

1. Identification

Name Pentaerythritol monooleate

CAS Number 10332-32-8

Recommendation for the chemical and restrictions on use

Applications Research and development/Performance chemical/ Industrial solvent.

Restrictions No specific uses advised against are identified.

Supplier's Details

InKemia Green Chemicals, Inc.

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Emergency contact number

InKemia Green Chemicals, Inc.

Tel: +1 (713) 909-7717

For emergency calls only.

2. Hazards

Classification of the substance or mixture

Classification Not classified as a hazardous product.

Label elements

GHS label statements, including pictograms, hazard, and precautionary statements.

The product does not need to be labeled. The product is not classified as a hazardous substance or mixture according to 29 CFR 1910 (OSHA HCS).

Signal word

—

Other Hazards None.

3 - Composition/information on ingredients

Substances

Chemical Name Pentaerythritol monooleate

Synonyms Pentaerythritol oleate; 3-Hydroxy-2,2-bis(hydroxymethyl)propyl oleate; [3-Hydroxy-2,2-bis(hydroxymethyl)propyl] (Z)-octadec-9-enoate.

SDS: Pentaerythritol monooleate

CAS Number 10332-32-8

Molecular Formula C23H44O5

Molecular Weight (g/mol) 400.6

Hazardous components

Component	Classification	Concentration
Pentaerythritol monooleate	...	<=100 wt.%

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

Impurities and stabilizing additives No data available.

Mixtures Not applicable.

4 - First-aid measures

Description of first aid measures

General information No applicable data available.

Inhalation If breathed in, move the person into fresh air. If symptoms persist, call a physician.

Ingestion Do not induce vomiting. If symptoms persist, call a physician.

Skin contact If symptoms persist, call a physician. Wash off with soap and plenty of water.

Eye contact Immediately irrigate with copious amounts of water for 15 minutes. Consult a physician.

Protection of first-aiders No applicable data available.

Most important symptoms and effects, both acute and delayed

General information No applicable data available.

Inhalation No hazards which require special first aid measure.

Ingestion No hazards which require special first aid measure.

Skin contact No hazards which require special first aid measure.

Eye contact No hazards which require special first aid measure.

Indication of immediate medical attention and special treatment need

Notes for the doctor No applicable data available.

5 - Fire-fighting measure

Extinguishing media

Suitable extinguisher media Carbon dioxide, alcohol resistant foam and water spray.

Unsuitable extinguisher media No data available.

Special hazards arising from the substance of mixture

Specific hazards No data available.

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. Cool containers exposed to flames with water until well after the fire is out. 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

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

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

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): None.

American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) : 10 mg/m³.
(TWA)

National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL): None.

Protective equipment



Engineering control measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. 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. If mist exists, install ventilation equipped with carbon canisters. Ventilation should be 10 air exchanges per hour.

Eye/Face protection

Wear safety glasses with side-shields.

Hand protection

Where there is potential for skin contact have available and wear as appropriate impervious gloves, apron, pants, and jacket.

Other skin and body protection

Where risk assessment shows 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 hands before and 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

Not available.

9 – Physical and chemical properties

Appearance	Yellow to amber liquid.	Water miscibility @ 20 °C, g/L	Immiscible.
Odor threshold	No data available.	Solubility (other)	No data available.
Melting point/Freezing point, °C	Lower than -20	Partition coefficient, log Pow @ 25 °C	6.88
Boiling point, °C	Higher than 250	Autoignition temperature, °C	Higher than 300
Flash point	280	Decomposition temperature, °C	No data available.
Evaporation rate	No data available.	Dynamic viscosity @ 25 °C, cP	13 @ 100°C
Upper / lower flammability or/and explosive limits	No data available.	Explosive properties	Not classified.
Vapor pressure @ 20 °C, kPa	8 x 10-007 @ 25 °C	Oxidizing properties	No data available.
Vapor density (air=1)	No data available.	Flammability	Non-flammable liquid.
Relative density @ 25 °C, g/cm³	0.940	Surface tension @ 20 °C, mN/m	40.6

10 – Stability and reactivity

Reactivity	May react violently with oxidizers.
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	High temperatures and ignition sources.
Hazardous decomposition products	No data available.

11 - Toxicological information

Acute toxicity - oral

Acute toxicity - oral (LD50,mg/kg) >5,000

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.

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.

Notes (Inhalation LD50) Based on available data the classification criteria are not met.

Skin corrosion/irritation

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

Serious eye damage/irritation

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

Respiratory sensitization

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

Skin sensitization

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

Germ cell mutagenicity

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

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

Carcinogenicity

IARC Based on available data the classification criteria are not met.

ACGIH Based on available data the classification criteria are not met.

NTP Based on available data the classification criteria are not met.

OSHA Based on available data the classification criteria are not met.

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 No data available.

Ingestion No data available.

Skin contact No data available.

Eye contact Based on available data the classification criteria are not met.

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 No data available.

Aquatic invertebrates No data available.

Aquatic plants No data available.

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 (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	No data available.

13 - Disposal considerations

Waste treatment methods

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 dangerous goods.
IMDG	Not dangerous goods.
IATA	Not dangerous goods.
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 10332-32-8 is listed on the TSCA inventory.

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

None of the ingredients are listed.

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

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components

No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right to Know Components

No components are subject to the New Jersey Right to Know Act.

Canada

Canadian Domestic Substances List (DSL)

CAS: 10332-32-8 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

SDS: Pentaerythritol monooleate

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Print.

Not a hazardous substance or mixture.

GHS Column Model 2017 Classification

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

Further Information

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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