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## Material Safety Data Sheet (MSDS)

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### 1. Product and Company Information

#### Product

Description Handpiece Maintenance Oil  
 Order code Z016117

#### Company Information

Company Name NAKANISHI INC.  
 Address 700 Shimohinata Kamuna-shi Tochigi 322-8666, Japan (HQ)  
 Dept. Quality Assurance Dept.  
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Emergency contact No.

Recommended use and usage restrictions : Lubricant

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### 2. Hazards information

#### Significant hazards and effects

##### Specific hazards

##### GHS classification

##### Physical and Chemical hazards

Explosives	N/A
Flammable/Ignitable gas	N/A
Flammable/Ignitable aerosol	N/A
Burnable/oxidized gas	N/A
High-pressure gas	N/A
Ignitable liquid	Out of category
Flammable solid	N/A
Autoreactive chemical	N/A
Pyrophoric liquid	Out of category
Pyrophoric solid	N/A
Self-heating chemical	unclassifiable
Water-reactive flammable chemical	N/A
Oxidizing liquid	N/A
Oxidizing solid	N/A
Organic peroxide	N/A
Metal-corrosive chemical	unclassifiable

##### Hazards to health

Acute toxicity (oral)	Out of category
Acute toxicity (percutaneous)	unclassifiable
Acute toxicity (inhalation : gas)	N/A
Acute toxicity (inhalation : vapor)	unclassifiable
Acute toxicity (inhalation : dust, mist)	unclassifiable
Skin corrosivity/Irritation	Out of category
Serious damage to eyes/Eye irritation	Out of category
Respiratory sensitization	unclassifiable
Skin sensitization	Out of category
Germline mutagenicity	unclassifiable
Carcinogenicity	Out of category

Reproductivity	Out of category
Effects on breast-feeding	unclassifiable
Target organ/Systemic toxicity (single exposure)	unclassifiable
Target organ/Systemic toxicity (repeated exposure)	unclassifiable
Hazards to suction aspiration	unclassifiable
Hazards to environment	
Hazards to water environment (acute)	Out of category
Hazards to water environment (chronic)	unclassifiable

\* Blanks = N/A or unclassifiable

#### Labeling elements

Pictogram	N/A
Cautions	N/A
Hazard and toxicity information	N/A
Handle with care	N/A

### 3. Composition and component (of single product-hazards)

Component (another name)	CAS No.	Content concentration (mass %)	Chemical/Structural formula	Notice No. from government gazette (CSCL)	PRTR
Liquid paraffin	8042-47-5	100	unidentifiable	9-1692	N/A

### 4. First-aid measures

Eye contact	<ul style="list-style-type: none"> <li>Immediately and thoroughly wash eyes with clean water for 15 mins. If you wear contact lenses, remove them, and continue to wash the eyes. If the pain persists, seek the help of a doctor.</li> </ul>
Skin contact	<ul style="list-style-type: none"> <li>Immediately wash the site with soap and water.</li> </ul>
Inhalation	<ul style="list-style-type: none"> <li>Immediately move the affected person to a place with fresh air and keep him/her warm with a blanket and quiet and seek medical attention.</li> </ul>
Ingestion	<ul style="list-style-type: none"> <li>Seek medical attention without forcing the person to vomit. Rinse his/her mouth if it's contaminated.</li> </ul>
Possible acute/delayed symptoms and major symptoms/signs	<ul style="list-style-type: none"> <li>Vomit/diarrhea-producing, if swallowed. Inflammation-producing, if got into eyes. Inflammation-producing, if come in contact with skin. Sickness-producing, if inhaled.</li> </ul>
Protection to those who provide first aid	<ul style="list-style-type: none"> <li>No information</li> </ul>

