



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Material name</b>	GLYCEROL
<b>Version #</b>	02
<b>Revision date</b>	08-26-2011
<b>CAS #</b>	56-81-5
<b>Product Codes</b>	<b>J.T.Baker: 2135, 2136, 2140, 2142, 2143, 2988, 4043, 5093, M778</b> <b>Macron: 5092, 72138</b>
<b>Synonym(s)</b>	1,2,3-propanetriol; glycerin; glycol alcohol; glycerol, anhydrous
<b>Manufacturer</b>	Avantor Performance Materials, Inc.
<b>Address</b>	3477 Corporate Parkway Suite #200 Center Valley, PA 18034 US
<b>Customer Service</b>	855-282-6867
<b>24 Hour Emergency</b>	908-859-2151
<b>Chemtrec</b>	800-424-9300

## 2. Hazards Identification

<b>Emergency overview</b>	CAUTION  May cause eye irritation. Spray mists may cause respiratory tract irritation.
<b>OSHA regulatory status</b>	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
<b>Potential health effects</b>	
<b>Routes of exposure</b>	Inhalation. Ingestion. Skin contact. Eye contact.
<b>Eyes</b>	Slightly irritating but does not injure eye tissue.
<b>Skin</b>	May cause skin irritation in susceptible persons.
<b>Inhalation</b>	High mist concentrations may cause irritation of respiratory tract.
<b>Ingestion</b>	May cause irritation of the gastrointestinal tract.
<b>Target organs</b>	Eyes.
<b>Chronic effects</b>	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
<b>Potential environmental effects</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
GLYCEROL	56-81-5	99 - 100

## 4. First Aid Measures

<b>First aid procedures</b>	
<b>Eye contact</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops or persists.
<b>Skin contact</b>	Wash skin with soap and water. Get medical attention if symptoms occur.
<b>Inhalation</b>	Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.
<b>Ingestion</b>	Seek medical advice. If ingestion of a large amount does occur, call a poison control center immediately.

**Notes to physician** Treat symptomatically.  
**General advice** 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.

## 5. Fire Fighting Measures

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**Flammable properties** This product is not flammable. May burn, but does not ignite readily.

**Extinguishing media**

**Suitable extinguishing media** Water. Carbon dioxide (CO2). Dry chemical powder. Foam.

**Unsuitable extinguishing media** None known.

**Protection of firefighters**

**Specific hazards arising from the chemical** By heating and fire, irritating vapors/gases may be formed.

**Protective equipment and precautions for firefighters** Use water spray to cool unopened containers. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters** Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.

**Specific methods** In the event of fire and/or explosion do not breathe fumes.

**Hazardous combustion products** Carbon monoxide and carbon dioxide.

## 6. Accidental Release Measures

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**Personal precautions** Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**Methods for containment** Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.

**Methods for cleaning up**

Large Spills: Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. Clean up in accordance with all applicable regulations. Collect in a non-combustible container for prompt disposal.

## 7. Handling and Storage

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**Handling** Wear appropriate personal protective equipment. Avoid breathing mist. Avoid contact with eyes. Use only with adequate ventilation. Wash thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.

**Storage** Keep container closed.

## 8. Exposure Controls / Personal Protection

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### ACGIH

Material	Type	Value	Form
GLYCEROL (56-81-5)	TWA	10.0000 mg/m3	Mist.

## Occupational exposure limits

### U.S. - OSHA

Material	Type	Value	Form
GLYCEROL (56-81-5)	PEL	15.0000 mg/m <sup>3</sup> 5.0000 mg/m <sup>3</sup>	Total dust. Respirable fraction.

### Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Personal protective equipment

#### Eye / face protection

Wear safety glasses with side shields (or goggles).

#### Skin protection

Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves.

#### Respiratory protection

Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

#### General hygiene considerations

Provide eyewash station and safety shower. 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.

#### General

Wear chemical protective equipment that is specifically recommended by the manufacturer. Launder contaminated clothing before reuse.

## 9. Physical & Chemical Properties

Appearance	Clear. Oily.
Color	Colorless.
Odor	Odorless.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
Melting point	68 °F (20 °C)
Freezing point	68 °F (20 °C)
Boiling point	554 °F (290 °C) 101.325 kPa
Flash point	390.2 °F (199 °C) Pensky-Martens Closed Cup
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor density	3.17
Specific gravity	1.2613
Relative density	Not available.
Solubility (water)	Miscible
Partition coefficient (n-octanol/water)	-1.76
Auto-ignition temperature	739 °F (392.8 °C)
Decomposition temperature	Not available.
Molecular weight	92.09 g/mol
Molecular formula	C3-H8-O3

## 10. Chemical Stability & Reactivity Information

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<b>Chemical stability</b>	Stable under normal temperature conditions.
<b>Conditions to avoid</b>	Excessive heat.
<b>Incompatible materials</b>	Strong oxidizing agents. Strong acids. Strong bases.
<b>Hazardous decomposition products</b>	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

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<b>Sensitization</b>	Not a skin sensitizer.
<b>Acute effects</b>	Low hazard for usual industrial or commercial handling.
<b>Local effects</b>	May cause eye irritation.
<b>Chronic effects</b>	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Skin corrosion/irritation</b>	None known.
<b>Epidemiology</b>	No epidemiological data is available for this product.
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Reproductive effects</b>	Contains no ingredient listed as toxic to reproduction
<b>Teratogenicity</b>	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
<b>Symptoms and target organs</b>	Mild eye irritation.

## 12. Ecological Information

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<b>Ecotoxicological data</b>	<b>Test Results</b>
<b>Product</b>	
GLYCEROL (56-81-5)	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 51000 mg/l 96.00 hours
<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Persistence and degradability</b>	Expected to be readily biodegradable.
<b>Partition coefficient (n-octanol/water)</b>	-1.76

## 13. Disposal Considerations

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<b>Disposal instructions</b>	Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. All wastes must be handled in accordance with local, state and federal regulations.
<b>Contaminated packaging</b>	Offer rinsed packaging material to local recycling facilities. Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport Information

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<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.

## IMDG

Not regulated as dangerous goods.

## 15. Regulatory Information

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**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

### CERCLA (Superfund) reportable quantity

None

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 311 hazardous chemical** Yes

### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**State regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

### US - Pennsylvania RTK - Hazardous Substances: Listed substance

GLYCEROL (CAS 56-81-5) Listed.

**Saf-T-Data** Health: 2 - Moderate  
Flammability: 1 - Slight  
Reactivity: 0 - None  
Contact: 1 - Slight  
Lab Protective Equip: B - GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES  
Storage Color Code: G - Green (General Storage)

## 16. Labeling Info

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**Label Hazard Warning** CAUTION

May cause eye irritation. Spray mists may cause respiratory tract irritation.

**Label Precautions** Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed.

**Label First Aid**

Immediately flush eyes with plenty of water for at least 15 minutes. Flush skin thoroughly with water. If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Get medical attention if irritation develops or persists. If ingestion of a large amount does occur, call a poison control center immediately.

**17. Other Information**

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**NFPA ratings**

Health: 1  
Flammability: 1  
Instability: 0

**Disclaimer**

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**Issue date**

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