



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 as amended by Regulation (EU) No. 2020/878, and
Regulation (EC) No. 1272/2008

Issuing Date 23-Oct-2024

Revision Date 23-Oct-2024

Revision Number 1

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

1.1. Product identifier

Product Name AMSOIL Glass Cleaner

Product Code(s) AGCSC

Synonyms None

Pure substance/mixture Mixture

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

Recommended use Glass cleaner

Uses advised against Use only for intended applications

1.3. Details of the supplier of the safety data sheet

Manufacturer

AMSOIL INC.
One AMSOIL Center
Superior, WI 54880, USA
T: +1 715-392-7101

For further information, please contact

E-mail address compliance@amsoil.com

1.4. Emergency telephone number

Emergency telephone CHEMTREC International: +1 703-741-5970

Emergency telephone - §45 - (EC)1272/2008

Europe 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aerosols Category 1 - (H222, H229)

2.2. Label elements



Signal word

Danger

Hazard statements

H222 - Extremely flammable aerosol.

H229 - Pressurised container: May burst if heated.

Precautionary Statements - EU (§28, 1272/2008)

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.

P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3. Other hazards**Other hazards**

Causes mild skin irritation. Harmful to aquatic life.

PBT & vPvB

None known

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	Notes
Ethanol 64-17-5	1-5	No data available	200-578-6 (603-002-00-5)	Flam. Liq. 2 (H225)	-	-	-	-
Butane 106-97-8	1-5	No data available	203-448-7 (601-004-00-0)	Flam. Gas 1 (H220) Press. Gas	-	-	-	C,U
2-butoxyethanol 111-76-2	1-5	No data available	203-905-0 (603-014-00-0)	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 3 (H331)	-	-	-	-
Propane 74-98-6	1-5	No data available	200-827-9 (601-003-00-5)	Flam. Gas 1 (H220) Press. Gas	-	-	-	U

Note C - Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note U - When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned: Press. Gas (Comp.), Press. Gas (Liq.), Press. Gas (Ref. Liq.), Press. Gas (Diss.). Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

Full text of H- and EUH-phrases: see section 16**Acute Toxicity Estimate**

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion

value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATE_{mix}) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Ethanol 64-17-5	7060	No data available	116.9 133.8	No data available	No data available
Butane 106-97-8	No data available	No data available	No data available	No data available	276808.3276
2-butoxyethanol 111-76-2	1200 ⁺ 470	435	No data available	3 ⁺ 2.1749 2.3489	No data available
Propane 74-98-6	No data available	No data available	No data available	No data available	200200

+ This value is the harmonised acute toxicity estimate (ATE) listed in CLP Annex VI, Part 3. This harmonised ATE value must be used when calculating the acute toxicity estimate (ATE_{mix}) for classifying a mixture containing the listed substance

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. Remove to fresh air.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth. Get medical attention if symptoms occur.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	Prolonged contact may cause redness and irritation.
Effects of Exposure	None.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO₂). Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Cylinders may rupture under extreme heat. Damaged cylinders should be handled only by specialists. Containers may explode when heated.

Hazardous combustion products Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

5.3. Advice for firefighters

Specific/special fire-fighting measures Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges. Contents under pressure. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

Other information Ventilate the area.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Flood with water to complete polymerization and scrape off floor.

Methods for cleaning up Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Clean contaminated surface thoroughly. Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections**Reference to other sections**

For additional information see: Section 8: Exposure controls/personal protection; Section 12: Ecological information; Section 13: Disposal considerations.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use spark-proof tools and explosion-proof equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Keep in an area equipped with sprinklers. Do not puncture or incinerate cans. Contents under pressure. In case of rupture: Avoid contact with skin and eyes. Avoid breathing vapours or mists. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities**Storage Conditions**

Store at temperatures not exceeding 50 °C/ 122 °F. Keep container tightly closed in a dry and well-ventilated place. Protect from sunlight. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

Storage class (TRGS 510)

LGK 2B.

