

## GLYCERIN

### Material Safety Data Sheet (MSDS)

#### 1. PRODUCT IDENTIFICATION

Product Name: Glycerin  
 INCI Name: Glycerin  
 Chemical Name: Glycerol  
 CAS Number: 56-81-5  
 EINECS Number: 200-289-5  
 Origin:

#### 2. PHYSICAL & CHEMICAL PROPERTIES

Boiling / Melting Point: 290°C (554°F) (760mmHg)  
 Specific Gravity, H<sub>2</sub>O=1: 1.2607  
 Vapor Pressure, mmHg: 1mmHg@20°C  
 Vapor Density, Air=1: 3.1 @20°C  
 Volatiles, % by Volume: not available  
 Evaporation Rate: not available  
 Solubility in Water: soluble  
 HLB Value: not available  
 Appearance: clear, slightly viscous liquid

#### 3. STABILITY & REACTIVITY

General: stable, hazardous polymerisation will not occur  
 Incompatible Materials / Conditions to Avoid: nitric acid, potassium permanganate, oxidants  
 Hazardous Decomposition Products: Acrolein if heated to 260°C (500°F)

#### 4. HANDLING & STORAGE

Store in closed containers between 17°C-55°C protected from humidity. Keep away from oxidizing agents, excessive heat, and ignition sources. Store and use in well ventilated areas. Do not store or use near heat, spark, or flame; also store out of sun. Precautions: To retain color and purity store in stainless steel vessels with provision made to protect against absorption of moisture from air.

#### 5. ACCIDENTAL RELEASE MEASURES

Spill Clean-up Procedures: Remove sources of ignition, contain spill to smallest area possible. Stop leak if possible. Pick up small spills with water or absorbent materials such as paper towels. Recover large spills for salvage or disposal. Wash hard surfaces with safety solvent or detergent. Caution: slippery surface.

#### 6. EXPOSURE CONTROLS & PERSONAL PROTECTION

Respiratory Protection: If used at temperatures >140°C (>284°F), wear a NIOSH approved organic vapor/mist respirator.  
 Protective Clothing: Safety glasses, goggles, or face shield recommended to protect eyes from mists or splashing. PVC coated gloves recommended to prevent skin contact.  
 Other Protective Measures: Employees must practice good personal hygiene, washing exposed areas of skin several times daily and laundering contaminated clothing before re-use.

#### 7. HAZARDS IDENTIFICATION

General: Primary route of exposure under normal use: Skin

Ingestion: Acute effects from oral overexposure: Diarrhea & vomiting, cramps, increased pulse and respiration rate, increased body temperature, falling blood pressure.

#### 8. FIRST AID MEASURES

Eyes: Irrigate eyes with a heavy stream of water for at least 15 to 20 minutes. Seek medical attention if symptoms persist.  
 Skin: Wash exposed areas of the body with water.  
 Inhalation: Remove from area of exposure to fresh air, seek medical attention if symptoms persist.  
 Ingestion: Seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

#### 9. FIRE FIGHTING MEASURES

NFPA Hazard Rating: Health: 1 Flammability: 1 Reactivity: 1  
 Flash Point: 199°C (390°F)  
 Fire Point: 1 atm 370°C (698°F)  
 Extinguishing Media: Water fog or fine spray, dry chemical extinguishers, carbon dioxide extinguisher, Foam. Do not use direct water stream as this may spread fire.  
 Unusual Fire & Explosion Hazards : Cool as rapidly as possible to reduce toxic acrolein level. (Acrolein formed at boiling point is explosive with air).  
 Special Fire Fighting Procedures: Firefighters should use self-contained NIOSH approved breathing apparatus to avoid exposure to smoke and vapor.

#### 10. TOXICOLOGICAL INFORMATION

LD50: Ingestion, Rat 17,000-27,200 mg/kg  
 Skin absorption: Rabbit >10,000 mg/kg  
 Inhalation: LC50, 6h, Aerosol: Rat >4 mg/L  
 Teratogenicity, Carcinogenicity: Did not cause cancer in laboratory animals.

#### 11. DISPOSAL CONSIDERATIONS

Storage and disposal must be in accordance with applicable local, state & federal disposal regulations. Characterization and compliance with applicable laws are the responsibility solely of the generator.

#### 12. TRANSPORT INFORMATION

UN Hazard Class: n/a  
 NFPA Codes: Health: 0 Flammability: 1 Reactivity: 1

#### 13. DISCLAIMER

This 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 other process. Such information is to be the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitability & completeness of such information for his own particular use.

ALL DATA HEREIN ARE ALL AS PER OUR SUPPLIER.