log value): Not available.

Vapour pressure: 0,6 hPa estimated

Density and/or relative density

Density: 1,07 g/cm3
1,01 g/cm3 estimated

Relative density: 1,04

Relative density temperature	20 °C (68 °F)
Vapour density	Not available.
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

VOC	7,94 % 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 temperatures exceeding the decomposition temperature. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
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	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
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	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity Not known.

Product	Species	Test Results
Comma Brake Fluid DOT 4		
Acute		
Dermal		
LD50	Rabbit	14766 mg/kg, 24 Hours
Inhalation		
LC50	Rat	12000 mg/m3, 8 Hours
Oral		
LD50	Rat	21007 mg/kg

Components	Species	Test Results
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)		
Acute		
Dermal		
LD50	Rabbit	2700 mg/kg
Oral		
LD50	Rat	3306 mg/kg
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)		
Acute		
Dermal		
LD50	Rabbit	6540 mg/kg
Oral		
LD50	Rat	5500 mg/kg

Components	Species	Test Results
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)		
Acute		
Dermal		
LD50	Rabbit	11890 mg/kg
Oral		
LD50	Rat	12570 mg/kg
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (CAS 143-22-6)		
Acute		
Dermal		
LD50	Rabbit	3540 mg/kg, 24 Hours
Oral		
LD50	Rat	5000 mg/kg
Butyl Polyglycol (CAS 9004-77-7)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	2000 mg/kg

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 sensitisation Due to partial or complete lack of data the classification is not possible.

Skin sensitisation 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.

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

Reproductive toxicity Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure Due to partial or complete lack of data the classification is not possible.

Specific target organ toxicity - repeated exposure Due to partial or complete lack of data the classification is not possible.

Aspiration hazard Due to partial or complete lack of data the classification is not possible.

Mixture versus substance information No information available.

11.2. Information on other hazards

Endocrine disrupting properties Not available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Product		Species	Test Results
Comma Brake Fluid DOT 4			
Aquatic			
Acute			
Fish	LC50	Fish	66488,4375 mg/l, 96 hours estimated

Components		Species	Test Results
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)			
Aquatic			
Acute			
Fish	LC50	Bluegill (Lepomis macrochirus)	1300 mg/l, 96 hours

Components	Species	Test Results
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)		
Aquatic		
Acute		
Fish LC50	Bluegill (Lepomis macrochirus)	7500 mg/l, 96 hours
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)		
Aquatic		
Acute		
Fish LC50	Western mosquitofish (Gambusia affinis)	> 32000 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)

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	0,56
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether	-1,18
2,2' -oxybisethanol; diethylene glycol	-1,47
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol	0,02

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture. This mixture does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.

12.6. Endocrine disrupting properties Not available.

12.7. 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.

12.8. Additional information

Estonia Dangerous substances in soil Data

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)	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
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] Orthoborate (CAS 30989-05-0)	Boron (B) 100 mg/kg Boron (B) 30 mg/kg Boron (B) 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.

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 UN3021

14.2. UN proper shipping name PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S., flash-point less than 23 °C (2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether)

14.3. Transport hazard class(es)

Class 3

Subsidiary risk 6.1

Label(s)	3+6.1
Hazard No. (ADR)	336
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	UN3021
14.2. UN proper shipping name	PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S., flash-point less than 23 °C (2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether)
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	6.1
Label(s)	3+6.1
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.

ADN

14.1. UN number	UN3021
14.2. UN proper shipping name	PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S., flash-point less than 23 °C (2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether)
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	6.1
Label(s)	3+6.1
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.

IATA

14.1. UN number	UN3021
14.2. UN proper shipping name	Pesticide, liquid, flammable, toxic, n.o.s. flash point less than 23°C (2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether)
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	6.1
14.4. Packing group	II
14.5. Environmental hazards	No.
ERG Code	3P
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	UN3021
14.2. UN proper shipping name	PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S. flashpoint less than 23°C (2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether)
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	6.1
14.4. Packing group	II
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-D
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 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 (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

2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)

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

Not listed.

UFI:

Austria: EG50-80U7-X00D-R5HW
Belgium: EG50-80U7-X00D-R5HW
Bulgaria: EG50-80U7-X00D-R5HW
Croatia: EG50-80U7-X00D-R5HW
Cyprus: EG50-80U7-X00D-R5HW
Czech Republic: EG50-80U7-X00D-R5HW
Denmark: EG50-80U7-X00D-R5HW
Estonia: EG50-80U7-X00D-R5HW
EU: EG50-80U7-X00D-R5HW
Finland: EG50-80U7-X00D-R5HW
France: EG50-80U7-X00D-R5HW
Germany: EG50-80U7-X00D-R5HW
Great Britain: EG50-80U7-X00D-R5HW
Greece: EG50-80U7-X00D-R5HW
Hungary: EG50-80U7-X00D-R5HW
Iceland: EG50-80U7-X00D-R5HW
Ireland: EG50-80U7-X00D-R5HW
Italy: EG50-80U7-X00D-R5HW
Latvia: EG50-80U7-X00D-R5HW
Lithuania: EG50-80U7-X00D-R5HW
Luxembourg: EG50-80U7-X00D-R5HW
Malta: EG50-80U7-X00D-R5HW
Netherlands: EG50-80U7-X00D-R5HW
Norway: EG50-80U7-X00D-R5HW
Poland: EG50-80U7-X00D-R5HW
Portugal: EG50-80U7-X00D-R5HW
Romania: EG50-80U7-X00D-R5HW
Slovakia: EG50-80U7-X00D-R5HW
Slovenia: EG50-80U7-X00D-R5HW
Spain: EG50-80U7-X00D-R5HW
Sweden: EG50-80U7-X00D-R5HW

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

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (CAS 112-34-5)
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)
2,2' -oxybisethanol; diethylene glycol (CAS 111-46-6)
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (CAS 143-22-6)
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] Orthoborate (CAS 30989-05-0)

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

Not listed.

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

According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

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 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.
AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
IATA: International Air Transport Association.
IBC: Intermediate Bulk Container.
IMDG: International Maritime Dangerous Goods.
MAC: Maximum Allowed Concentration.
MARPOL: International Convention for the Prevention of Pollution from Ships.
PBT: Persistent, bioaccumulative, toxic.
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.
vPvB: Very persistent and very bioaccumulative.

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 statements, which are not written out in full under sections 2 to 15

H302 Harmful if swallowed.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H361d Suspected of damaging the unborn child.
H361fd Suspected of damaging fertility or the unborn child.

Revision information

SECTION 2: Hazards identification: Prevention
Composition / Information on Ingredients: Component Summary

Training information

Follow training instructions when handling this material.

Disclaimer

Moove Lubricants ltd. 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 in the sheet was written based on the best knowledge and experience currently available.