



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Date of issue: 25/08/2017
Revision date: 25/08/2017
Version: 1.0

Glycerol

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

1.1. Product identifier

Substance name : glycerol
EC-No. : 200-289-5
CAS-No. : 56-81-5
Product code : I-A8.103.27 serie, I-A8.103.28 serie, I-15.892.81 serie
Formula : C₃H₈O₃
Synonyms : 1,2,3-propane triol / 1,2,3-propanetriol / 1,2,3-trihydroxypropane / 90 technical glycerine / citifluor AF 2 / glycerene / glycerin / glycerin mist / glycerin USP / glycerin, anhydrous / glycerin, synthetic / glyceritol / glycyol alcohol / glyrol / grocolene / IFP (=glycerol) / incorporation factor (=glycerol) / MOON (=glycerol) / osmoglyn / star (=glycerol) / superol (=1,2,3-propanetriol) / synthetic glycerin / trihydroxypropane

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemical

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Antonides CV
Beukenlaan 1
8536TK Oosterzee - Nederland
T +31882686643

1.4. Emergency telephone number

Emergency number : 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances



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Name	Product identifier	%	Classification according to Directive 67/548/EEC
glycerol	(CAS-No.) 56-81-5 (EC-No.) 200-289-5	100	Not classified
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
glycerol	(CAS-No.) 56-81-5 (EC-No.) 200-289-5	100	Not classified

Full text of R- and H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

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

Symptoms/effects after inhalation	: ON HEATING: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/effects after skin contact	: Dry skin.
Symptoms/effects after eye contact	: Redness of the eye tissue. Not irritating.
Symptoms/effects after ingestion	: Nausea. Vomiting. Diarrhoea. AFTER ABSORPTION OF HIGH QUANTITIES: Headache. Dehydration. Disturbances of heart rate. Change in the haemogramme/blood composition. Decreased renal function.
Chronic symptoms	: No effects known.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Alcohol-resistant foam. Dry chemical powder. Carbon dioxide. Dry sand.
Unsuitable extinguishing media	: Container may slop over if solid jet (water/foam) is applied.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD. Combustible. INDIRECT FIRE HAZARD. Temperature above flashpoint: higher fire/explosion hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".



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Reactivity : May polymerize on exposure to temperature rise. Decomposes on exposure to temperature rise: release of toxic/corrosive/combustible gases/vapours (acrolein). Upon combustion: CO and CO₂ are formed. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts with (some) acids: (increased) risk of fire/explosion.

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Dilute toxic gases with water spray.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Protective clothing. See "Material-Handling" to select protective clothing.

Emergency procedures : Mark the danger area. No naked flames. Wash contaminated clothes. In case of reactivity hazard: consider evacuation.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply.

Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or kieselguhr, powdered limestone. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Keep away from naked flames/heat. Finely divided: spark- and explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

7.2. Conditions for safe storage, including any incompatibilities

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases.

Storage area : Store in a dry area. Ventilation at floor level. Fireproof storeroom. May be stored under nitrogen. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: steel. aluminium. iron. synthetic material. glass. MATERIAL TO AVOID: No data available.



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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

glycerol (56-81-5)		
Belgium	Limit value (mg/m ³)	10 mg/m ³ (Glycérine (brouillard)); Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	10 mg/m ³ (Glycérine (aérosols de)); France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ Glycerol, mist; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)