7.3. Specific end use(s)**Specific use(s).**

No information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure Limits**

Under conditions which may generate mists, the following exposure limits are recommended: Long-term exposure limit (8-hour TWA): 5 mg/m³. Short-term exposure limit (15-minute): 10 mg/m³.

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Ethanol 64-17-5	-	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL 2000 ppm STEL 3800 mg/m ³	TWA: 1000 ppm TWA: 1907 mg/m ³	TWA: 1000 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³
Butane 106-97-8	-	TWA: 800 ppm TWA: 1900 mg/m ³ STEL 1600 ppm STEL 3800 mg/m ³	TWA: 1000 ppm STEL: 980 ppm STEL: 2370 mg/m ³	TWA: 1900 mg/m ³	TWA: 600 ppm TWA: 1450 mg/m ³ TWA: 10 ppm TWA: 22 mg/m ³ STEL: 750 ppm STEL: 1810 mg/m ³
2-butoxyethanol 111-76-2	TWA: 20 ppm TWA: 98 mg/m ³	TWA: 20 ppm TWA: 98 mg/m ³	TWA: 20 ppm TWA: 98 mg/m ³	TWA: 20 ppm TWA: 98 mg/m ³	TWA: 20 ppm TWA: 98 mg/m ³

	STEL: 50 ppm STEL: 246 mg/m ³ Sk*	STEL 40 ppm STEL 200 mg/m ³ Sk*	STEL: 50 ppm STEL: 246 mg/m ³ Sk*	STEL: 50 ppm STEL: 246 mg/m ³ Sk*	STEL: 50 ppm STEL: 246 mg/m ³ Sk*
Propane 74-98-6	-	TWA: 1000 ppm TWA: 1800 mg/m ³ STEL 2000 ppm STEL 3600 mg/m ³	TWA: 1000 ppm	TWA: 1800.0 mg/m ³	-
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Ethanol 64-17-5	-	TWA: 1000 mg/m ³ Ceiling: 3000 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 2000 ppm STEL: 3800 mg/m ³	TWA: 500 ppm TWA: 1000 mg/m ³ STEL: 1000 ppm STEL: 1900 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 1300 ppm STEL: 2500 mg/m ³
Butane 106-97-8	-	-	TWA: 500 ppm TWA: 1200 mg/m ³ STEL: 1000 ppm STEL: 2400 mg/m ³	TWA: 800 ppm TWA: 1500 mg/m ³	TWA: 800 ppm TWA: 1900 mg/m ³ STEL: 1000 ppm STEL: 2400 mg/m ³
2-butoxyethanol 111-76-2	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 100 mg/m ³ Sk* Ceiling: 200 mg/m ³	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 246 mg/m ³ STEL: 50 ppm Sk*	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk* S+	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 250 mg/m ³ Sk*
Propane 74-98-6	-	-	TWA: 1000 ppm TWA: 1800 mg/m ³ STEL: 2000 ppm STEL: 3600 mg/m ³	TWA: 1000 ppm TWA: 1800 mg/m ³	TWA: 800 ppm TWA: 1500 mg/m ³ STEL: 1100 ppm STEL: 2000 mg/m ³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Ethanol 64-17-5	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 5000 ppm STEL: 9500 mg/m ³	TWA: 200 ppm TWA: 380 mg/m ³	TWA: 200 ppm TWA: 380 mg/m ³ Peak: 800 ppm Peak: 1520 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 2000 ppm STEL: 3800 mg/m ³
Butane 106-97-8	TWA: 800 ppm TWA: 1900 mg/m ³	TWA: 1000 ppm TWA: 2400 mg/m ³	TWA: 1000 ppm TWA: 2400 mg/m ³ Peak: 4000 ppm Peak: 9600 mg/m ³	TWA: 1000 ppm TWA: 2350 mg/m ³	TWA: 2350 mg/m ³ STEL: 9400 mg/m ³
2-butoxyethanol 111-76-2	TWA: 10 ppm TWA: 49 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 10 ppm TWA: 49 mg/m ³ Sk*	TWA: 10 ppm TWA: 49 mg/m ³ Peak: 20 ppm Peak: 98 mg/m ³ Sk*	TWA: 25 ppm TWA: 120 mg/m ³ Sk*	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*
Propane 74-98-6	-	TWA: 1000 ppm TWA: 1800 mg/m ³	TWA: 1000 ppm TWA: 1800 mg/m ³ Peak: 4000 ppm Peak: 7200 mg/m ³	TWA: 1000 ppm TWA: 1800 mg/m ³	-
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Ethanol 64-17-5	STEL: 1000 ppm	-	STEL: 1000 ppm STEL: 1884 mg/m ³	TWA: 1000 mg/m ³	TWA: 500 ppm TWA: 1000 mg/m ³ STEL: 1000 ppm STEL: 1900 mg/m ³
Butane 106-97-8	TWA: 1000 ppm STEL: 3000 ppm	-	STEL: 1000 ppm STEL: 2377 mg/m ³	TWA: 300 mg/m ³ STEL: 300 mg/m ³	-
2-butoxyethanol 111-76-2	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 20 ppm TWA: 97 mg/m ³	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 10 ppm TWA: 50 mg/m ³ STEL: 20 ppm STEL: 100 mg/m ³ Sk*
Propane 74-98-6	STEL: 3000 ppm Simple asphyxiant	-	: Simple asphyxiant	TWA: 1000 ppm TWA: 1800 mg/m ³ STEL: 300 mg/m ³	-

Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Ethanol 64-17-5	-	-	TWA: 137 ppm TWA: 260 mg/m ³ STEL: 1000 ppm STEL: 1900 mg/m ³ Sk*	TWA: 500 ppm TWA: 950 mg/m ³ STEL: 625 ppm STEL: 1187.5 mg/m ³	TWA: 1900 mg/m ³
Butane 106-97-8	-	-	-	TWA: 250 ppm TWA: 600 mg/m ³ STEL: 312.5 ppm STEL: 750 mg/m ³	TWA: 1900 mg/m ³ STEL: 3000 mg/m ³
2-butoxyethanol 111-76-2	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 20.4 ppm TWA: 100 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 10 ppm TWA: 50 mg/m ³ STEL: 20 ppm STEL: 75 mg/m ³ Sk*	TWA: 98 mg/m ³ STEL: 200 mg/m ³ Sk*
Propane 74-98-6	-	-	-	TWA: 500 ppm TWA: 900 mg/m ³ STEL: 625 ppm STEL: 1125 mg/m ³	TWA: 1800 mg/m ³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 5000 ppm STEL: 9500 mg/m ³	TWA: 500 ppm TWA: 960 mg/m ³ Ceiling: 1920 mg/m ³	TWA: 960 mg/m ³ TWA: 500 ppm STEL: 1000 ppm STEL: 1920 mg/m ³	STEL: 1000 ppm STEL: 1910 mg/m ³
Butane 106-97-8	TWA: 1000 ppm STEL: 1000 ppm	TWA: 700 mg/m ³ STEL: 1000 mg/m ³	TWA: 1000 ppm TWA: 2400 mg/m ³ STEL: 5000 ppm STEL: 12000 mg/m ³	TWA: 1000 ppm TWA: 2400 mg/m ³ STEL: 4000 ppm STEL: 9600 mg/m ³	TWA: 1000 ppm
2-butoxyethanol 111-76-2	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 20 ppm TWA: 98 mg/m ³ Sk* Ceiling: 246 mg/m ³	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*	TWA: 20 ppm TWA: 98 mg/m ³ STEL: 50 ppm STEL: 245 mg/m ³ Sk*
Propane 74-98-6	TWA: 1000 ppm	TWA: 778 ppm TWA: 1400 mg/m ³ STEL: 1000 ppm STEL: 1800 mg/m ³	-	TWA: 1000 ppm TWA: 1800 mg/m ³ STEL: 4000 ppm STEL: 7200 mg/m ³	TWA: 1000 ppm
Chemical name	Sweden		Switzerland		United Kingdom
Ethanol 64-17-5	NGV: 500 ppm NGV: 1000 mg/m ³ Vägledande KGV: 1000 ppm Vägledande KGV: 1900 mg/m ³		TWA: 500 ppm TWA: 960 mg/m ³ STEL: 1000 ppm STEL: 1920 mg/m ³		TWA: 1000 ppm TWA: 1920 mg/m ³ STEL: 3000 ppm STEL: 5760 mg/m ³
Butane 106-97-8	NGV: 350 mg/m ³		TWA: 800 ppm TWA: 1900 mg/m ³ STEL: 3200 ppm STEL: 7600 mg/m ³		TWA: 600 ppm TWA: 1450 mg/m ³ STEL: 750 ppm STEL: 1810 mg/m ³
2-butoxyethanol 111-76-2	NGV: 10 ppm NGV: 50 mg/m ³ Bindande KGV: 50 ppm Bindande KGV: 246 mg/m ³ Sk*		TWA: 10 ppm TWA: 49 mg/m ³ STEL: 20 ppm STEL: 98 mg/m ³ Sk*		TWA: 25 ppm TWA: 123 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ Sk*
Propane 74-98-6	NGV: 350 mg/m ³		TWA: 1000 ppm TWA: 1800 mg/m ³ STEL: 4000 ppm STEL: 7200 mg/m ³		-

