

Date Prepared: 11/13/2014

Reviewed On: 10/15/2014

1 Identification            • Product Identifier         • Product Name: Glycerol         Catalog Number: 28220         CAS Number:         See 1:5         EC number:         200-289-5         EC number:         200-289-5         Relevant identified uses of the substance or mixture and uses advised against         No further relevant information available.         Application of the substance / the mixture In-vitro Diagnostics         Details of the supplier of the safety data sheet         Manufacturer/Supplier:         BD Diagnostic Systems         T. Loveton Circle         Sparks, MD 21152         Telephone:         (410) 771 - 0100 or (800) 638 – 8663         Email Address: Technical. Services         Emergency telephone number:         Information Department: Technical Service         Emergency telephone number:         In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic         Systems (410) 771-0100 or (800)-638-8663, or Chem Trec at (800) 424-9300.          2 Hazard(s) identification          • Classification of the substance or mixture         The substance is not classified according to the Globally Harmonized System (GHS).         Classification according to Directive 67/548/EEC or Directive 1999/45/EC         ¥; Irritant         R36/38: Irritating to eyes and skin.         Label elements         OHS label elements Void         Hazard pictograms Void         Signal word Void         Hazard pictograms Void         Signal word Void         Hazard pictograms Void         Signal word Void         Hazards (scale 0-4)         ¥Heath = 2         Flammability = 0         F	
<ul> <li>Product Name: <u>Glycerol</u></li> <li>Catalog Number: 228220</li> <li>CAS Number: 56-81-5</li> <li>EC number: 200-289-5</li> <li>Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.</li> <li>Application of the substance / the mixture In-vitro Diagnostics</li> <li>Details of the supplier of the safety data sheet</li> <li>Manufacturer/Supplier: BD Diagnostic Systems 7 Loveton Circle</li> <li>Sparks, MD 21152</li> <li>Telephone: (410) 771 · 0100 or (800) 638 – 8663</li> <li>Email Address: Technical Services @bd.com</li> <li>Information Department: Technical Service</li> <li>Emergency telephone number: In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771 · 0100 or (800) -638-8663, or ChemTrec at (800) 424-9300.</li> </ul> 2 Hazard(s) identification • Classification of the substance or mixture The substance is not classified according to the Globally Harmonized System (GHS). • Classification according to Directive 67/548/EEC or Directive 1999/45/EC • Xi: Irritant Rasda is: Irritating to eyes and skin. • Label elements • GHS label elements Void • Marting (scale 0-4) • Mealth = 2 • Fianmability = 0 Reactivity = 0 • Health = 2 • Fianmability = 0 Reactivity = 0 • Reactivity = 0 Reactivity = 0 • Context page 4	1 Identification
56-81-5         • EC number: 200-289-5         • Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.         • Application of the substance / the mixture In-vitro Diagnostics         • Details of the supplier of the safety data sheet         • Manufacturer/Supplier: BD Diagnostic Systems 7 Loveton Circle         Sparks, MD 21152         Telephone: (410) 771 - 0100 or (800) 638 – 8663 Email Address: Technical Services @bd.com         • Information Department: Technical Services         • Intermetion Department: Technical Services         • Intermetion Department: Technical Services         • Instructurer/Supplier: In case of a chemical energency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.         2 Hazard(s) identification         • Classification of the substance or mixture The substance is not classified according to the Globally Harmonized System (GHS).         • Classification according to Directive 67/548/EEC or Directive 1999/45/EC         Image: Irritating to eyes and skin.         • Label elements         • GHS label elements Void         • Hazard pictograms Void         • Mazard pictograms Void         • Mazard statements Void         • Hazard statements Void         • Hazard statements Void         • Hazard statements Void	Product Name: <u>Glycerol</u> Catalog Number: 228220
