

3. Composition/Information on ingredients

Distinction of substance or mixture : mixture

Chemical name or generic name : Standard liquids for calibrating densitometer.

Components :

No.	Components name	CAS No.	Molecular formula	Content
1	Base oil (Cannot be disclosed due to trade secret.)	64742-47-8 8042-47-5	Not possible to define.	100%

If product contained highly refined mineral oil, it contains <3% DMSO-extract, according to IP346.

No.	The Chemical Substance Control Law Class Reference Number in the Gazette List	Industrial Safety and Health Law Class Reference Number in the Gazette List	Industrial Safety and Health Law	PRTR law
1	No information	Not applicable	Labeling (Mineral oil 80-90%)	Not applicable

4. First-aid measures

If inhaled :
 • Remove casualty to fresh air and keep at rest in a position comfortable for breathing. Cover with blanket to keep warm and rest in a quiet surrounding. Seek immediate medical advice and attention.

If on skin :
 • Wash skin with large amount of water using soap.

If in eyes :
 • Rinse cautiously with clean water for several minutes. Remove contact lenses, if present and easy to do, and continue rinsing. After rinsing for a minimum of 15 minutes, seek medical advice and attention.

If swallowed :
 • If swallowed, may irritate mucous membrane of stomach and induce vomiting. Inhalation if mist may cause feeling ill. Skin contact and eye contact may cause irritation.

5. Fire-fighting measures

Extinguishing media
 • Concentrated strong liquid in mist and powder forms, carbon dioxide and foam. Use powder and carbon dioxide may be used small fires only. Effective to use foam to shutdown the air in a large fires.

Unsuitable extinguishing media
 • Do not use water in a jet.

6. Accidental release measures

Personal precautions,
 protective equipment and
 • Avoid contact with skin and eyes. Prepare suitable equipment and materials.

emergency procedures :

Environmental
precautions :

- Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. In event of entering in the sea, extend oil fences to prevent from spreading, and sop up with absorbent materials. Use chemicals and/or detergents, they must satisfy technical standards as set by the Ministry of Land, Infrastructure and Transport / Ministry of the Environment.

Methods and materials for
containment and cleaning
up :

- Promptly remove all ignition sources and stop leakages. In a small leakage, absorb and recover by use of soil, sand, sawdust and waste clothes. In a large leakage, cordon off the danger zone, prevent from entering and enclose it with sand bank and stop outflow. Cover liquid surface with foam, and recover liquid into containers.

7. Handling and storage

Handling

Technical measures :

- In handling this material over the allocated volume, ensure approval to meet requires of the laws. Keep away from heat, sparks, open flames, hot objects. No smoking. Take measures against static discharge. Ensure to wear clothing and shoes made of conductive materials. When fixing or processing machine, it carries out after removing dangerous objects completely. NEVER suck up (siphoning) this material by mouth.
- Wear suitable protect equipment if skin or eye contact may cause. Seal containers hermetically without handling in violent such as falling, dropping, or jolting.

Precautions for safe handling :

- Use under normal temperature. Prevent from mixing water and impurity.

Avoiding incompatibilities :

- Avoid contact with halogens, strong acids, alkali and oxidizing materials.

Storage

Conditions for safe storage :

- Keep containers tightly closed and in a cool, well-ventilated place away from direct sunlight. It is recommended to lock up storage area. Use properly labelled and closeable containers. Avoid heat, sparks, open flame and static accumulation.

Container and packaging material for
safe storage :

- Storage in original containers. Do not pressurize empty containers. May cause rupture. Do not weld, heat up, drill or cut containers. May ignite the residue and cause explosion.

8. Exposure controls/Personal protection

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

Occupational exposure limits :

ACGIH

5mg/m³ (as Oil mist, mineral) (2012) [TWA]^[1]

※TWA (Time Weighted Average)

Average exposure to a contaminant to which workers may be exposed without adverse effect over a period such as in an 8-hour day or 40-hour week (an average work shift).

Personal protective Equipment :

- Respiratory protection : • No respiratory protection is ordinarily required under normal conditions of use.
Use appropriate equipment in response to the circumstances.
- Hand protection : • Use oil-proof protective hand gloves under prolonged or repeated skin contact.
- Eye protection : • Wear safety glasses or full face shield if splashes are likely to occur.
- Skin and body protection : • Use oil-proof/long sleeved clothing under prolonged usage.

9. Physical and chemical properties

Appearance (physical state, form, color etc.)

