

# SAFETY DATA SHEET

Version 6.3  
Revision Date 28.04.2022  
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## SECTION 1: Identification of the hazardous chemical and of the supplier

### 1.1 Product identifiers

Product name : Glycerin  
Product Number : G2289  
Brand : Sigma-Aldrich  
CAS-No. : 56-81-5

### 1.2 Other means of identification

1,2,3-Propanetriol  
Glycerol  
Glycerin

### 1.3 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For R&D use only. Not for pharmaceutical, household or other uses.

### 1.4 Details of the supplier of the safety data sheet

Company : SIGMA-ALDRICH (M) SDN BHD  
Level 3, Menara Sunway Annexe,  
Jalan Lagoon Timur, Bandar Sunway,  
46150 PETALING JAYA, SELANGOR  
MALAYSIA  
Telephone : +60 (603)03-563-53321  
Fax : +60 (603)03-563-54116

### 1.5 Emergency telephone

Emergency Phone # : 1-800-815-308 (CHEMTREC) \* + 62 0800  
140 1253 (Customer Call Centre)

## Section 2: Hazard identification

### 2.1 GHS Classification

Classification according to CLASS regulations 2013

Not a hazardous substance or mixture.

### 2.2 GHS Label elements, including precautionary statements

Labelling according to CLASS regulations 2013

Pictogram none

Signal Word none

Hazard statement(s) none

Precautionary statement(s) none

Not a hazardous substance or mixture.

## 2.3 Other hazards - none

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### SECTION 3: Composition and information of the ingredients of the hazardous chemical

Substance / Mixture : Substance

#### 3.1 Substances

Synonyms : 1,2,3-Propanetriol  
Glycerol  
Glycerin

Formula : C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>  
Molecular weight : 92.09 g/mol  
CAS-No. : 56-81-5  
EC-No. : 200-289-5

#### Hazardous ingredients

Component	Classification	Concentration
<b>glycerine</b>		
		<= 100 %

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### SECTION 4: First aid measures

#### 4.1 Description of first-aid measures

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

##### In case of skin contact

Wash off with soap and plenty of water.

##### In case of eye contact

Flush eyes with water as a precaution.

##### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

No data available

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas.  
For personal protection see section 8.

### 6.2 Environmental precautions

No special environmental precautions required.

### 6.3 Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Keep container tightly closed in a dry and well-ventilated place.

Hygroscopic.

#### Storage class

Storage class (TRGS 510): 10: Combustible liquids

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls and personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
glycerine	56-81-5	TWA	10 mg/m <sup>3</sup>	Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

### 8.2 Exposure controls

#### Appropriate engineering controls

General industrial hygiene practice.

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

#### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### **Body Protection**

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **Respiratory protection**

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### **Control of environmental exposure**

No special environmental precautions required.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- |  |                                   |
|--|-----------------------------------|
| a) Physical state                          | viscous                           |
| b) Color                                   | clear                             |
| c) Odor                                    | odorless                          |
| d) Melting point/freezing point            | Melting point/range: 20 °C - lit. |
| e) Initial boiling point and boiling range | 182 °C at 27 hPa - lit.           |

f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	Upper explosion limit: 19 %(V) at 1013 hPa Lower explosion limit: 2.7 %(V) at 1013 hPa
h) Flash point	199 °C at ca.1013.0 hPa - Pensky-Martens closed cup
i) Autoignition temperature	370 °C
j) Decomposition temperature	No data available
k) pH	5.5 - 8
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m) Water solubility	at 25 °C miscible
n) Partition coefficient: n-octanol/water	log Pow: -1.75 at 25 °C
o) Vapor pressure	0.004 hPa at 50 °C 0.260 hPa at 100 °C 5.7 hPa at 150 °C
p) Density	1.25 g/cm <sup>3</sup> - lit.
Relative density	No data available
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

## 9.2 Other safety information

Surface tension	ca.63.4 mN/m at 20 °C
Relative vapor density	3.18 - (Air = 1.0)

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

## 10.5 Incompatible materials

Strong oxidizing agents

## 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 27,200 mg/kg

Remarks: (ECHA)

Inhalation: No data available

LD50 Dermal - Rabbit - > 10,000 mg/kg

Remarks: (External MSDS)

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

Remarks: (ECHA)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Remarks: (ECHA)

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

No data available

#### Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

### 11.2 Additional Information

Repeated dose toxicity - Rat - male - Oral - NOAEL (No observed adverse effect level) - > 1,600 mg/kg

Remarks: (ECHA)

Repeated dose toxicity - Rat - male and female - Inhalation

Remarks: (ECHA)

Repeated dose toxicity - Rabbit - Dermal

Remarks: (ECHA)

RTECS: MA8050000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Kidney - Irregularities - Based on Human Evidence

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish                      static test LC50 - Oncorhynchus mykiss (rainbow trout) - 54,000 mg/l - 96 h  
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates                      Remarks: No data available (glycerine)

Toxicity to algae                      Remarks: No data available (glycerine)

### 12.2 Persistence and degradability

Biodegradability                      aerobic - Exposure time 2 d  
Result: 90 % - Readily biodegradable.  
Remarks: (ECHA)

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Endocrine disrupting properties

No data available

### 12.7 Other adverse effects

No data available

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## SECTION 13: Disposal information

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transportation information

### 14.1 UN number

ADR/RID: -

IMDG: -

IATA-DGR: -

Sigma-Aldrich- G2289

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The life science business of Merck operates as MilliporeSigma in the US and Canada



#### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods  
IMDG: Not dangerous goods  
IATA-DGR: Not dangerous goods

#### 14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA-DGR: -

#### 14.4 Packaging group

ADR/RID: - IMDG: - IATA-DGR: -

#### 14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA-DGR: no

#### 14.6 Special precautions for user

#### 14.7 Incompatible materials

Strong oxidizing agents

#### Further information

Not classified as dangerous in the meaning of transport regulations.

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### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

##### Notification status

**AICS:** On the inventory, or in compliance with the inventory  
**DSL:** All components of this product are on the Canadian DSL  
**ENCS:** On the inventory, or in compliance with the inventory  
**ISHL:** On the inventory, or in compliance with the inventory  
**KECI:** On the inventory, or in compliance with the inventory  
**NZIoC:** Not in compliance with the inventory - glycerine  
**PICCS:** On the inventory, or in compliance with the inventory

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### SECTION 16: Other information

#### Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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