

**SAFETY DATA SHEET**

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 12/07/2017

Version 1.3

**SECTION 1. Identification****Product identifier**

Product number	GX0185
Product name	Glycerol GR ACS
CAS-No.	56-81-5

**Relevant identified uses of the substance or mixture and uses advised against**

Identified uses	Reagent for analysis
-----------------	----------------------

**Details of the supplier of the safety data sheet**

Company	EMD Millipore Corporation   290 Concord Road, Billerica, MA 01821, United States of America   General Inquiries: +1-978-715-4321   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
---------	---

<b>Emergency telephone</b>	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
----------------------------	--

**SECTION 2. Hazards identification****GHS-Labeling**

Not a dangerous substance according to GHS.

**Other hazards**

None known.

**SECTION 3. Composition/information on ingredients**

Chemical nature	Alcohol	
Formula	(HOCH <sub>2</sub> ) <sub>2</sub> CHOH	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub> (Hill)
Molar mass	92.1 g/mol	

**Hazardous ingredients***Chemical name (Concentration)*

CAS-No.

*glycerine (>= 90 % - <= 100 % )*

56-81-5

Exact percentages are being withheld as a trade secret.

# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

GX0185

Version 1.3

Product name

Glycerol GR ACS

---

## SECTION 4. First aid measures

### Description of first-aid measures

#### *Inhalation*

After inhalation: fresh air.

#### *Skin contact*

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

#### *Eye contact*

After eye contact: rinse out with plenty of water. Remove contact lenses.

#### *Ingestion*

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Never give anything by mouth to an unconscious person.

### Most important symptoms and effects, both acute and delayed

Cyanosis, gastric pain, Drowsiness, Diarrhea, Vomiting, Headache

### Indication of any immediate medical attention and special treatment needed

No information available.

---

## SECTION 5. Fire-fighting measures

### Extinguishing media

#### *Suitable extinguishing media*

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

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### Special hazards arising from the substance or mixture

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

Fire may cause evolution of:

Acrolein

### Advice for firefighters

#### *Special protective equipment for fire-fighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### *Further information*

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

---

## SECTION 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number                      GX0185  
Product name                         Glycerol GR ACS

---

Version 1.3

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

## Environmental precautions

Do not let product enter drains.

## Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

---

## SECTION 7. Handling and storage

### Precautions for safe handling

Observe label precautions.

### Conditions for safe storage, including any incompatibilities

Tightly closed.

Store at room temperature.

---

## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### *Ingredients*

Basis	Value	Threshold limits	Remarks
<i>glycerine 56-81-5</i>			
OSHA_TRANS	PEL:	15 mg/m <sup>3</sup>	Form of exposure: Total dust.
	PEL:	5 mg/m <sup>3</sup>	Form of exposure: Respirable fraction.
Z1A	Time Weighted Average (TWA):	10 mg/m <sup>3</sup>	Form of exposure: Total dust.
	Time Weighted Average (TWA):	5 mg/m <sup>3</sup>	Form of exposure: Respirable fraction.

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

### *Hygiene measures*

Change contaminated clothing. Wash hands after working with substance.

### *Eye/face protection*

Safety glasses

---

# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number                      GX0185  
Product name                         Glycerol GR ACS

---

Version 1.3

## *Hand protection*

full contact:

Glove material:                      Nitrile rubber  
Glove thickness:                    0.11 mm  
Break through time:                > 480 min

splash contact:

Glove material:                      Nitrile rubber  
Glove thickness:                    0.11 mm  
Break through time:                > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

## *Other protective equipment:*

protective clothing

## *Respiratory protection*

required when vapors/aerosols are generated.

---

## SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	odorless
Odor Threshold	Not applicable
pH	ca. 5 at 100 g/l 68 °F (20 °C)
Melting point/range	64 - 68 °F (18 - 20 °C)
Boiling point/boiling range	554 °F (290 °C) at 1,013 hPa (decomposition)
Boiling point/boiling range	360 °F (182 °C) at 15 hPa

# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number  
Product name

GX0185  
Glycerol GR ACS

Version 1.3

---

Flash point	ca. 356 °F (180 °C) Method: open cup
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	2.6 %(V)
Upper explosion limit	11.3 %(V)
Vapor pressure	< 0.001 hPa at 68 °F (20 °C)
Relative vapor density	3.18
Density	1.26 g/cm <sup>3</sup> at 68 °F (20 °C)
Relative density	No information available.
Water solubility	at 68 °F (20 °C) soluble
Partition coefficient: n-octanol/water	log Pow: -1.8 (25 °C) (experimental) Bioaccumulation is not expected. (Lit.)
Autoignition temperature	No information available.
Decomposition temperature	> 554 °F (> 290 °C)
Viscosity, dynamic	1,412 mPa.s at 68 °F (20 °C)
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	752 °F (400 °C)

