



SAFETY DATA SHEET

SDS: 50270-E231EEN
Date Prepared: 2010/07/01
Date Revised: 2023/04/12

Product Name: MAKINO SPINDLE LUBRICANT

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: MAKINO SPINDLE LUBRICANT

1.2 Relevant identified uses of substance or mixture and uses advised against

Recommended use: General industrial application

1.3 Details of the supplier of the safety data sheet

Identification of the supplier: ENEOS Corporation

Address: 1-2, Otemachi 1-Chome, Chiyoda-ku, Tokyo, 100-8162 Japan

Charge section: Lubricants Sales & Marketing Dept.
(TEL:+81 3-6260-2012)

1.4 Emergency telephone number

Emergency telephone number: +81-3-6260-2012
(Contact Available time: From 9:00 to 17:30 GMT +9 hours)

2. Hazards identification

2.1 Classification of the substance or mixture

Hazard category	Category
Flammable liquids	No Classification
Acute toxicity (oral)	No Classification
Acute toxicity (dermal)	No Classification
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	No Classification
Aspiration hazard	Category 1

2.2 Label elements

Hazard pictograms:



Signal word: Danger

Hazard statement: Causes skin irritation.
May be fatal if swallowed and enters airways.

Precautionary statements:

Prevention Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not allow the eyes to become exposed to the product. Do not swallow the product.
Wash hands thoroughly after handling.



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Do not eat, drink or smoke when using this product.

Response IF SWALLOWED: Immediately call a POISON CENTER/doctor.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

Do NOT induce vomiting.

Take off contaminated clothing and wash it before reuse.

Storage The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight.

Containers that have been opened must be tightly sealed.

Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage.

2.3 Other hazards

PBT or vPvB : Not applicable

3. Composition/information on ingredients

3.1 Substances Not Applicable

3.2 Mixtures

Ingredients and Concentration

Ingredient Name	Concentrationwt.%
Base Oil(s)	90-99
Additives	<10

4. First aid measures

4.1 Description of first aid measures

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Cover the body with blankets to keep warm and quiet. If you feel unwell, seek medical advice.

Skin contact: Immediately flush skin with large amounts of water.

Wash contaminated clothing before reuse.



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If skin irritation occurs: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.

Eye contact: Rinse with clean water carefully for several minutes. Remove contact lenses if present and if removal is easy, then continue rinsing. Rinse for 15 minutes at a minimum and seek medical attention.

Ingestion: Do not induce vomiting. Drink [one glass] [two glasses] of water. Call a physician [or poison control center] immediately.
 Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

No information for mixtures.

No information.

4.3 Indication of any immediate medical attention and special treatment needed.

No information for mixtures.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Mist of loaded liquid, dry chemicals, carbon dioxide, fire foam, and dry sand are effective.

Extinguishing media to avoid: Use of straight stream of water can cause a risk of spreading fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical: In some cases of fire, may release irritant gases.

When burnt, may generate carbon monoxide and other toxic gases.

Fire fighting: Spray water to the surrounding facilities for cooling.
 Keep unauthorized persons off the site of occurrence of fire and the surroundings.
 Even after extinction, cool containers thoroughly with plenty of water.

5.3 Advice for fire-fighters

Special protective equipment and precautions for fire fighters: Wear fire resistant or flame retardant clothing.

Fight fire from windward direction while wearing protective equipment. If contact with skin is expected, wear impervious protective equipment and gloves.

Use air-breathing apparatus and protective clothing whenever necessary.



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6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency measures

Wear protective equipment when working.

Remove nearby potential ignition sources immediately.

When mist is generated, use respiratory equipment to prevent inhalation of mist.

Do not touch or walk through spillage.

Pay attention to the site of spillage, which is slippery.

6.2 Environmental precautions

Prevent spreading of oil spill with earth and sand, sandbags, or other proper materials and use care not to allow the oil spill to flow to street drains, sewer systems, and rivers.

At sea, install oil spill containment booms to prevent spreading of spills and absorb with absorption mat or other proper materials.

6.3 Methods and material for containment and cleaning up

In case of spillage in small quantity, collect spillage by absorbing with earth, sand, sawdust, waste, or other proper materials.

In case of spillage in large quantity, enclose with embankment to prevent spreading of spillage and collect spillage in empty containers to the extent possible.

6.4 Reference to other sections

In case of spillage, immediately inform the organizations concerned of the spillage to prevent possible accidents and spreading of spillage.

Remove nearby potential ignition sources immediately and make fire-extinguishing agents available. Remove spillage completely, and ventilate and clean the site and the surroundings.