<ul> <li>Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.</li> <li>Application of the substance / the mixture In-vitro Diagnostics</li> <li>Details of the supplier of the safety data sheet</li> <li>Manufacturer/Supplier: BD Diagnostic Systems 7 Loveton Circle Sparks, MD 21152 Telephone: (410) 771 - 0100 or (800) 638 – 8663 Email Address: Technical_Services @bd.com</li> <li>Information Department: Technical Service</li> <li>Temergency telephone number: In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.</li> <li>2 Hazard(s) identification</li> <li>Classification of the substance or mixture The substance is not classified according to the Globally Harmonized System (GHS).</li> <li>Classification according to Directive 67/548/EEC or Directive 1999/45/EC</li> <li>Xi, Irritatin Ra36/38: Irritating to eyes and skin.</li> <li>Label elements GHS label elements Void</li> <li>Signal word Void</li> <li>Marard statements Void</li> <li>NFPA ratings (scale 0-4)</li> <li>Marard statements Void</li> <li>MFA ratings (scale 0-4)</li> <li>Meatth = 2 Flammability = 0 Reactivity = 0</li> <li>Health = 2 Flammability = 0 Reactivity = 0</li> <li>Flammability = 0 Reactivity = 0</li> <li>Keactivity = 0</li> <li>Reactivity = 0</li> <li>Reactivity = 0</li> </ul>	56-81-5
$\begin{array}{c} \textbf{Harrie Constraints} \\ \textbf{Harrie Constraints} \\$	<ul> <li>Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.</li> </ul>
<ul> <li>Manufacturer/Supplier: BD Diagnostic Systems 7 Loveton Circle Sparks, MD 21152 Telephone: (410) 771 - 0100 or (800) 638 - 8663 Email Address: Technical Services @bd.com</li> <li>Information Department: Technical Service</li> <li>Emergency telephone number: In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.</li> <li>2 Hazard(s) identification</li> <li>Classification of the substance or mixture The substance is not classified according to the Globally Harmonized System (GHS).</li> <li>Classification according to Directive 67/548/EEC or Directive 1999/45/EC</li> <li>i: rintant</li> <li>R36/38: Irritating to eyes and skin.</li> <li>Label elements</li> <li>GHS label elements Void</li> <li>Hazard pictograms Void</li> <li>Signal word Void</li> <li>Health = 2 Flammability = 0 Reactivity = 0</li> <li>HINS ratings (scale 0-4)</li> <li>i: Health = 2 Flammability = 0 Reactivity = 0</li> <li>Health = 2 Flammability = 0 Reactivity = 0</li> <li>Health = 2 Flammability = 0 Reactivity = 0</li> <li>constrained to the substance on the substan</li></ul>	<ul> <li>Application of the substance / the mixture In-vitro Diagnostics</li> </ul>
<b>2 Hazard(s) identification</b> • <b>Classification of the substance or mixture</b> The substance is not classified according to the Globally Harmonized System (GHS).• <b>Classification according to Directive 67/548/EEC or Directive 1999/45/EC• Classification according to Directive 67/548/EEC or Directive 1999/45/EC• Classified according to Pirective 67/548/EEC or Directive 1999/45/EC</b> <t< td=""><td><ul> <li>Manufacturer/Supplier: BD Diagnostic Systems</li> <li>7 Loveton Circle</li> <li>Sparks, MD 21152</li> <li>Telephone: (410) 771 - 0100 or (800) 638 – 8663</li> <li>Email Address: Technical_Services @bd.com</li> <li>Information Department: Technical Service</li> <li>Emergency telephone number: In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic</li> </ul></td></t<>	<ul> <li>Manufacturer/Supplier: BD Diagnostic Systems</li> <li>7 Loveton Circle</li> <li>Sparks, MD 21152</li> <li>Telephone: (410) 771 - 0100 or (800) 638 – 8663</li> <li>Email Address: Technical_Services @bd.com</li> <li>Information Department: Technical Service</li> <li>Emergency telephone number: In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic</li> </ul>
• Classification of the substance or mixture The substance is not classified according to the Globally Harmonized System (GHS). • Classification according to Directive 67/548/EEC or Directive 1999/45/EC w Xi; Irritant R36/38: Irritating to eyes and skin. • Label elements • GHS label elements Void • Hazard pictograms Void • Hazard statements Void • Hazard statements Void • MFPA ratings (scale 0-4) • Health = 2 Flammability = 0 Reactivity = 0 • HMIS ratings (scale 0-4) • Health = 2 Flammability = 0 Reactivity = 0 Reactivity = 0 Reactivity = 0 Reactivity = 0 Reactivity = 0	
• Label elements • GHS label elements Void • Hazard pictograms Void • Signal word Void • Hazard statements Void • NFPA ratings (scale 0-4)	<ul> <li>Classification of the substance or mixture The substance is not classified according to the Globally Harmonized System (GHS).</li> <li>Classification according to Directive 67/548/EEC or Directive 1999/45/EC</li> <li>Xi; Irritant</li> </ul>
Flammability = 0 Reactivity = 0 HMIS ratings (scale 0-4) HEALTH 2 HEALTH 2 HEALTH 2 FIRE 0 REACTIVITY 0 Reactivity = 0 (Contd. on page 2)	<ul> <li>Label elements</li> <li>GHS label elements Void</li> <li>Hazard pictograms Void</li> <li>Signal word Void</li> <li>Hazard statements Void</li> </ul>
HEALTH2FIRE0REACTIVITY0Reactivity = 0(Contd. on page 2)	Flammability = 0
FIRE $\bigcirc$ Flammability = 0 REACTIVITY $\bigcirc$ Reactivity = 0 (Contd. on page 2)	· HMIS ratings (scale 0-4)
	HEALTH2Health = 2FIRE $\bigcirc$ Flammability = 0



