

# Safety Data Sheet



## 1. Identification of the Substance/Mixture and the Supplier

Supplier : National Institute of Advanced Industrial Science and Technology (AIST)  
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Office in Charge : Reference Materials Office, Center for Quality Management of Metrology, National Metrology Institute of Japan  
Person in Charge : Certified Reference Material Staff  
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Emergency Contact : Same as above

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ID Number : 6009001

Identity of Substance/Mixture : Certified reference material NMIJ CRM 6009-a  
Triolein  
Recommended Use of the Chemical and Restriction on Use : This reference material may be used to prepare standard solutions and to calibrate analytical instruments for a variety of quantitative analyses specific to Triolein; it may also be used to validate analytical methods and instruments. In addition, among triglyceride analyses that do not distinguish molecular species as represented by neutral-fat measurements in blood serum, this material may be used to prepare standard solutions for methods utilizing Triolein as a standard. Do not use this reference material for other purposes than testing/research.

## 2. Hazards Identification

GHS classification: Classification not possible

GHS-labeling element : -

Signal word : -

Hazard and toxicity information : -

Other toxicity information : -

Cautionary statement : [Safety measures]  
Wear appropriate protective equipment to avoid inhalation and contact with the eyes, skin, or clothing.  
[Emergency measures]  
Inhalation: Seek fresh air and gargle thoroughly. If the exposed person shows symptoms of poisoning, seek medical attention.

Skin contact: Wash with plenty of water and soap. Seek medical attention if irritation develops.

Eye contact: Flush thoroughly with plenty of clean water for at least 15 minutes. Seek medical attention, if necessary.

Ingestion: Induce vomiting and drink a large amount of water. Seek medical attention, if necessary.

[Storage]

Use explosion-proof electrical equipment for storage. Ground all equipment. Containers should be kept closed at  $-20\text{ }^{\circ}\text{C}$ , free from air contact and away from direct sunlight.

[Disposal]

Follow the related regulations and ordinances of the local government.

Use a waste-treatment firm certified by prefectural governor.

Classification is impossible or not applicable for hazards not mentioned above.

### 3. Composition/Information on Ingredients

Single substance or compound	:	Single substance
Chemical name	:	Triolein
Synonyms	:	Glycerol trioleate, olein
Concentration	:	99.4% (kg/kg)
Chemical or structural formula	:	$(\text{C}_{17}\text{H}_{33}\text{COO})_3\text{C}_3\text{H}_5$
Molecular weight	:	885.43
Content	:	99.4 %
Reference Number in Gazetted List in Japan	in	: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : (2)-669
		Industrial Safety and Health Act : Published
CAS number	:	122-32-7

### 4. First-aid Measures

Eye contact	:	Flush immediately with plenty of water for at least 15 minutes. Seek medical attention in case of abnormalities.
Skin contact	:	Wash with plenty of water and soap. Seek medical attention if irritation develops.
Inhalation	:	Seek fresh air and keep warm and rest. Seek medical attention, if necessary.
Ingestion	:	Induce vomiting and drink plenty of plain water or salted water. Get medical attention immediately.
Estimated acute and late symptom	:	-
Most important	:	-

symptoms and effects

Protection of first-aiders : Use personal protective equipment.

### 5. Fire-fighting Measures

- Extinguishing media : Dry extinguishing agent, carbonic anhydride, foam, dried sand, and water spray.
- Specific hazards with regard to firefighting : Irritant or toxic fume (or gas) may be generated in the event of fire.
- Specific methods of firefighting : Eliminate the origin of fire and put the fire out with extinguishing media. If possible, move containers to a safe place. If not, cool the peripheral areas with water spray.
- Protection for firefighters : Work from the windward side to prevent the inhalation of toxic gas. Use fire-prevention clothing, fireproof clothing, fire-protection clothing, respirator, circulating oxygen breathing apparatus, rubber gloves, and rubber boots.

### 6. Accidental Release Measures

- Personal precautions : Promptly remove all potential ignition sources from peripheral areas. In case of ignition, prepare the equipment for firefighting.
- Protective equipment and emergency measures : When accidental release takes place indoors, thoroughly clear the air until the emergency measures are complete. Before the operation, wear appropriate protective equipment to protect the skin from droplets and to prevent inhalation of dust and gas.
- Environmental precautions : Prevent the released product from being drained into a river or other area that might cause environmental damage. Prevent the polluted discharge from being drained into the environment without being processed properly.
- Recovery and neutralization : Collect in an empty container. Wash and clean the spilled area with plenty of water.
- Prevention of second accident : Surround the area with a rope, etc., to prevent unauthorized people from entering the area. Work from the windward side and evacuate people to the leeward side.

