

# SAFETY DATA SHEET

North American Version

## DIGLYCEROL

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1. Identification of the substance or preparation

Product name : DIGLYCEROL  
Chemical Name : Diglycerol  
Synonyms : Diglycerin, Oxybispropanediol, Propanediol,oxybis-  
Molecular formula : C6H14O5  
Molecular Weight : 166.2 g/mol

#### 1.2. Use of the Substance/Preparation

Recommended use : - Chemical industry  
- Cosmetics

#### 1.3. Company/Undertaking Identification

Address : SOLVAY CHEMICALS, INC.  
3333 RICHMOND AVENUE  
HOUSTON TX 77098-3099  
United States

#### 1.4. Emergency and contact telephone numbers

Emergency telephone : 1 (800) 424-9300 CHEMTREC® (USA & Canada)  
01-800-00-214-00 (MEX. REPUBLIC)

Contact telephone number : US: +1-800-765-8292 (Product information)  
(product information): US: +1-513-679-3031 (Product information)

### 2. HAZARDS IDENTIFICATION

#### 2.1. Emergency Overview:

NFPA : H= 0 F= 1 I= 1 S= None  
HMIS : H= 0 F= 1 R= 1 PPE = Supplied by User; dependent on local  
conditions

##### General Information

Appearance : viscous liquid  
Colour : colourless  
Odour : odourless

#### 2.2. Potential Health Effects:

##### Inhalation

- No adverse effects are normally expected.

##### Eye contact

- No adverse effects are normally expected.

##### Skin contact

- No adverse effects are normally expected.

**Ingestion**

- No reported cases of intoxication in man.
- Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Other toxicity effects**

- See section 11: Toxicological Information

**2.3. Environmental Effects:**

- See section 12: Ecological Information

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Diglycerol**

CAS-No. : 59113-36-9  
Concentration : **>= 90.0 %**

### 4. FIRST AID MEASURES

**4.1. Inhalation**

- No hazards which require special first aid measures.

**4.2. Eye contact**

- Rinse thoroughly with plenty of water, also under the eyelids.

**4.3. Skin contact**

- Wash off with plenty of water.

**4.4. Ingestion**

- If a large amount is swallowed, get medical attention.

**If victim is conscious:**

- If swallowed, rinse mouth with water (only if the person is conscious).

**If victim is unconscious but breathing:**

- not applicable

### 5. FIRE-FIGHTING MEASURES

**5.1. Suitable extinguishing media**

- Water
- Water spray
- Carbon dioxide (CO<sub>2</sub>)
- Foam, AFFF
- Dry powder

**5.2. Extinguishing media which shall not be used for safety reasons**

- None.

**5.3. Special exposure hazards in a fire**

- Combustible material
- Heating can release hazardous gases.
- Vapours may form explosive mixtures with air.

**5.4. Hazardous decomposition products**

- Carbon monoxide
- Acrolein (traces)

### 5.5. Special protective equipment for fire-fighters

- Evacuate personnel to safe areas.
- In the event of fire, wear self-contained breathing apparatus.

### 5.6. Other information

- Cool containers / tanks with water spray.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions

- Refer to protective measures listed in sections 7 and 8.

### 6.2. Environmental precautions

- Should not be released into the environment.

### 6.3. Methods for cleaning up

- Dam up.
- Soak up with inert absorbent material.
- Prevent product from entering drains.
- Keep in properly labelled containers.
- Keep in suitable, closed containers for disposal.
- Treat recovered material as described in the section "Disposal considerations".

## 7. HANDLING AND STORAGE

### 7.1. Handling

- No special handling advice required.

### 7.2. Storage

- Keep away from incompatible products
- To maintain product quality, do not store in heat or direct sunlight.

### 7.3. Other information

- Keep away from open flames, hot surfaces and sources of ignition.
- Do not smoke.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Exposure Limit Values

#### Diglycerol

- US. ACGIH Threshold Limit Values  
Remarks: none established

#### Glycerol

- US. ACGIH Threshold Limit Values 01 2006  
time weighted average = 10 mg/m<sup>3</sup>  
Remarks: Mist
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) 02 2006  
Permissible exposure limit = 5 mg/m<sup>3</sup>  
Remarks: respirable dust fraction
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) 02 2006  
Permissible exposure limit = 15 mg/m<sup>3</sup>  
Remarks: Total dust
- US. OSHA Table Z-1-A (29 CFR 1910.1000) 1989

time weighted average = 5 mg/m<sup>3</sup>

Remarks: respirable dust fraction

- US. OSHA Table Z-1-A (29 CFR 1910.1000) 1989

time weighted average = 10 mg/m<sup>3</sup>

Remarks: Total dust

ACGIH® and TLV® are registered trademarks of the American Conference of Governmental Industrial Hygienists.