Date Prepared: 11/13/2014

Reviewed On: 10/15/2014

#### Product Name: Glycerol

(Contd. of page 1)

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

#### 3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description:
- 56-81-5 glycerol
- · Identification number(s):
- · EC number: 200-289-5

#### 4 First-aid measures

- · Description of first aid measures
- · General information No special measures required.
- · After inhalation Seek medical treatment in case of complaints.
- · After skin contact Immediately wash with water and soap and rinse thoroughly.
- · After eye contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing If symptoms persist consult doctor.
- *Most important symptoms and effects, both acute and delayed* No further relevant information available.
- · Information for doctor Show this product label or this SDS.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

#### 5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents CO2, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

#### 6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Not required.

• Environmental precautions: Wipe up with damp sponge or mop.

(Contd. on page 3)



Date Prepared: 11/13/2014

#### Reviewed On: 10/15/2014

Product Name: Glycerol

(Contd. of page 2)

Methods and material for containment and cleaning up: No special measures required.
 Reference to other sections No dangerous substances are released.

#### 7 Handling and storage

- · Precautions for safe handling No special measures required.
- Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage
- $\cdot$  Requirements to be met by storerooms and receptacles: 15 30  $^{\circ}C$
- Information about storage in one common storage facility: Store away from oxidizing agents.
- Further information about storage conditions: Store in cool, dry conditions in well sealed containers.
- · Specific end use(s) No further relevant information available.

#### 8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see Section 7.
- · Control parameters

· Components with limit values that require monitoring at the workplace:

56-81-5 glycerol

PEL 15\*; 5\*\* mg/m<sup>3</sup>

\*Total dust \*\*Respirable fraction

TWA Short-term value: 10 mg/m<sup>3</sup>

· Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls
- · Personal Protective Equipment
- · General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:



Chemical resistant gloves (i.e. nitrile, or equivalent).

• Eye protection: Safety glasses

(Contd. on page 4)

(Contd. of page 3)

# 😂 BD

## Safety Data Sheet acc. to OSHA HCS

Date Prepared: 11/13/2014

#### Reviewed On: 10/15/2014

Product Name: Glycerol

· Body protection: Protective work clothing (lab coat).