Physical state	: Liquid.
Color	: Clear
Odour	: Characteristic mineral oil
pH	: No information
Melting point/Freezing point	: No information
Boiling point, initial boiling point, and boiling range	: No information
Flash point	: 100°C (COC)
Upper flammability or explosive limits	: 7 vol%(estimated)
Lower flammability or explosive limits	: 1 vol%(estimated)
Vapour pressure	: No information
Density	: Approx. 0.82g/cm ³ (15°C)
Solubility Solubility for water	: Negligible
Solubility for solvents	: No information
Partition coefficient : n-octanol / water	: No information
Auto-ignition temperature	: No information
Decomposition temperature	: No information
Kinetic Viscosity	: 5.03mm ² /s (20°C)

10. Stability and reactivity

Reactivity :	• Avoid contact with strong oxidizing agent.
Chemical stability :	• Stable under normal condition.
Possibility of hazardous reactions :	• No information
Conditions to avoid :	• Avoid contact with halogens, strong acids, alkalis, and oxidizing materials
Incompatible materials :	• No information
Hazardous decomposition products :	• Hazardous decomposition products are not expected to form during normal storage. Generates smoke, carbon monoxide, sulfurous acid gas etc. during combustion.

11. Toxicological information

Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the main component of a whole product, rather than for individual component(s).

Acute toxicity :

LD50(Oral)	Rat	>5,000 mg/kg (estimated)	[2]
LD50(Dermal)	Rabbit	>5,000 mg/kg (estimated)	[2]
LC50(Mist)	Rat	>5 mg/L, 4h (estimated)	[2]

Skin Corrosion / Irritation :

Not classified as a skin irritation (rabbit test).^[2] Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

Serious eye damage / Eye irritation :

Not classified as an eye irritation (rabbit test).^[2]

Carcinogenicity

Product contains mineral oils of types shown to be noncarcinogenic in animal skin- painting studies^[2]

Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC monographs: Group ^{[2][3]}, ACGIH^[4] and EU Directives.^[5]

Reproductive toxicity

Results of developmental and reproductive toxicity studies showed no evidence of developmental or reproductive toxicity in rats.^[2]

Reproductive toxicity :

Acute studies do not indicate any specific organ toxicity following single exposure.^[2]

Specific target organ toxicity :

The repeat dose toxicity has been investigated by dermal and inhalation routes for periods between 4 weeks and up to 2 years. No systemic effects showed.^[2]

12. Ecological information

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the main component of a whole product, rather than for individual component(s).

Ecotoxicity :

LL50(96H)	Fish(Fathead minnow)	> 100 mg/L	[2]
NOEL(14D)	Fish(Fathead minnow)	> 100 mg/L	[2]
EL50/NOEL(48H)	Crustacea (Daphnia magna)	> 10000 mg/L	[2]
NOEL(21D)	Crustacea (Daphnia magna)	> 10 mg/L	[2]
NOEL	Algae(Pseudokirchneriella subcapitata)	> 100 mg/L	[2]

Persistence and degradability : • Another lubricant base oil was determined to be inherently biodegradable but not readily biodegradable, with a mean degradation of 31% by day 28.

Bioaccumulation : • No information

Mobility in soil : • Lubricating oil components have estimated log Koc >3, indicating these components are likely to be adsorbed onto soil and sediment and are not likely to leach to ground water.

Hazardous to the ozone layer : • Not classified because this product not contained substances listed on Montreal Protocol and Ozone Layer Protection Law.

13. Disposal considerations

Residual waste • Waste disposal yourself or entrust the industrial waste treatment company who obtained the prefectural governor's permission or municipal corporation. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

 • Do not dispose into the environment, in drains or in water courses.

 • For landfill disposal, destroy by fire and confirm cinders agreed to Waste Disposal Law.

 • In event of burning this material, ensure to carryout work in safe place with guards in position, and select a method that would not cause any harm or damage to others during combustion or explosion.

Contaminated • Purify and recycle or performs suitable disposal in accordance with the standard of related container and laws and regulations. Disposal with remove content completely. packaging

14. Transport information

International regulations :

UN number : Not applicable.
UN proper shipping name (English) : Not Dangerous Goods.

Specific safety measures and conditions for transportation

- Caution: Flammable.
- Transport remarkably with containers may not cause friction or agitation.
- Display signage on vehicle and provide with fire fighting equipment, if and when required to transport more than the specified quantity. Total piled height of vehicle shall be less than 3 meters.
- Abide by other laws and regulations that are applicable.

15. Regulatory information

16. Other information

References

- [1] Thresholds limit values for chemical substances and physical agents and biological exposure indices, ACGIH (2012)
- [2] ECHA (European Chemicals Agency), website "ECHA CHEM", Information on Registered Substances (2011). SDS of EU suppliers (2011)
- [3] IARC Monographs Programme on the Evaluation of Carcinogenic Risk to Humans (2006)
- [4] ACGIH documentation (2006)
- [5] EC Directive 67/548/EEC Annex I, EU CLP Regulation(EC) No.1272/2008 Annex VI Table3.1, Table3.2
- [6] SDS of JS5(Nippon Grease Co., Ltd.) SDS Code:E478900200

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Other information

- This safety data sheet (SDS) is issued based on the latest reference, data etc currently available. The information in this SDS has been carefully assessed, but no guarantee is given for its accuracy. We cannot anticipate all conditions under which this product may be used. It is the user's responsibility to take appropriate safety measures for handling.