SAEL = Solvay Acceptable Exposure Limit, Time Weighted Average for 8 hour workdays. No Specific TLV STEL (Short Term Exposure Level) has been set. Excursions in exposure level may exceed 3 times the TLV TWA for no more than a total of 30 minutes during a workday and under no circumstances should they exceed 5 times the TLV TWA.

## 8.2. Engineering controls

- Ensure adequate ventilation.
- Refer to protective measures listed in sections 7 and 8.

## 8.3. Personal protective equipment

### 8.3.1. Respiratory protection

- No personal respiratory protective equipment normally required.
- In case of insufficient ventilation, wear suitable respiratory equipment.

### 8.3.2. Hand protection

- Protective gloves
- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Suitable material: PVC

### 8.3.3. Eye protection

- If splashes are likely to occur, wear:
- Goggles
- Face-shield

### 8.3.4. Skin and body protection

- Wear suitable protective clothing.

### 8.3.5. Hygiene measures

- When using do not eat, drink or smoke.
- Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. General Information

**Appearance** : viscous liquid  
**Colour** : colourless  
**Odour** : odourless

### 9.2. Important health safety and environmental information

**pH** : 5 - 6  
*Concentration: 100 g/l*  
*Temperature: 20 °C ( 68 °F )*

**Boiling point/boiling range** : 205 °C ( 401 °F )  
*Pressure: 1.3 hPa*

**Flash point** : ca. 230 °C ( 446 °F )  
*Remarks: Combustible material*  
*Method: open cup*

<b>Flammability</b>	: <i>Remarks: not applicable</i>
<b>Explosive properties</b>	: <u><i>Explosion danger:</i></u> <i>Remarks: Vapours may form explosive mixture with air. (Glycerol)</i>
<b>Vapour pressure</b>	: < 1 hPa <i>Temperature: 20 °C ( 68 °F )</i>
<b>Relative density / Density</b>	: 1.28 <i>Temperature: 25 °C ( 77 °F )</i>
<b>Solubility</b>	: Soluble in: : Water : Alcohol
<b>Partition coefficient: n-octanol/water</b>	: <u><i>log Pow:</i></u> -1.76
<b>Viscosity</b>	: 12,000 - 13,000 mPa.s <i>Temperature: 25 °C ( 77 °F )</i>
<b>Vapour density</b>	: <i>Remarks: no data available</i>

### 9.3. Other data

**Auto-flammability** : ca. 380 °C ( 716 °F )

## 10. STABILITY AND REACTIVITY

### 10.1. Stability

- Stable under recommended storage conditions.

### 10.2. Conditions to avoid

- To avoid thermal decomposition, do not overheat.
- Heat, flames and sparks.

### 10.3. Materials to avoid

- Oxidizing agents, Products which react with alcohols

### 10.4. Hazardous decomposition products

- Carbon monoxide, Acrolein (traces)

## 11. TOXICOLOGICAL INFORMATION

### Toxicological data

#### **Acute oral toxicity**

- LD50, rat, > 2,000 mg/kg

#### **Skin irritation**

- rabbit, No skin irritation

#### **Eye irritation**

- rabbit, No eye irritation

#### **Sensitisation**

- guinea pig, Did not cause sensitization on laboratory animals.

#### **Chronic toxicity**

- Prolonged exposure, Target Organs: gastro-intestinal system, irritant effects, (Glycerol)
- Repeated exposure, no systemic effect, (Glycerol)

**Remarks**

- Health injuries are not known or expected under normal use.
- In vitro tests did not show mutagenic effects, (Glycerol)

## 12. ECOLOGICAL INFORMATION

### 12.1. Ecotoxicity effects

**Acute toxicity**

- Fishes, *Carassius auratus*, LC50, 24 h, > 5,000 mg/l (Glycerol)
- Crustaceans, *Daphnia magna*, LC50, 24 h, > 10,000 mg/l (Glycerol)

**Further information on ecology**

- Bacteria, *Pseudomonas putida*, EC50, 16 h, > 10,000 mg/l (Glycerol)

### 12.2. Mobility

- Remarks: no data available

### 12.3. Persistence and degradability

**Abiotic degradation**

- Result: no data available

**Biodegradation**

- aerobic, Tested according to: Zahn - Wellens, Chemical degradation > 90 %, 7 d  
Remarks: Inherently biodegradable.

