

SDS: Glycerol (Dehydrated crude)

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1. Identification

Name Glycerol (Dehydrated crude)

CAS Number 56-81-5

Recommendation for the chemical and restrictions on use

Applications Research and development.

Restrictions This product may not be used for commercial purposes or in formulations used for commercial purposes.

Supplier's Details

InKemia Green Chemicals, Inc.

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Emergency contact number

InKemia Green Chemicals, Inc.

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For emergency calls only.

2. Hazards

Classification of the substance or mixture

Classification Causes mild skin irritation (Category 3), H316.
Causes Eye irritation (Category 2B), H320.

Label elements

Pictogram

None.

Signal word

Warning

Hazard Statements

H316 - Causes mild skin irritation.
H320 - Causes eye irritation

Precautionary Statements

P264 - Wash skin thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing.
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P235 - Store in a well-ventilated place. Keep cool.

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P501 - Dispose of contents/container to an approved waste disposal plant.

Other Hazards

None.

3 - Composition/information on ingredients

Substances

Chemical Name	Glycerol (Dehydrated crude)
Synonyms	Glycerin; Glycerine; 1,2,3-Propanetriol; Glycyl alcohol.
CAS Number	56-81-5
Molecular Formula	C ₃ H ₈ O ₃ (Glycerol fraction)
Molecular Weight (g/mol)	92.090

Hazardous components

Component	Classification	Concentration
MONG (Material organic nonglycerol)	Eye Irrit. 2A ; Skin Irrit. 3.	<=10wt.%

Note: For the full text of the H-Statements mentioned in this Section, see Section 16.

Impurities and stabilizing additives

No data available.

Mixtures

This product is a mixture of fatty acid methyl esters with an average composition of:
 This product is a mixture an average composition of:
 Glycerol 85-95 wt.%
 Water 2-5 wt.%
 MONG (Material organic non-glycerol) 1-10 wt.%
 Salts (as NaCl) 3-7 wt.%

4 - First-aid measures

Description of first aid measures

General information

Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Inhalation

Remove from exposure, moving to fresh air.
 Artificial respiration and oxygen are necessary if not breathing.
 Consult a physician.

Ingestion

Wash out mouth with water if the person is conscious. Do not induce vomiting. Consult a physician.

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Skin contact	Immediately wash skin with soap and copious amounts of water.
Eye contact	Immediately irrigate with copious amounts of water for 15 minutes. Consult a physician.
Protection of first-aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described might vary depending on the concentration and length of exposure.
Inhalation	Slightly dangerous.
Ingestion	Slightly dangerous.
Skin contact	May cause irritation.
Eye contact	May cause irritation.

Indication of immediate medical attention and special treatment need

Notes for the doctor	Treat symptomatically.
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5 – Fire-fighting measure

Extinguishing media

Suitable extinguisher media	Dry chemical, carbon dioxide or water fog. Do not use water directly on the fire.
Unsuitable extinguisher media	No data available.

Special hazards arising from the substance of mixture

Specific hazards	Keep product and empty container away from heat and sources of ignition.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

Advice for firefighters

Protective actions during firefighting

Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Avoid discharge to the aquatic environment. Control runoff water by containing and keeping it out of sewers and watercourses. If the risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighting

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Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots, and gloves provide a basic level of protection for chemical incidents.

6 – Accidental release measures

Personal precautions, protective equipment, and emergency procedures

Personal Precautions

Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into the spilled material.

Environmental precautions

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleanup

Methods for cleaning

Contain and remove the spillage, soaking up the residue with non-flammable absorbent. Place in an adequate container for immediate disposal. Eliminate sources of ignition. For waste disposal see Section 13.

Reference to other sections

For personal protection see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For disposal see section 13.

7 – Handling and storage

Precautions for safe handling

Usage precautions

Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink, and animal feeding stuff. Keep container tightly sealed when not in use. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers. For precautions see Section 2.