### 5. Fire-fighting measures

Fire-fighting agent	<ul style="list-style-type: none"> <li>Spray enforcement agent, foam/powder/carbon dioxide fire-fighting agent are effective.</li> </ul>
Unsuitable fire-fighting agent	<ul style="list-style-type: none"> <li>Do not use jet spray water.</li> </ul>
Specific fire-fighting methods	<ul style="list-style-type: none"> <li>Remove inflammable items from the source of the fire. Use powder/carbon dioxide fire-extinguisher at the early stages of fire. In case of a larger fire, it is effective to use a foam fire extinguisher and block out the flames. The flames could spread by using water. Sprinkle water on equipments around the area. Forbid unauthorized persons to access to the fire site.</li> </ul>
Protection to those who extinguish a fire	<ul style="list-style-type: none"> <li>Wear a proper protective cloth (rescue suit) and extinguish the fire from the windward side.</li> </ul>

### 6. Measures for preventing exposure

Exposure to human body	<ul style="list-style-type: none"> <li>Use protective equipment if there is a possibility of contacting with skin/eyes.</li> </ul>
Protectors/Emergency measure	Use breathing apparatus not inhale the mist, if necessary.
Exposure to environment	<ul style="list-style-type: none"> <li>Collect as much of the liquid as possible to prevent soil/water pollution.</li> </ul>

Collection/Neutralization	<ul style="list-style-type: none"> <li>▪ In case of large amount, rope off the area where a leak has occurred to keep people away. Be sure to wear protectors.</li> <li>Use soil and sand to stop the flow of leaking lubricant and lead the lubricant to a safe area. Collect as much of the liquid as possible in an empty container. Do not discharge it into rivers and/or sewers etc.</li> <li>In case of small amount, supply earth sand/waste cloth to absorb the lubricant, and wipe it off.</li> <li>At sea, use an oil-spill containment boom to prevent it from spreading, and it up with an absorption mat. Do not discharge leakage into sewers, drains, etc. Dispose of waste etc. in accordance with applicable regulations.</li> </ul>
Method/Equipment for containment/purifying	<ul style="list-style-type: none"> <li>▪ In case of spilling, immediately prevent it from spreading and collect it by skimming or using appropriate absorbent. If necessary, use chemicals that meets technical standards specified in the Transport Ministerial Ordinance.</li> </ul>
Prevention of second disaster	Immediately report to the appropriate authorities for help.

## 7. Handling and Storage (Conform to applicable regulations)

### Handling

#### Technical aspects

- Take a countermeasure against static electricity and wear a dielectric cloth/shoes. Steam generated by oil products is accumulative since it is heavier than air. Provide adequate ventilation and keep it away from fire. The lubricant must be handled at room temperature while paying attention to prevent moisture and dirt from entering the lubricant.
- When handling a larger-than-specified quantity of the products, perform the activity at the manufacturing/storage/handling site satisfying the applicable standards. When repairing a machine with hazardous residue, remove the hazardous material in a safe place beforehand.
- When repairing a machine with hazardous residue, remove the hazardous material in a safe place beforehand. Use protective equipment if there is a possibility of contacting with skin/eyes. Use breathing apparatus not inhale the mist, if necessary.
- When taking the lubricant out of the container, use a pump. Do not suck it through a tube. Do not weld/overheat/punctuate/cut the container, which could cause an explosion.

#### Local/General ventilation

- See "8. Measures for preventing exposure"

#### Contact avoidance

- Keep it away from heat (flames/sparks). Do not generate steam needlessly.

#### Cautions for handling

- Do not apply pressure on the empty container, which could cause an explosion. Do not swallow it. Keep out of reach of children.

### Storage

#### Technical aspects

- Avoid heat, spark, flame and static electricity.
- Electric(al) apparatus used in the storage area must be explosionproof structured. Earth the apparatus on the ground when used.
- Airtight the container.
- Avoid direct sunlight.

#### Incompatible hazardous substances

- Keep halogen/strong acid/alkali/oxidizing substances in a separate place in order not to come in contact with each other.