---

## SECTION 10. Stability and reactivity

### Reactivity

Forms explosive mixtures with air on intense heating.  
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number                      GX0185  
Product name                         Glycerol GR ACS

---

Version 1.3

Risk of explosion with:

halogens, Strong oxidizing agents, peroxi compounds, hydrogen peroxide, Nitriles  
perchloric acid, with, Lead oxides

Nitric acid, with, sulfuric acid

Risk of ignition or formation of inflammable gases or vapors with:

potassium permanganate, hydrides, calcium hypochlorite

Fluorine, with, Lead oxides

Exothermic reaction with:

Oxides of phosphorus, chromium(VI) oxide, phosphorus halides

Acetic anhydride, with, phosphorous oxichloride

ANILINE, with, Nitrobenzene

## Conditions to avoid

Strong heating (decomposition).

## Incompatible materials

no information available

## Hazardous decomposition products

in the event of fire: See section 5.

---

## SECTION 11. Toxicological information

### Information on toxicological effects

*Likely route of exposure*

Eye contact, Skin contact

*Target Organs*

Eyes

Skin

Respiratory system

Kidneys

*Acute oral toxicity*

LD50 Rat: 12,600 mg/kg (IUCLID)

Symptoms: Vomiting, gastric pain, Diarrhea

*Acute inhalation toxicity*

Symptoms: Possible damages:, slight mucosal irritations

*Acute dermal toxicity*

LD50 Rabbit: > 18,700 mg/kg

(IUCLID)

*Skin irritation*

Rabbit

Result: No irritation

(IUCLID)

---

# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number  
Product name

GX0185  
Glycerol GR ACS

Version 1.3

## *Eye irritation*

Rabbit

Result: No eye irritation

OECD Test Guideline 405

## *Sensitization*

Patch test: human

Result: negative

(IUCLID)

## *Genotoxicity in vitro*

Ames test

Result: negative

(IUCLID)

## *Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

## *Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

## *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

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

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## **Further information**

After swallowing of large amounts:

Cyanosis, Headache, Drowsiness

However, when the product is handled appropriately, hazardous effects are unlikely to occur.

Handle in accordance with good industrial hygiene and safety practice.

---

## **SECTION 12. Ecological information**

### **Ecotoxicity**

#### *Toxicity to fish*

static test LC50 *Oncorhynchus mykiss* (rainbow trout): 54,000 mg/l; 96 h (ECHA)

# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

GX0185

Version 1.3

Product name

Glycerol GR ACS

---

## *Toxicity to daphnia and other aquatic invertebrates*

static test EC50 Daphnia magna (Water flea): > 10,000 mg/l; 24 h (ECHA)

## **Persistence and degradability**

### *Biodegradability*

63 %; 14 d

OECD Test Guideline 301C

Readily biodegradable.

### *Biochemical Oxygen Demand (BOD)*

870 mg/g (5 d)

(External MSDS)

### *Chemical Oxygen Demand (COD)*

1,160 mg/g

(External MSDS)

### *Theoretical oxygen demand (ThOD)*

1,217 mg/g

(Lit.)

### *Ratio BOD/ThBOD*

BOD5 71 %

(Lit.)

### *Ratio COD/ThBOD*

95 %

(Lit.)

## **Bioaccumulative potential**

### *Partition coefficient: n-octanol/water*

log Pow: -1.8 (25 °C)

(experimental)

Bioaccumulation is not expected. (Lit.)

## **Mobility in soil**

No information available.

---

## **SECTION 13. Disposal considerations**

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

---

## **SECTION 14. Transport information**

### **Land transport (DOT)**

Not classified as dangerous in the meaning of transport regulations.

### **Air transport (IATA)**

Not classified as dangerous in the meaning of transport regulations.

### **Sea transport (IMDG)**

Not classified as dangerous in the meaning of transport regulations.

---



# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

GX0185

Version 1.3

Product name

Glycerol GR ACS

---

## SECTION 15. Regulatory information

### United States of America

#### SARA 313

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 302

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

#### Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

#### DEA List I

Not listed

#### DEA List II

Not listed

### US State Regulations

#### Massachusetts Right To Know

##### *Ingredients*

glycerine

#### Pennsylvania Right To Know

##### *Ingredients*

glycerine

#### New Jersey Right To Know

##### *Ingredients*

glycerine

#### California Prop 65 Components

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

#### Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL

---

## SECTION 16. Other information

# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

GX0185

Version 1.3

Product name

Glycerol GR ACS

---

## **Training advice**

Provide adequate information, instruction and training for operators.

## **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Revision Date 12/07/2017

---

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

*All rights reserved. Millipore and the "M" Mark are registered trademarks of Merck KGaA, Darmstadt, Germany.*