### 7. Handling and Storage

- Handling
- Technical measures : Fire prohibited.  
 Avoid high temperature, sparks, and contact with strong oxidizing agents.
- Local ventilation and general ventilation : In case steam or mist is generated, seal the source and provide local exhaust ventilation.
- Precautions for safe : Avoid rough handling such as dropping, shocking, dragging, or

- handling
- otherwise agitating the container.
  - Do not cause the substance to leak, overflow, or drift, and prevent steam from being generated.
  - Seal the container after use.
  - Wash hands, face, and other necessary parts thoroughly, and gargle after handling.
  - Do not eat, drink, or smoke in places other than the designated areas.
  - Do not bring gloves and other contaminated protective equipment into the break area.
  - Only authorized people are allowed in the handling area.
  - Wear appropriate protective equipment to prevent inhalation, or contact with eyes, skin, or clothing.
  - When handling indoors, provide local exhaust ventilation.
- Storage
- Appropriate storage conditions : Use explosion-proof electric equipment in storage, and ground all equipment.  
Containers shall be kept closed at  $-20\text{ }^{\circ}\text{C}$ , free from contact with air and away from sunlight.
  - Incompatible materials : Oxidizing agents and materials with strong oxidizing properties.
  - Safe packaging materials : Glasses

## 8. Exposure Controls/Personal Protection

Standard control concentration

N/A

Threshold limit values

- ACGIH TLV-TWA : N/A
- Value recommended by Japanese Society of Occupational Health : N/A

Society of Occupational Health

- OSHA PEL TWA : N/A

Engineering controls

- Ventilation and emission : When using indoors, seal the ignition source and provide local exhaust ventilation.  
Set up safety equipment near the handling area for quick access to eye- and body-wash station and indicate its location.

Safety management and gas detection : -

- Storage precautions : Keep out of sunlight in a clean place at  $-20\text{ }^{\circ}\text{C}$ .

Protective equipment

- Respiratory protection : Gas masks for organic gasses, air respirators
- Hand protection : Protective gloves
- Eye protection : Protective glasses
- Skin and body : Long-sleeve protective clothing

protection

## 9. Physical and Chemical Properties

- Appearance, etc. : Solid (−20 °C)
- Color : White
- Odor : No data
- pH : No data
- Melting point : No data
- Boiling point : Approximately 235 °C (24 hPa)
- Flashing point : 322 °C (Cleveland open-cup method)
- Explosive range : No data
- Vapor pressure : No data
- Relative vapor density(Air=1) : No data
- Specific gravity or bulk specific gravity : 0.908 g/mL to 0.914 g/mL
- Solubility : Slightly soluble in ethanol and scarcely soluble in water
- *n*-Octanol/water partition coefficient (Log Po/w) : No data
- Auto-ignition temperature : No data

## 10. Stability and Reactivity

- ◇Stability
  - Deteriorates with light
- ◇Reactivity
  - No data
- ◇Conditions to avoid
  - Sunlight, heat, open fires, high temperatures, sparks, static electricity, and other ignition sources.
- ◇Incompatible materials
  - Strong oxidizing agents

## 11. Toxicological Information

Acute toxicity                      Intravenous rat TDLo: 7.5 mg/kg/2 months

## 12. Ecological Information

Degradability/Concentration

- No data

Bioaccumulation

- No data

Ecotoxicity

- No data

## 13. Disposal Considerations

- Residues : Incineration  
Incinerate in the incinerator with a scrubber system.  
Dispose the contents and container in accordance with related regulations and ordinances of the local government. If disposal according to the above method is not possible, use a waste-treatment firm certified by prefectural governor.
- Contaminated containers and packaging : To dispose of an empty container, completely remove the contents.
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#### 14. Transport Information

- UN Dangerous : Not applicable  
Goods Number  
UN Classification : -  
Product name : -  
Packing group : -  
ICAO/IATA : -  
Marine pollutant : Not applicable  
Matters to be attended to : Avoid direct sunlight. Prevent leakage and fires caused by shock or agitation to the container, and transport with caution.
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#### 15. Regulatory Information

- No applicable laws and regulations
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#### 16. Other Information

##### Others

The information in this document is not intended to be exhaustive and is based on currently available information and data. The measures given in this document are applicable only to normal handling conditions. When handling this reference material under special conditions etc., it is recommended to take safety measures appropriate to each specific application and context of use. This document is intended to provide information and not intended to guarantee anything in handling this reference material.

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