#### Conditions

- Store it with "Hazard" labeling in a well-ventilated place.

#### Packaging technique

- When moving the lubricant to separate container, use a metal or glass container. Plastics containers could be soluble.

## 8. Measures for preventing exposure

### Equipment measures

- For mist/vapor generation, keep the source of mist/vapor airtight or provide a local exhaust system. Provide cleaning facilities for eyes/body near the handling place.

## Exposure limit value

Component	Controlled concentration (SHA)	Allowable concentration		
		Japan society for occupational health	ACGIH(TLV-TWA)	ACGIH(TLV-STEL)
Liquid paraffin	N/A	3mg/m <sup>3</sup> (Mineral oil mist)	5mg/m <sup>3</sup> (Mineral oil mist)	N/A

## Protectors (if necessary)

For respiration	Not necessary under normal conditions. Wear a (organic) gas mask if necessary.
For hands	Wear oil-resistant protective globes if come in long-term/repeated contact with hands.
For eyes	Wear general glasses if droplets are spread.
For skin/body	In case of long-term use or getting wet, wear oil-resistant work cloth with long sleeves. Take off the wet cloth and wash it thoroughly prior to wearing it again.
Proper hygiene measure	No eating and smoking while working. Wash hands with soap prior to eating, smoking.

## 9. Physical and chemical properties, hazard information

	Component
Status	Liquid
Appearance	Clear and colorless
Odor	Odiferous
pH	-----
Melting point	-----
Boiling point	-----
Firing point	160°C(COC)
Ignition point	-----
Explosive range	1~7vol% (estimate)
Vapor pressure	3.0 x 10 <sup>-3</sup> Pa (50°C)
Vapor density	-----
Specific gravity	0.835g/cm <sup>3</sup> (15°C)
Solubility	Not soluble (water : 20°C)
Octanol/water partition coefficient	-----
Decomposition temperature	-----
Odor threshold	-----
Evaporation rate (Butyl acetate=1)	-----
Flammability (solid, gas)	-----
Fluid point	-10.0°C
Viscosity	7.8mm <sup>2</sup> /s (37.8°C)
Others	No data

## 10. Stability and reactivity

Stability	Stable
Hazard reactivity	Stable
Conditions to avoid	Heating, Contacting with Incompatible hazardous substances, Fire source Strong oxidant
Hazardous decomposition product	N/A

## 11. Toxicological information (on component, including human cases and immunological information)

Acute toxicity (oral)	• LD <sub>50</sub> >5g/kg therefore, classified as out of acute toxicity (oral).
Acute toxicity (percutaneous)	• Unclassifiable for the reason of no data
Acute toxicity (inhalation : gas)	• Unclassifiable for the reason of no data

Acute toxicity (inhalation : vapor)	▪ Unclassifiable for the reason of no data
Acute toxicity (inhalation : mist)	▪ Unclassifiable for the reason of no data
Skin corrosivity/Irritation	▪ No irritation detected after applying it to skin of a rabbit, therefore, classified as out of skin corrosivity/irritation.
Serious damage to eyes/ Eye irritation	▪ No irritation detected after applying it to skin of a rabbit, therefore, classified as out of serious damage to eyes/Eye irritation.
Respiratory sensitization or Skin sensitization	▪ For respiratory sensitization, unclassifiable for the reason of no data. No skin sensitization detected after applying it to skin of a pig.
Germline mutagenicity	▪ Unclassifiable for the reason of no data
Carcinogenicity	▪ Liquid paraffin has higher degree of refining than highly-refined oil which is classified as 3 of IARC group (no carcinogenicity to human). Therefore,classified as no carcinogenicity.
Reproductivity	▪ No reproductivity decline detected after applying 4350mg/kg bw/day to male and female rats for 13wks (5days/week), therefore, classified as out of reproductivity.
Specific target organ/ Systemic toxicity (repeated exposure)	▪ Unclassifiable for the reason of no data
Specific target organ/ Systemic toxicity (single exposure)	▪ Unclassifiable for the reason of no data
Hazards to suction aspiration	▪ Unclassifiable for the reason of no data

