

SAFETY DATA SHEET



Glycerol

BDH1172

Version 1.5

Revision Date 03/19/2015

Print Date 05/08/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Glycerol

MSDS Number : 000000011695

Product Use Description : Solvent

Manufactured for : VWR International LLC
Radnor Corporate Center
Building One
Suite 200
100 Matsonford Road
Radnor PA 19087

For more information call : (Monday-Friday, 8.00am-5:00pm)
1-800-932-5000

In case of emergency call : (24 hours/day, 7 days/week)
1-800-424-9300(USA Only)
For Transportation Emergencies:
1-800-424-9300 (CHEMTREC - Domestic)
1-613-996-6666 (CANUTEC - Canada)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Form : liquid, clear

Color : colourless

Odor : odourless

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Classification of the substance or mixture

Not a hazardous substance or mixture.

Precautionary statements : **Prevention:**
Use personal protective equipment as required.

Hazards not otherwise classified : May cause eye and skin irritation.

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₃H₈O₃

Chemical nature : Substance

Chemical Name	CAS-No.	Concentration
Glycerol	56-81-5	100.00 %

SECTION 4. FIRST AID MEASURES

Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.

Eye contact : Rinse immediately with plenty of water, also under the eyelids,

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for at least 15 minutes. Call a physician if irritation develops or persists.

Ingestion : Do not induce vomiting without medical advice. Call a physician.

Notes to physician

Treatment : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
Cool closed containers exposed to fire with water spray.

: Water spray
Foam
Carbon dioxide (CO₂)
Dry powder

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

: High volume water jet

Specific hazards during firefighting : In case of fire hazardous decomposition products may be produced such as:
Acrolein
Carbon monoxide
Carbon dioxide (CO₂)

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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- Personal precautions : Wear personal protective equipment.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Ensure adequate ventilation.
Remove all sources of ignition.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Prevent product from entering drains.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Methods for cleaning up : Ventilate the area.
Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

SECTION 7. HANDLING AND STORAGE**Handling**

- Handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Do not smoke.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

- Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place.

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Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from heat and sources of ignition.
Keep away from direct sunlight.
Protect from physical damage.
Store away from incompatible substances.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- | | | |
|--------------------------|---|---|
| Protective measures | : | Ensure that eyewash stations and safety showers are close to the workstation location. |
| Engineering measures | : | Use with local exhaust ventilation.
Prevent vapour buildup by providing adequate ventilation during and after use. |
| Eye protection | : | Wear as appropriate:
Safety glasses with side-shields
Safety goggles |
| Hand protection | : | Protective gloves
Gloves must be inspected prior to use.
Replace when worn. |
| Skin and body protection | : | Wear as appropriate:
Solvent-resistant apron
If splashes are likely to occur, wear:
Protective suit |
| Respiratory protection | : | In case of insufficient ventilation wear suitable respiratory equipment.
Use NIOSH approved respiratory protection. |
| Hygiene measures | : | When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Avoid breathing vapours, mist or gas. |

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Avoid contact with skin, eyes and clothing.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Glycerol	56-81-5	PEL : Permissible exposure limit	15 mg/m ³	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Further information	:	Form of exposure : Total dust.			

Glycerol	56-81-5	PEL : Permissible exposure limit	5 mg/m ³	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Further information	:	Form of exposure : Respirable fraction.			

Glycerol	56-81-5	TWA : time weighted average	10 mg/m ³	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Further information	:	Form of exposure : Total dust.			

Glycerol	56-81-5	TWA : time weighted average	5 mg/m ³	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Further information	:	Form of exposure : Respirable fraction.			

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state	: liquid, clear
Color	: colourless
Odor	: odourless
pH	: 6.5 - 8.5 at 50 Weight percent Note: (as aqueous solution)
Melting point/freezing point	: 17.8 °C
Boiling point/boiling range	: 290 °C
Flash point	: 390 °F (199 °C) Method: closed cup
Lower explosion limit	: 2 %(V)
Upper explosion limit	: 11.3 %(V) Note: no data available
Vapor pressure	: 1.33 hPa at 20 °C(68 °F)
Vapor density	: 3.1 at 20 °C Note: (Air = 1.0)
Density	: 1.261 g/cm3
Water solubility	: Note: soluble

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Ignition temperature : 369.9 °C

Molecular weight : 92.11 g/mol

SECTION 10. STABILITY AND REACTIVITY

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Conditions to avoid : Heat, flames and sparks.
Keep away from direct sunlight.
Protect from moisture.

Incompatible materials to avoid : Strong oxidizing agents
Acetic anhydride
Calcium oxychloride
Chromium oxides
Alkali metal hydrides

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:
Acrolein
Carbon monoxide
Carbon dioxide (CO₂)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD₅₀: 17,000 - 27,200 mg/kg
Species: Rat

Acute dermal toxicity : LD₅₀: > 10,000 mg/kg
Species: Rabbit

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Genotoxicity in vitro : Note: In vitro tests did not show mutagenic effects

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : static test
LC50: 44,000 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates : LC50: > 10,000 mg/l
Exposure time: 24 h
Species: Daphnia magna (Water flea)

Toxicity to bacteria : Respiration inhibition
EC50: > 1,000 mg/l
Exposure time: 3 h
Species: activated sludge
Method: OECD 209

Elimination information (persistence and degradability)

Bioaccumulation : Bioconcentration factor (BCF): 3.16
Note: Accumulation in aquatic organisms is unlikely.

Biodegradability : Value: 63 %
Method: OECD 301 C
Note: Readily biodegradable, according to appropriate OECD test.

Further information on ecology

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Dispose of contents/ container in accordance with local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT Not dangerous goods

TDG Not dangerous goods

IATA Not dangerous goods

IMDG Not dangerous goods

SECTION 15. REGULATORY INFORMATION

Inventories

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL.

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Toxic Chemical Control Law (TCCL) List : On the inventory, or in compliance with the inventory

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Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances : On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

National regulatory information

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards : Acute Health Hazard

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts RTK : Glycerol 56-81-5

WHMIS Classification : Not Rated
This product has been classified according to the hazard criteria

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of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 1	1
Flammability	: 1	1
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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