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
2-butoxyethanol 111-76-2	-	-	-	-	200 mg/g Creatinine (urine - Butoxyacetic acid end of shift at end of workweek) 0.17 mmol/mmol Creatinine (urine - Butoxyacetic acid end of shift at end of workweek)
Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
2-butoxyethanol 111-76-2	-	-	-	150 mg/g Creatinine (urine - Butoxyacetic acid (after hydrolysis) for long-term exposures: at the end of the shift after several shifts) 150 mg/g Creatinine (urine - Butoxyacetic acid (after hydrolysis) end of shift) 150 mg/g Creatinine - BAT (for long-term exposures: at the end of the shift after several shifts) urine	150 mg/g Creatinine (urine - Butoxyacetic acid (after hydrolysis) for long-term exposures: at the end of the shift after several shifts) 150 mg/g Creatinine (urine - Butoxyacetic acid (after hydrolysis) end of shift)
Chemical name	Hungary	Ireland	Italy MDLPS	Italy AIDII	
2-butoxyethanol 111-76-2	-	200 mg/g Creatinine (urine - end of shift)	-	200 mg/g Creatinine - urine (Butoxyacetic acid (with hydrolysis)) - end of shift	
Chemical name	Slovenia	Spain	Switzerland	United Kingdom	
2-butoxyethanol 111-76-2	150 mg/g Creatinine - urine (Butoxyacetic acid (after hydrolysis)) - at the end of the work shift; for long-term exposure: at the end of the work shift after several consecutive workdays	200 mg/g Creatinine (urine - Butoxyacetic acid (with hydrolysis) end of shift)	150 mg/g creatinine (urine - 2-Butoxyacetic acid (after hydrolysis) end of shift, and after several shifts (for long-term exposures))	240 mmol/mol creatinine - urine (Butoxyacetic acid) - post shift	

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
Ethanol 64-17-5	-	343 mg/kg bw/day [4] [6]	950 mg/m ³ [4] [6] 1900 mg/m ³ [5] [7]
2-butoxyethanol 111-76-2	-	125 mg/kg bw/day [4] [6] 89 mg/kg bw/day [4] [7]	98 mg/m ³ [4] [6] 1091 mg/m ³ [4] [7] 246 mg/m ³ [5] [7]

Notes

- [4] Systemic health effects.
 [5] Local health effects.
 [6] Long term.
 [7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
Ethanol 64-17-5	87 mg/kg bw/day [4] [6]	-	114 mg/m ³ [4] [6] 950 mg/m ³ [5] [7]
2-butoxyethanol 111-76-2	6.3 mg/kg bw/day [4] [6] 26.7 mg/kg bw/day [4] [7]	89 mg/kg bw/day [4] [6] 89 mg/kg bw/day [4] [7]	59 mg/m ³ [4] [6] 426 mg/m ³ [4] [7] 147 mg/m ³ [5] [7]