## 12. Ecological information

Eco toxicity	▪ Fish (Bluegill) $LC_{50} > 10g/L$ Classified as out of "Hazards to water environment (acute)", but unclassifiable for Bioaccumulation potential and Rapid Decomposability. Therefore, unclassifiable for "Hazards to water environment (chronic)"
Persistence/Decomposability	▪ No information
Bioaccumulation potential	▪ No information
Mobility to soil	▪ No information
Other toxicity	▪ No information
Environmental standards	▪ No information

## 13. Disposal considerations

Waste from residues	Dispose of the container and the lubricant contained by yourself or request an industrial waste disposal professional licensed by the local government for the disposal. No dumping. In case of disposal by landfill, burn it in an incineration The following substances in the burned ash must meet the standards set by the General Administrative Agency of the Cabinet : Copper or the compound, Zin or the compound, Fluoride, Alkyl mercury compound, Mercury or the compound, Arsenic or the compound, Hexavalent chromium compound,Organophosphorous compound, Lead and the compound, Cadmium and thecompound, Cyanogen compound, PCB. In case of incineration disposal, carry out the incineration in a safe place/way not to pose a hazard to others. Set a guard.
Contaminated containers and packages	Dispose of the container and the lubricant contained by yourself or request an industrial waste disposal professional licensed by the local government for the disposal. No dumping. In case of disposal by landfill, burn it in an incineration system before disposal.

## 14. Transport information

International regulations	N/A
National regulations	
Surface transportation	Hazardous material of Fire defense law

Container	List of rules/regulations for hazardous materials 3.2 Metallic drum (250L), Metallic container (60L) etc.
Labeling on container	I Description of the hazard, Category 4 No.3 Oil, Danger level III II Quantity III Keep fire away 1) Deliver the containers without being frictioned/shaken during transportation. 2) In case of delivering a larger-than-specified quantity of products, provide the vehicle with appropriate signs specified in the ministerial ordinance. Also prepare a suitable firefighting equipment in the vehicle. The height of cargo must be 3m or lower. 3) Do not mix it with Category 1 & 6 hazardous materials or high-pressure gas, when loading.
Maritime transportation	Ship Safety Act, nonhazardous material, individual transport/cargo
Air transportation	Aviation law, nonhazardous material
Specific cautions	On delivery, avoid direct sunlight and prevent container from being damaged/corroding/falling/rolling/collapsing.
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15. Applicable laws and regulations	
Industrial Safety and Health Act	Unnotifiable substance
High Pressure Gas Safety Act	N/A
Fire defense law	Category 4, No.3 oil
Poisonous and Deleterious Substances Control Law	N/A
Water Quality Pollution Control Act	Oil discharge regulations (5mg/L allowable concentration) Detected as normal-hexane extracts
Act for the Prevention of Marine Pollution and Maritime Disasters	Oil discharge regulations (prohibited in principle)
Sewerage Service Act	Mineral oil discharge regulations
Wastes Disposal and Public Cleansing Act	Industrial-waste regulations (Diffusion/outflow-prohibited)
Food Sanitation Act	Must be used exclusively for the purpose of dividing and demolding bread dough under restrictions of Japanese Standards of Food Additives.
PRTR	N/A
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16. Other information	
Informative literature	MSDS for each material Liquefied petroleum gas MSDS All data of object substances under PRTR All data of object substances under Industrial Safety and Health Act All data of object substances under Poisonous and Deleterious Substance Control Law
Remarks	There may be a lack of sufficient information for the reason that all documents and literatures are not searched. And release of new findings or revision of conventional theory could change this information. This MSDS is not intended to ensure completeness/accuracy of information of information. Therefore, the product requires extreme caution in handling. The adequacy will be determined at your own risk.
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