

Safety Data Sheet



1. Identification of the Substance/Mixture and the Supplier

Supplier : National Institute of Advanced Industrial Science and Technology (AIST)
 Address : 1-3-1 Kasumigaseki, Chiyoda, Tokyo, Japan
 Office in Charge : Reference Materials Office, Center for Quality Management of Metrology, National Metrology Institute of Japan
 Person in Charge : Certified Reference Material Staff
 Telephone No. : +81-29-861-4059 Fax No. : +81-29-861-4009
 Emergency Contact : Same as above

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ID Number : 8302001

Identity of Substance/Mixture : Certified reference material: NMIJ CRM 8302-a Biodiesel Fuel(Palm oil-Based)
 Recommended Use of the Chemical and Restriction on Use : This CRM is intended for use in the calibration of instruments, or confirming the validity of methods or instruments during analysis of the following components in biodiesel fuel (fatty acid methyl esters) samples and similar materials; or during measurement of density and kinematic viscosity. Do not use this reference material for other purposes than testing/research.
 This CRM is a reference material (specified in the Japanese Industrial Standard (JIS) Q 0030).

2. Hazards Identification

GHS Classification : Flammable liquid : Hazard Category 4
 Serious Eye Damage/ Eye Irritation : Hazard Category 2B

GHS label element : -

Signal Word : Warning

Other Hazards : Eye irritation

Statement : Flammable liquid

Precautionary Statement : [Safety Precaution]

Statement : Wash hands thoroughly after use.

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Use personal protective equipment if necessary.

[First-aid Action]

If in eyes: Rinse cautiously with clean water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

[Storage]

Avoid direct sunlight. Store in a dry, cool and well ventilated

environment. Close cap tightly and hermetically after use.

[Disposal]

Dispose of this reference material in accordance with applicable legislation and local government ordinance.

Entrust disposal of this reference material to a professional waste disposal company licensed by prefectural governor.

The other hazards than the above do not result in classification or are not classifiable.

3. Composition/Information on Ingredients

Substance/Mixture : Mixture

Ingredient 1

Chemical name : Palm oil-based fatty acid methyl esters

Synonym : -

Chemical formula : -

Molecular weight : -

CAS number : 91051-34-2

Content : Over 99 %

Reference Number in
Gazetted List in Japan : Act on the Evaluation of Chemical Substances and Regulation of
Their Manufacture, etc. : -
Industrial Safety and Health Act : -

Ingredient 2

Chemical name : Methanol

Synonym :

Chemical formula : CH₃OH

Molecular weight : 32.04

CAS number : 67-56-1

Content : 564 mg/kg

Reference Number in
Gazetted List in Japan : Act on the Evaluation of Chemical Substances and Regulation of
Their Manufacture, etc. : (2)-201
Industrial Safety and Health Act : Published

Ingredient 3

Chemical name : Water

Synonym :

Chemical formula : H₂O

Molecular weight : 18.02

CAS number : 7732-18-5

Content : 393 mg/kg

Reference Number in
Gazetted List in Japan : Act on the Evaluation of Chemical Substances and Regulation of
Their Manufacture, etc. : -
Industrial Safety and Health Act : -

Other elements included in this CRM:

Na(1.26 mg/kg),Mg(0.83 mg/kg),K(0.72 mg/kg),Ca(1.01 mg/kg),P(2.09 mg/kg),S(7.17 mg/kg)

Hazardous Ingredient : Methanol

4. First-aid Measures

- If in eyes : Rinse cautiously with clean water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- If on Skin : Rinse away thoroughly with clean water. Take off/Remove contaminated clothing, shoes, etc. Get medical advice/attention.
- If inhaled : Remove victim to fresh air and keep at rest and warm. Get medical advice/attention.
- If swallowed : Rinse mouth thoroughly with water. Get medical advice/attention immediately.
- Expected Acute and Delayed Symptom : -
- Most Critical Characteristic and Symptom : -
- Protection for first aid provider : Use appropriate protective equipment to avoid inhalation.

5. Fire-fighting Measures

- Extinguishing Media : Powder, foam, carbon dioxide, dry sand, water spray (rod-like water injection prohibited).
- Fire-Specific Hazards : In case of fire, may emit irritating or toxic fume (or gas).
- Specific Fire-Fighting Method : Eliminate ignition sources at the origin of a fire and put out fire by using extinguishing media. Remove movable containers promptly to a safe place. In the case of immovable containers, cool their surroundings with sprayed water.
- Protecting fire-fighting personnel : Extinguish from windward, avoid inhaling toxic gases. Use personal protective equipment such as fire-resistant clothing, self-contained compressed air breathing apparatus, closed circuit breathing apparatus, rubber gloves, rubber boots, etc.

6. Accidental Release Measures

- Personal Precaution : Remove ignition source in the vicinity immediately. Prepare fire-fighting equipment for the possibility of fires.
- Personal Protective Protective equipment and emergency procedure : Ventilate the affected areas thoroughly, if it is in an indoor environment, until the clean-up operation is completed. Use appropriate personal protective equipment during the operation to avoid skin contact of splash etc. and inhalation of dust and gas.
- Environmental Precautions : Take precautions to prevent spillage from draining into rivers etc. to adversely impact the environment. Make it sure to

- appropriately treat contaminated wastewater in order to prevent untreated wastewater from being released into the surrounding environment.
- Recovery and Neutralization : Adsorb spillage with waste clothes or wiping clothes or dry sand, and collect in empty containers. Rinse away the remains with plenty of water.
- Prevention of Secondary Disaster : Mark the restricted area with rope etc. to keep out unauthorized people. Carry out the clean-up operation from the windward and make people on the leeward side evacuate.