Advice on general occupational hygiene

Promptly wash if in contact with skin. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Conditions for safe storage, including any Incompatibilities

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Storage precautions

Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well-ventilated place. Keep containers upright. Protect containers from damage. Keep in a fresh and dry place, avoiding direct sunlight. Keep container tightly sealed, in a fireproof place.

Storage class

Miscellaneous hazardous material storage. Preferably in a well-ventilated solvent cabinet.

Specific end uses

The identified uses for this product are in Section 1.

8 – Exposure controls/personal protection

Control parameters

Occupational exposure limits:

OSHA Permissible Exposure Limit (PEL):

Glycerin (mist)

Regulatory limits:

Total dust: 15 mg/m³ (OSHA PEL); 10 mg/m³ (8-hour TWA).

Respirable fraction: 5 mg/m³ (OSHA PEL); 5 mg/m³ (8-hour TWA).

Protective equipment



Engineering control measures

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Eye/Face protection

Wear safety glasses with side-shields.

Hand protection

Avoid skin contact. Wear protective clothes and solvent resistant gloves (nitrile).

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Other skin and body protection

Use engineering controls to reduce air contamination to permissible exposure level. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

Hygiene measures

Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with a multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure

Avoid discharging to drains.

9 – Physical and chemical properties

Appearance	Yellow to brown liquid.	Water miscibility @ 20 °C, g/L	Miscible.
Odor threshold	No data available.	Solubility (other)	Miscible with alcohols and acetone.
Melting point/Freezing point, °C	Lower than 18.1	Partition coefficient, log Pow @ 25 °C	No data available.
Boiling point, °C	Higher than 182	Autoignition temperature, °C	No data available.
Flash point	Higher than 150	Decomposition temperature, °C	No data available.
Evaporation rate	No data available.	Dynamic viscosity @ 25 °C, cP	Lower than 950
Upper / lower flammability or/and explosive limits	No data available.	Explosive properties	Not classified.
Vapor pressure @ 20 °C, kPa	Lower than 0.13	Oxidizing properties	No data available.
Vapor density (air=1)	No data available.	Flammability	Non-flammable liquid.
Relative density @ 25 °C, g/cm³	1.200		

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10 - Stability and reactivity

Reactivity	No data available.
Chemical stability	Stable under normal storage conditions.
Possibility of hazardous reactions	Hazardous polymerization do not occur under normal conditions.
Incompatible materials	Strong oxidizing agents. Strong bases. Strong acids.
Conditions to avoid	Ignition sources.
Hazardous decomposition products	No data available.

11 - Toxicological information

Acute toxicity - oral

Acute toxicity - oral (LD50,mg/kg)	>5,000 (For glycerol)
Species	Rat
Notes (oral LD50)	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Acute toxicity - dermal (LD50,mg/kg)	No data available.
Species	No data available.
Notes (Dermal LD50)	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Acute toxicity - inhalation (LC50,dust/mist mg/l)	No data available.
Species	No data available.
Notes (Inhalation LD50)	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Result	May cause mild irritation.
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Serious eye damage/irritation

Result	May cause mild irritation.
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Respiratory sensitization

Result	Based on available data the classification criteria are not met.
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Skin sensitization

Result	May in some cases cause an allergic skin reaction.
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Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.
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Carcinogenicity

IARC

This product does not contain 0.1% or more of the known or potential carcinogens listed in IARC.

NTP

This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP.

OSHA

This product does not contain 0.1% or more of the known or potential carcinogens listed in OSHA.

Reproductive toxicity

Fertility

Based on available data the classification criteria are not met.

Development

Based on available data the classification criteria are not met.

Specific target organ toxicity

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Additional information

General information

This product is not classified as hazardous.

Inhalation

Vapors or mists may irritate: mucous membranes. May cause: dizziness, nausea.

Ingestion

No hazard expected under normal use.

Skin contact

Mild skin irritant.

Eye contact

Mild eye irritant.

Route of entry

Ingestion, Inhalation, skin and/or eye contact.

Target organs

Not specific target organ known.

12 - Ecological information

Toxicity

Ecotoxicity

Not regarded as dangerous for the environment. However, large or frequent spills may have dangerous effects on the environment.

Acute toxicity

Toxicity to fish

LC50 (96h.) >16,000 mg/l (Fathead minnow; EPA-T.E.S.T. estimation for glycerol)

Aquatic invertebrates

No data available.

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Aquatic plants IGC50 (48 h.) >18,000 mg/l (T. pyroformis; EPA-T.E.S.T. estimation, for glycerol)

Chronic toxicity

Toxicity to fish No data available.

Aquatic invertebrates No data available.

Aquatic plants No data available.

Persistency and biodegradability

Persistency and biodegradability No data available.

Result: - This product is readily biodegradable.

Biodegradation Readily biodegradable (EPI Suite estimation).

Biological oxygen demand(mg/g) No data available.

Chemical oxygen demand(mg/g) No data available.

BOD/COD ratio No data available.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Results of PBT and vPvB No data available.

Other adverse effects Do not let product enter drains.
Avoid its uncontrolled discharge into the environment.

13 – Disposal considerations

Waste treatment methods

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General information

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of safely. When handling waste, the safety precautions applying to the handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues.

Disposal methods

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration and landfill should only be considered when recycling is not feasible.

14 – Transport information

DOT (US)	Not regulated by the DOT.
IMDG	Not regulated.
IATA	Not regulated.
Transport in bulk according to	Annex II of MARPOL 73/78, and the IBC Code Not applicable.

15 – Regulatory information

US Federal Regulations and state regulations

Components of the product are listed in the quoted regulations. For details, please refer to the regulations directly. This list is not exhaustive; please check for other applicable regulations.

This product has been classified by hazard criteria of the Controlled Products Regulations, and the SDS contains all the information required by the Controlled Products Regulations.

US Federal Regulations

SARA 302 Section 302 (Specific toxic chemical listings)

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

SARA Section 311/312 (Specific toxic chemical listings)

No SARA Hazards.

SARA Section 313 (Specific toxic chemical listings)

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.

RCRA (hazardous waste code)

None of the ingredients are listed.

TSCA (Toxic Substances Control Act)

CAS 56-81-5 is listed on the TSCA inventory.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

None of the ingredients are listed.

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US State Regulations

Proposition 65 (California)

Chemicals are known to cause cancer

None of the chemicals in this product are listed.

Chemicals are known to cause reproductive toxicity for females

None of the chemicals in this product are listed.

Chemicals are known to cause reproductive toxicity for males

None of the chemicals in this product are listed.

Massachusetts Right to Know Components

Glycerin CAS: 56-81-5

Pennsylvania Right to Know Components

Glycerin CAS: 56-81-5

New Jersey Right to Know Components

Glycerin CAS: 56-81-5

Minnesota Right to Know Components

Glycerin CAS: 56-81-5

Rhode Island Right to Know Components

Glycerin CAS: 56-81-5

Canada

Canadian Domestic Substances List (DSL)

CAS: 56-81-5 is listed on Canada's DSL List.

Canadian NPRI Ingredient Disclosure list (limit 0.1%)

The substance is not specified on any list. There is no control measure imposed to this substance.

Canadian NPRI Ingredient Disclosure list (limit 1%)

The substance is not specified on any list. There is no control measure imposed to this substance.

16 – Other information

Full text of H-Statements referred to under sections 2 and 3

H316 Causes mild skin irritation.

H320 Causes eye irritation.

GHS Column Model 2017 Classification

Acute health hazards (single exp)	Low
Chronic health hazards (repeated exp.)	Negligible
Environmental hazards	Negligible
Physical-chemical hazards	Negligible

Further Information

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The information above is believed to be accurate and represents the best information available. However, we make no warranty of merchantability or any other warranty, express or implied, on such information and we assume no liability resulting from its use. Users should make their investigations to determine the suitability of the information for their purposes. In no event shall the InKemia Green Chemicals, Inc. be liable for any claims, losses or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages arising, even if the InKemia Green Chemicals, Inc. has been advised of the possibility of such damages.

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