### 12.4. Bioaccumulative potential

- Bioconcentration: log Pow = -1.76, (Glycerol)  
Result: non-suspected bioaccumulation

### 12.5. Other adverse effects

- no data available

### 12.6. Remarks

- Ecological injuries are not known or expected under normal use.

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste from residues / unused products

- In accordance with local and national regulations.
- The organic ingredients can be biodegraded in a sewage plant after neutralization.
- or
- Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

### 13.2. Packaging treatment

- Rinse the empty containers with a low volatility hydrocarbon and treat the effluent in the same way as waste.
- or
- Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.
- The empty and clean containers are to be reused in conformity with regulations.

### 13.3. RCRA Hazardous Waste

- Listed RCRA Hazardous Waste (40 CFR 302) - No
- Unlisted RCRA Hazardous Waste (40 CFR 302) - No

## 14. TRANSPORT INFORMATION

- Sea (IMO/IMDG)
- not regulated
- Air (ICAO/IATA)
- not regulated
- U.S. Dept of Transportation
- not regulated
- It is recommended that ERG Guide number 111 be used for all non-regulated material.
- Canadian Transportation of Dangerous Goods
- not regulated

## 15. REGULATORY INFORMATION

### 15.1. Inventory Information

<b>Toxic Substance Control Act list (TSCA)</b>	: -	In compliance with inventory.
<b>Australian Inventory of Chemical Substances (AICS)</b>	: -	One or more components not listed on inventory.
<b>Canadian Domestic Substances List (DSL)</b>	: -	In compliance with inventory.
<b>Inventory of Existing Chemical Substances (China) (IECS)</b>	: -	In compliance with inventory.
<b>EU list of existing chemical substances (EINECS)</b>	: -	In compliance with inventory.
<b>Japanese Existing and New Chemical Substances (MITI List) (ENCS)</b>	: -	In compliance with inventory.
<b>Korean Existing Chemicals List (ECL)</b>	: -	In compliance with inventory.
<b>New Zealand Inventory of Chemicals (NZIOC)</b>	: -	One or more components not listed on inventory.
<b>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</b>	: -	One or more components not listed on inventory.

### 15.2. Other regulations

***US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)***

- not regulated.

***US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required***

- not regulated.

***US. EPA CERCLA Hazardous Substances (40 CFR 302)***

- not regulated.

***US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)***

- not regulated.

***US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)***

- not regulated.

***US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)***

- not regulated.

### 15.3. Classification and labelling

**Canada. Canadian Environmental Protection Act (CEPA). WHMIS Ingredient Disclosure List (Can. Gaz., Part II, Vol. 122, No. 2)**

- Not listed

Remarks: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

## 16. OTHER INFORMATION

### Ratings :

#### **NFPA (National Fire Protection Association)**

Health = 0 Flammability = 1 Instability = 1 Special =None

#### **HMIS (Hazardous Material Information System)**

Health = 0 Fire = 1 Reactivity = 1 PPE : Supplied by User; dependent on local conditions

### Further information

- General revision
- Distribute new edition to clients

Material Safety Data Sheets contain country specific regulatory information; therefore, the MSDS's provided are for use only by customers of the company mentioned in section 1 in North America. If you are located in a country other than Canada, Mexico or the United States, please contact the Solvay Group company in your country for MSDS information applicable to your location. The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product). To our actual knowledge, the information contained herein is accurate as of the date of this document. However, neither the company mentioned in section 1 nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use in compliance with applicable law, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes. The company mentioned in section 1 reserves the right to make additions, deletions or modifications to the information at any time without prior notification. Trademarks and/or other products of the company mentioned in section 1 referenced herein are either trademarks or registered trademarks of the company mentioned in section 1 or its affiliates, unless otherwise indicated.

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