7. Handling and Storage

Handling

- Engineering Precautions : Strict ban on fire.
Keep away from hot surfaces and sparks. Do not allow contact with strong oxidizer.
- Local and General Ventilation : When vapor or mist is generated, seal the source, and provide local exhaust ventilation or central ventilation.
- Precautions for Safe Handling : Avoid rough handling such as turning over, dropping, giving a shock to or dragging containers.
Prevent spill, overflow and scattering, and avoid vapor generation.
Keep container tightly closed after use.
Wash hands, face etc. thoroughly and gargle after handling this reference material.
Restrict drinking, eating and smoking to a designated area.
Do not bring gloves and other contaminated personal protective equipment into staff room.
Make a place handling this reference material a restricted area to keep out unauthorized people.
Use appropriate personal protective equipment to avoid inhalation and contact with eyes, skin and clothing.
Use local ventilation system in indoor handling area.

Storage

- Appropriate Storage Conditions : Keep out of sunlight and heat sources. Seal the case and stored at a dark, clean and cool place at normal room temperature.
- Safe Container Packaging Material : Glass

8. Exposure Controls/Personal Protection

Threshold Limit Value

Not specified

Permissible Concentration

- ACGIH TLV-TWA : Not specified
- Value recommended by Japan Society for Occupational Health : Not specified
- OSHA PEL TWA : Not specified

Engineering Controls

- Ventilation/Exhaust : Local ventilation system or General ventilation system
- Safety Control/ Gas Detection : Measuring equipment, Detecting tube
- Storage Precaution : Ventilate along floor surface. Seal. Keep away from flammable substances, reducing agents and strong oxidizers.

Personal Protective Equipment (PPE)

- Respiratory System : Protective mask
- Hands : Protective gloves
- Eyes : Protective glasses
- Skin and Body : Protective clothing

Hygiene Controls

Handle this reference material in accordance with industrial health and safety standards.

9. Physical and Chemical Properties

- Appearance, etc. : Liquid
- Color : Clear and yellow
- Odor : Characteristic odor
- pH : No data
- Melting point : Ca. 15 °C
- Boiling point : No data
- Flashing point : From 60 °C to 90 °C
- Explosive range : No data
- Vapor pressure : No data
- Relative vapor density(Air=1) : No data
- Specific gravity or bulk specific gravity : 0.87504 g/cm³ (15 °C)
- Solubility : It is almost insoluble in water. It is soluble in many polar organic solvents such as ethanol, acetone, and toluene.
It is almost insoluble in non-polar organic solvents such as hexane and petroleum ether.
- *n*-Octanol/water partition coefficient (Log Po/w) : No data
- Auto-ignition temperature : No data
- Kinetic viscosity : 4.4801 mm²/s (40 °C)

10. Stability and Reactivity

- ◇Chemical Stability
 - Stable under recommended storage conditions
- ◇Reactivity
 - No information available
- ◇Conditions to Avoid
 - Direct sunlight, heat, open flame, high temperature material, spark, static electrical charge, and other fire sources.
- ◇Hazardous Decomposition Products

- Carbon monoxide, carbon dioxide

11. Toxicological Information

Acute Toxicity	(Methanol) Oral Rat LD50:5600 mg/kg Transdermal Rabbit LD50:15800 mg/kg
Serious Eye Damage/Eye Irritation	(Methanol) In the Draize test using rabbits, the mean score for conjunctivitis after 24, 48, and 72 hours was 2.1 (greater than 2.0), and conjunctival edema was observed for 4 hours (score 2.00), but it was noticeably improved after 72 hours (score 0.50).

Other

* For the toxicity information, due to no information as a mixture, it is originated from the information about raw materials.

The present product is stable under the normal condition, and there is no hazard such as eluting any harmful additive agent ingredients; however, in case of special handling such as its use under higher temperature, sufficient measures for safety should be taken.

12. Ecological Information

Persistence and Degradability

- No data available

Bioaccumulative Potential

- No data available

Ecotoxicity

- No data available

13. Disposal Considerations

Residual Waste	:	Incineration method Incinerate in an incinerator equipped with scrubber. Dispose of this reference material in accordance with applicable legislation and local government ordinance. When the above-mentioned treatments are not possible, entrust disposal of this reference material to a professional waste disposal company licensed by local or national authority.
Contaminated Container and Package	:	Dispose of containers after thoroughly removing their contents.

14. Transport Information

UN Number	:	Not applicable
UN Classification	:	Not applicable
Shipping Name	:	-
Packing Group	:	-

ICAO/IATA : -
Marine Pollutant : Hazardous Liquid Substance (Class Y Substance)
Precautions : Avoid direct sunlight and fire sources and transfer with care not to spill/leak by dropping or falling, etc.

15. Regulatory Information

- ◇ Fire Service Act
 - Hazardous Material Category IV, Class III Petroleums, Hazard Rank III (Water-Insoluble Liquid)
 - ◇ Ship Safety Act
 - Announcement of Ministry of Land, Infrastructure and Transport on Regulations for the Carriage and Storage of Dangerous Goods in Ships, Appendix 8-3, Palm oil-based fatty acid methyl esters
 - ◇ Act for the Prevention of Marine Pollution and Maritime Disasters
 - Order for Enforcement of Carriage in Bulk, Appended Table 1 Noxious Liquid Substances (Category Y) 319 Palm Methyl Esters
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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.