8.2. Exposure controls

Materials for protective clothing	: GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: natural rubber. neoprene. PVC. viton. GIVE LESS RESISTANCE: styrene-butadiene rubber. GIVE POOR RESISTANCE: polyurethane.
Hand protection	: Gloves.
Eye protection	: Safety glasses.
Skin and body protection	: Protective clothing.
Respiratory protection	: Mist formation: aerosol mask with filter type P1. On heating: gas mask with filter type A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 92.09 g/mol
Colour	: Colourless.
Odour	: Odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 18.17 °C (1013 hPa)
Freezing point	: No data available
Boiling point	: 290 °C (760 mm Hg)
Flash point	: 199 °C (Closed cup; 1013 hPa; 177 °C; Open cup; 1013 hPa)
Critical temperature	: 452 °C
Auto-ignition temperature	: 370 °C
Decomposition temperature	: 290 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: < 0.001 mm Hg (20 °C)
Vapour pressure at 50 °C	: 0.2 mm Hg (100 °C)
Relative vapour density at 20 °C	: 3.17
Relative density	: 1.26 (20 °C)
Relative density of saturated gas/air mixture	: 1
Density	: 1261 kg/m ³ (20 °C)



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Solubility	: Soluble in water. Soluble in ethanol. Soluble in acetone. Soluble in ethylacetate. Insoluble in oils/fats. Water: 100 g/100ml (25 °C, Complete) Ethanol: miscible Ether: 0.2 g/100ml (poorly soluble)
Log Pow	: -1.75 (Experimental value; Equivalent or similar to OECD 107)
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 1412 mPa.s (20 °C; 612 mPa.s; 30 °C; 14,8 mPa.s; 100 °C)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 2.7 - 19 vol %

9.2. Other information

Specific conductivity	: 6.4 µS/m
VOC content	: 0 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Hygroscopic. Slightly volatile.

SECTION 10: Stability and reactivity

10.1. Reactivity

May polymerize on exposure to temperature rise. Decomposes on exposure to temperature rise: release of toxic/corrosive/combustible gases/vapours (acrolein). Upon combustion: CO and CO₂ are formed. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts with (some) acids: (increased) risk of fire/explosion.

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

glycerol (56-81-5)

LD50 oral rat	27200 mg/kg (Rat; Experimental value)
LC50 inhalation rat (mg/l)	> 2.75 mg/l/4h (Rat; Experimental value)

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified



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STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5.
Ecology - water	: Mild water pollutant (surface water). Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to algae. Not harmful to bacteria. Not harmful to aquatic organisms (EC50 >1000 mg/l).

glycerol (56-81-5)

LC50 fish 1	54000 mg/l (LC50; 96 h; Salmo gairdneri; Static system; Fresh water)
EC50 Daphnia 1	> 10000 mg/l (EC50; 24 h; Daphnia magna; Static system; Fresh water)
Threshold limit algae 1	> 10000 mg/l (EC0; 8 days; Scenedesmus quadricauda; Static system; Fresh water)

12.2. Persistence and degradability

glycerol (56-81-5)

Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.87 g O ₂ /g substance
Chemical oxygen demand (COD)	1.16 g O ₂ /g substance
ThOD	1.217 g O ₂ /g substance
BOD (% of ThOD)	0.71

12.3. Bioaccumulative potential

glycerol (56-81-5)

Log Pow	-1.75 (Experimental value; Equivalent or similar to OECD 107)
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

glycerol (56-81-5)

Surface tension	0.0634 N/m (20 °C; 1000 g/l)
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Remove waste in accordance with local and/or national regulations. Remove to an authorized waste treatment plant. Recycle by distillation. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Do not discharge into surface water.
Additional information	: LWCA (the Netherlands): KGA category 03. Can be considered as non hazardous waste according to Directive 2008/98/EC.
European List of Waste (LoW) code	: 16 03 06 - organic wastes other than those mentioned in 16 03 05



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SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Transport regulations (ADR) : Not subject

Transport regulations (RID) : Not subject

14.6.2. Transport by sea

Transport regulations (IMDG) : Not subject

14.6.3. Air transport

Transport regulations (IATA) : Not subject

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

glycerol is not on the REACH Candidate List

VOC content : 0 %

15.1.2. National regulations

Water hazard class (WGK) : 1 - low hazard to waters

WGK remark : Classification water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 2)

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information



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Disclaimer:

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