Physical and chemical properties			
<ul> <li>Information on basic physical and chemical properties</li> <li>General Information</li> <li>Appearance:</li> </ul>			
Form:	Highly viscous Liquid		
Color: · Odor:	Colorless Pleasant		
<ul> <li>Change in condition</li> <li>Melting point/Melting range:</li> <li>Boiling point/Boiling range:</li> </ul>			
· Flash point:	Not applicable		
· Danger of explosion:	Product does not present an explosion hazard.		
· Density:	Not determined		
<ul> <li>Solubility in / Miscibility with Water: Organic solvents:</li> <li>Other information</li> </ul>	Soluble 100.0 % No further relevant information available.		

#### 10 Stability and reactivity

- · Reactivity
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: Incompatible material: strong oxidizers.
- · Hazardous decomposition products: No dangerous decomposition products known.

#### 11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:
  - 56-81-5 glycerol
  - Oral LD50 250 mg/kg (mus)

(Contd. on page 5)



Date Prepared: 11/13/2014

Reviewed On: 10/15/2014

#### Product Name: Glycerol

(Contd. of page 4)

#### 12600 mg/kg (rat)

- · Primary irritant effect:
- · on the skin: No irritating effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Subacute to chronic toxicity: Target organ: kidneys
- · Additional toxicological information:

The product is not subject to OSHA classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

#### · Carcinogenic categories

· IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

#### **12 Ecological information**

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Ecotoxical effects:
- · Other information:

The ecological effects have not been thoroughly investigated, but currently none have been identified.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

#### **13 Disposal considerations**

- · Waste treatment methods
- · Recommendation

Smaller quantities can be disposed of with solid waste. This product is not considered a RCRA hazardous waste.

(Contd. on page 6)

US



Date Prepared: 11/13/2014

Reviewed On: 10/15/2014

#### Product Name: Glycerol

(Contd. of page 5) Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to state and federal regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

### 14 Transport information

· UN-Number		
· DOT, ADR, ADN, IMDG, IATA	Void	
· UN proper shipping name		
· DOT, ADR, ADN, IMDG, IATA	Void	
· Transport hazard class(es)		
· DOT, ADR, ADN, IMDG, IATA		
· Class	Void	
· Packing group		
· DOT, ADR, IMDG, IATA	Void	
· Environmental hazards:		
· Marine pollutant:	No	
<ul> <li>Special precautions for user</li> </ul>	Not applicable.	
· Transport in bulk according to Annex II of		
MARPOL73/78 and the IBC Code	Not applicable.	
· Transport/Additional information:	If a "void" appears in the Hazard Class section for the type of transportation, this indicates the product is not regulated for transportation.	
· UN "Model Regulation":	-	

#### 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- · SARA Section 355 (extremely hazardous substances)
- Substance is not listed.
- · SARA Section 313 (specific toxic chemical listings)

Substance is not listed.

- · TSCA (Toxic Substances Control Act)
  - Substance is listed.

(Contd. on page 7)

US



Date Prepared: 11/13/2014

#### Reviewed On: 10/15/2014

Product Name: Glycerol

(Contd. of page 6)

- California Proposition 65 Chemicals known to cause cancer
- Substance is not listed.
- California Proposition 65 Chemicals known to cause reproductive toxicity for females:
  - Substance is not listed.
- · California Proposition 65 Chemicals known to cause reproductive toxicity for males:
- Substance is not listed.
- · California Proposition 65 Chemicals known to cause developmental toxicity:
- Substance is not listed.

#### · Carcinogenic categories

- TLV (Threshold Limit Value established by ACGIH)
- Substance is not listed.
- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

#### **16 Other information**

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

#### Department issuing SDS: Environmental, Health & Safety Created by Michael J. Spinazzola

· Date of preparation / last revision 11/13/2014 / -

Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent