

## Safety Data Sheet

Effective Date: May 18, 2020

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Common name : NSK K1 Lubrication unit, NSK K1-L Lubrication unit

Manufacturer : NSK Ltd

1-5-50, KUGENUMASHINMEI, FUJISAWA-SHI, KANAGAWA 251-8501, JAPAN

TEL: +81-466-21-3228, FAX: +81-466-27-9766

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### 2. HAZARDS IDENTIFICATION

Name of classification : Not applicable to classification criteria

Dangerousness : Classified to Japanese fire defense law's dangerous material, fourth type, fourth petroleum

Hazardous property : No precautionary information.

Environmental impact : No precautionary information

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### 3. COMPOSITION, INFORMATION ON INGREDIENTS

Substance or mixture : Mixture

Component information : Petroleum hydrocarbon and additives (industrial lubrication oil)  $\geq 70\%$   
Polyethylene  $\leq 30\%$

Chemical formula : Not possible to define

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### 4. FIRST-AID MEASURES

General Information : Not expected to be a health hazard when used under normal conditions.

Inhalation : Remove the person to fresh air and keep comfortable for breathing. Cover the body with a blanket to keep warm and comfortable, and get medical attention.

Skin contact : Wash with plenty of water and soap. In the case that molten material in high temperature contacts skin, cool with plenty of water immediately. Do not peel molten material or clothes from the skin forcefully, get medical attention.

Eye contact : Remove contact lenses if present and easy to do. Flush the eyes with plenty of clean water and get medical attention.

Ingestion : Do not induce vomiting forcefully, get medical attention immediately. Rinse inside of mouth with water.

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### 5. FIRE-FIGHTING MEASURES

Extinguishing media : Mist extinguishing liquid, foam, carbon dioxide and powder are effective.

Specific hazards in fire : Toxic gases may be produced, such as carbon monoxide.

Protective equipment for fire fighters : Wear suitable Personal Protective Equipment (PPE).

Fire fighting instructions :

- (1) Eliminate ignition sources.
- (2) Stand upwind of the fire to avoid inhalation of any toxic gases.
- (3) Cool surrounding equipment by spraying with water.
- (4) Restrict the area to all except required persons.

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## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Pay attention not to slip on oil; wear suitable protectors.
Environmental precautions	: Prevent spills from entering sewers, or waterways to prevent contamination of the environment.
Methods and materials for cleaning up	: For solid material, wipe up and collect it. For oil, adsorb it with soil, sand, sawdust, or waste cloth.

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## 7. HANDLING AND STORAGE

Handling	: Do not inhale or swallow it. Use suitable protective equipment if it may contact skin or eyes. Avoid contact with spark, flame, halogens, strong acids, alkalis, and oxidizing substances.
Storage	: Store in a cool, dark place away from direct sunlight. In order to avoid transformation, do not store in high temperature environment or outdoors.

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## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Equipment	: In the case that mist or vapor would occur, enclose the source or use explosion-proof exhaust ventilation.
Standard concentration	: No standard
Allowable concentration	: 3mg/m <sup>3</sup> (As mineral oil mist) by Japan society for occupational health 5mg/m <sup>3</sup> (As mineral oil mist) by ACGIH
Protective equipment :	
Respiratory protection	: Use an appropriate mask for organic gases when mist or vapor occurs.
Hand protection	: For long-term or repeated contact, wear oil-resistant gloves.
Eye protection	: Wear protective eyewear when mist, vapor, or splashes may occur.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Solid
Color	: Light yellow
Odor	: Slight odor
Melting point	: Polyethylene 132-136 °C
Boiling point	: No information
Flash point	: More than 200 °C
Auto-ignition temperature	: No information. Estimated 350-410 °C
Explosion limits	: Estimated 1-7% (industrial lubricant oil)
Vapor pressure	: No information
Vapor density	: No information
Specific gravity	: 0.92 approximately
Solubility in water	: Insoluble

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## 10. STABILITY AND REACTIVITY

Chemical stability and reactivity	: Stable if stocked at room temperature and in a dark place.
Dangerous adverse reaction possibility	: Avoid contact with strong oxidizing agents.
Condition to avoid	: Contact with do-not-mix substances, flame, heat source, static electricity
Do-not-mix substances	: Halogens, strong acids, alkalis, acidifying substances.

Hazardous decomposition substances : When it is burned or decomposed, carbon-monoxide, carbon-dioxide, carbon-hydrogen, and acidifying substances could be produced.

#### 11. TOXICOLOGICAL INFORMATION

Acute Toxicity (LD50) : More than 5g/kg for industrial lubrication oil (Estimated value)

Skin corrosion/irritation : No information

Eye damage/irritation : No information

Respiratory or skin sensitization : No information

Germ cell mutagenicity : No information

Carcinogenicity : 1) Polyethylene: IARC Group 3  
2) Base oil of lubrication oil: IARC Group 3

Reproduction toxicity : No information

Specific target organ toxicity - single exposure : No information

Specific target organ toxicity - repeated exposure : No information

Aspiration hazards : No information

#### 12. ECOLOGICAL INFORMATION

Ecotoxicity : No information (toxic to aquatic life)  
Do not dispose into ocean or other body of water so that aquatic life or birds will not swallow it.

Persistence and degradability :

Polyethylene : Does not degrade for a long time in the environment.

Industrial lubrication oil : It is biodegradable, but does not easily decompose.

Bioaccumulative potential : No precautionary information.

Mobility in soil : No precautionary information.

Hazardous to ozone layer : No precautionary information.

#### 13. DISPOSAL CONSIDERATION

Waste must be disposed of in accordance with federal, state and local environmental control regulations.  
Dumping is prohibited.

#### 14. TRANSPORT INFORMATION

IMDG code, UN class : Not applicable

Specific safety measures and conditions for transportation:  
Do not mix load with high-pressure gases or dangerous materials stated in Japanese fire defense law, classification first type and sixth type.

#### 15. REGULATORY INFORMATION

Japanese regulations : Hazardous material under the Fire Defense Law, Waste Disposal Law, Marine Pollution Prevention Law, Clean Water Law, and Sewage Law.

#### 16. OTHER INFORMATION

Request : Safety Data Sheet is provided to handling agents as reference information to secure the safety handling for hazardous toxic chemical products. For handling agents, please use it with your own responsibility and take appropriate treatment for individual situations. Thus, this data sheet itself is not a guaranteed certification of safety.

## Property of industrial lubrication oil:

Appearance	: Light yellow-dark brown
Flash point	: Equal to and over 200 °C
Density	: 0.85-0.91 g/cm <sup>3</sup> (15°C)
Fluid point	: Equal to or less than -12.5 °C
Content	: Base oil $\geq$ 95 % , Additive $\leq$ 5%
Classification by fire defense law	: Fourth type fourth petroleum oil