Notes

[4]	Systemic health effects.
[5]	Local health effects.
[6]	Long term.
[7]	Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
2-butoxyethanol 111-76-2	8.8 mg/L	26.4 mg/L	0.88 mg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
2-butoxyethanol 111-76-2	34.6 mg/kg sediment dw	3.46 mg/kg sediment dw	463 mg/L	2.33 mg/kg soil dw	0.02 g/kg food

8.2. Exposure controls**Engineering controls**

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Eye/face protection**

If there is a risk of contact: Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.

Hand protection

If there is a risk of contact: Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Impervious gloves. Wear suitable gloves. Gloves must conform to standard EN 374.

Skin and body protection

If there is a risk of contact: Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots. (EN 14058).

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls

No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Foam
Physical state	Aerosol
Colour	White
Odour	Pleasant
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flammability		Level 3 Aerosol
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Flash point		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
pH		No data available
pH (as aqueous solution)		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Water solubility		No data available
Solubility(ies)		No data available
Partition coefficient		No data available
Vapour pressure		No data available
Relative density		No data available
Bulk density		No data available
Liquid Density		No data available
Relative vapour density		No data available
Particle characteristics		
Particle Size		No data available
Particle Size Distribution		No data available

9.2. Other information

9.2.1. Information with regards to physical hazard classes

Not applicable

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	None under normal use conditions.
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10.2. Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact None.
Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks. Protect from direct sunlight.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition can lead to release of irritating gases and vapours. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation	Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.
Eye contact	Specific test data for the substance or mixture is not available. Contact with eyes may cause irritation.
Skin contact	Specific test data for the substance or mixture is not available. Causes mild skin irritation.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Prolonged contact may cause redness and irritation.

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

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral)	60,000.00 mg/kg
ATEmix (dermal)	21,750.00 mg/kg
ATEmix (inhalation-dust/mist)	25.00 mg/l
ATEmix (inhalation-vapour)	150.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethanol 64-17-5	= 7060 mg/kg (Rat)	-	= 116.9 mg/L (Rat) 4 h = 133.8 mg/L (Rat) 4 h
Butane 106-97-8	-	-	= 658 g/m ³ (Rat) 4 h
2-butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 435 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h = 486 ppm (Rat) 4 h
Propane	-	-	> 800000 ppm (Rat) 15 min

74-98-6			
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes mild skin irritation.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or 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.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

Chemical name	European Union
Butane	Muta. 1B

Carcinogenicity The supplier declares that it can be shown that the substance(s) contain less than 3% DMSO extract as measured by IP 346.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
Butane	Carc. 1A

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

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Due to the viscosity, this product does not present an aspiration hazard.

11.2. Information on other hazards**11.2.1. Endocrine disrupting properties**

Endocrine disrupting properties Based on available data, the classification criteria are not met

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information**12.1. Toxicity**

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethanol 64-17-5	-	LC50: 12.0 - 16.0mg/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 13400 - 15100mg/L (96h, Pimephales promelas)	-	LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =2mg/L (48h, Daphnia magna)

2-butoxyethanol 111-76-2	-	LC50: =1490mg/L (96h, Lepomis macrochirus) LC50: =2950mg/L (96h, Lepomis macrochirus)	-	EC50: >1000mg/L (48h, Daphnia magna)
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12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Ethanol	-0.35
Butane	2.31
2-butoxyethanol	0.81
Propane	1.09

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment Based on available data, the classification criteria are not met.

Chemical name	PBT and vPvB assessment
Ethanol 64-17-5	The substance is not PBT / vPvB
Butane 106-97-8	The substance is not PBT / vPvB
2-butoxyethanol 111-76-2	The substance is not PBT / vPvB
Propane 74-98-6	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties Based on available data, the classification criteria are not met.

12.7. Other adverse effects

Other adverse effects No information available.

PMT or vPvM properties Based on available data, the classification criteria are not met.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.
Waste codes / waste designations according to EWC / AVV	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	UN1950
14.2 UN proper shipping name	Aerosols, flammable
14.3 Transport hazard class(es)	2.1
14.4 Packing group	Not applicable
Description	UN1950, Aerosols, flammable, 2.1
14.5 Environmental hazards	No
14.6 Special Precautions for Users	
Special Provisions	A145, A167, A802
ERG Code	10L
Note:	None

IMDG

14.1 UN number or ID number	UN1950
14.2 UN proper shipping name	Aerosols
14.3 Transport hazard class(es)	2.1
14.4 Packing group	Not applicable
Description	UN1950, Aerosols, 2.1
14.5 Environmental hazards	No
14.6 Special Precautions for Users	
Special Provisions	63,190, 277, 327, 344, 381, 959
EmS-No.	F-D S-U
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	UN1950
14.2 UN proper shipping name	AEROSOLS
14.3 Transport hazard class(es)	2.1
14.4 Packing group	Not applicable
Description	UN1950, AEROSOLS, 2.1
14.5 Environmental hazards	No
14.6 Special Precautions for Users	
Special Provisions	190, 327, 344, 625
Classification code	5F

ADR

14.1 UN number or ID number	UN1950
14.2 UN proper shipping name	AEROSOLS
14.3 Transport hazard class(es)	2.1
14.4 Packing group	Not applicable
Description	UN1950, AEROSOLS, 2.1
14.5 Environmental hazards	No
14.6 Special Precautions for Users	
Special Provisions	190, 327, 344, 625
Classification code	5F
Tunnel restriction code	(D)

ADN

14.1 UN/ID no	UN1950
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14.2 EPNN	AEROSOLS
14.3 Transport hazard class(es)	2.1
14.4 Packing group	Not applicable
Description	UN1950, AEROSOLS, 2.1
14.5 Environmental hazard	No
14.6 Special Precautions for Users	
Special Provisions	190, 327, 344, 625
Classification code	5F
Ventilation	VE01, VE04
Equipment Requirements	PP, EX, A

SECTION 15: Regulatory information

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number
Ethanol 64-17-5	RG 84
2-butoxyethanol 111-76-2	RG 84

Germany

Water hazard class (WGK) slightly hazardous to water (WGK 1)

Netherlands

Carcinogenic, mutagenic and reproductive toxic effects

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
Ethanol	Present	-	Fertility Category 1A Development Category 1A Can be harmful via breastfeeding

Switzerland

Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC) SR 814.018 Group I
WPO (GSchV) SR 814.201; WPA (GSchG) SR 814.20 Class B

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Butane - 106-97-8	28 29 75	-
2-butoxyethanol - 111-76-2	75	-

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

P3a - FLAMMABLE AEROSOLS

P3b - FLAMMABLE AEROSOLS

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Biocidal Products Regulation (EU) No 528/2012 (BPR)

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Ethanol - 64-17-5	Product-type 1: Human hygiene Product-type 2: Disinfectants and algacides not intended for direct application to humans or animals Product-type 4: Food and feed area

International Inventories

Contact supplier for inventory compliance status

15.2. Chemical safety assessment**Chemical Safety Report**

No information available

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H220 - Extremely flammable gas

H225 - Highly flammable liquid and vapour

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H331 - Toxic if inhaled

Legend

SVHC: Substances of Very High Concern for Authorisation:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

STOT: Specific Target Organ Toxicity

ATE: Acute Toxicity Estimate

LC50: 50% Lethal Concentration

LD50: 50% Lethal Dose

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

Sk*

Skin designation

SCBA Self-contained breathing apparatus

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method

Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	On basis of test data
Carcinogenicity	On basis of test data
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Chronic aquatic toxicity	On basis of test data
Aspiration hazard	Calculation method
Ozone	Calculation method
Flammable aerosol	On basis of test data

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 Environmental Protection Agency
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
 Organisation for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

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Disclaimer

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End of Safety Data Sheet