7. Handling and storage

7.1 Precautions for safe handling

Technical measures: Keep away from any possible contact with sparks, open flames, and high-temperature materials, and do not allow release of vapor without justification.

Use pumps or other proper equipment for taking out from containers. Do not siphon with your mouth using a tube. Do not drink.



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Ventilation requirements:	When mist is generated, use respiratory equipment to prevent inhalation of mist. In case of vapor/mist dispersion, install a closed system, local ventilation system, and/or other proper equipment for the sources of vapor/mist generation.
Precautions for safe handling:	Avoid rough handling of containers such as falling, dropping, exposing to shock, and dragging. Maintain adequate ventilation when handling indoors. Avoid falling, dropping, exposing to shock, or dragging of containers. Wash hands and face thoroughly after handling. Be careful with fire.
Contact avoidance:	Wear protective gloves when opening containers to eliminate a risk of hand injury. Use care to keep away from any possible contact with halogens, strong acids, alkalis, and acidifying substances. Contact with and storage in the same location of halogens, strong acids, alkali and oxidized substances must be avoided.
Hygiene measures:	After handling Wash hands thoroughly.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions:	Store locked up. Store in a well ventilated, cool, dry, dark place, protecting from direct sunlight and keeping away from any potential ignition sources and high-temperature materials.
Safety adequate container materials:	Store tightly stopped after use to prevent possible contamination with dust and moisture. Preferably store locked up in a proper storage area. Use spill-proof containers that are free of damage/corrosion.

7.3 Specific end use(s)

General industrial application

8. Exposure controls/personal protection

8.1 Control parameters



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Product Name: MAKINO SPINDLE LUBRICANT

Ingredient Name	Japan Society for Occupational Health	ACGIH	
	Occupational Exposure Limits	TLV-STEL	TLV-TWA
Base Oil(s)	-ppm 3mg/m3 (Mineral Oil Mist)	-ppm -mg/m3	-ppm 5mg/m3 (Mineral Oil Mist)

8.2 Exposure controls

Appropriate engineering controls:	In case of mist generation, enclose the source of mist generation, or install a ventilation system.
Respiratory protection:	Install eye cleaning and body cleaning equipment near the handling site. Wear protective gloves/protective clothing/eye protection/face protection. Not needed under normal conditions, but wear a gas mask (against organic gases) whenever required.
Hand protection:	Wear protective gloves/protective clothing/eye protection/face protection. In case of prolonged or repeated exposure, wear oil-resistant hand protection.
Eye/face protection:	Wear protective gloves/protective clothing/eye protection/face protection. In case of exposure to splashes, wear ordinary type goggles.
Skin protection:	Wear protective gloves/protective clothing/eye protection/face protection. In case of handling over a prolonged period of time or in case of exposure to oil, wear oil-resistant, long-sleeved work clothing.
Hygiene measures:	Take off contaminated clothing and wash thoroughly before reuse. Wash hands thoroughly after handling.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Form:	Liquid
Color:	Light yellow
Odor:	Slight odor



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Melting point/freezing point: Pour Point-10.0(°C)

Initial boiling point and boiling range: Initial boiling point - End point No data

Flammability (solid, gas): No data

Upper/lower flammability or explosive limits: ExplosionLimit(1-7vol%)

Flash point: ≥ 95 (°C)Cleveland Open Cup

Auto-ignition temperature: Estimate200-410(°C)

Decomposition temperature: No data.

pH: No data

Kinematic viscosity: ≤ 20.5 (mm²/sec) (40°C)

Solubility: water : Insoluble.

Partition coefficient: No data.
n-octanol/water:

Vapour pressure: No data

Density(g/cm³): 0.7764(15°C)

Vapour density: No data.

Particle characteristics: No data

10. Stability and reactivity

10.1 Reactivity

Not Reactive

Stable when stored or preserved in a dark place at room temperature.

10.2 Chemical stability

Stable when stored or preserved in a dark place at room temperature.

10.3 Possibility of hazardous reactions

Keep away from any possible contact with strong oxidizing agents.

10.4 Conditions to avoid

Contact with incompatible hazard substances

Prolonged heating, open flames, and ignition sources



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10.5 Incompatible materials

Use care to keep away from any possible contact with halogens, strong acids, alkalis, and acidifying substances.

10.6 Hazardous decomposition products

When burnt, may release carbon monoxide and other gases.

11. Toxicological information

11.1 Information on toxicological effects

Product

Acute toxicity (oral):	No Classification For mixtures, hazard category was identified based on the classification criteria for mixtures.
Acute toxicity (dermal):	No Classification For mixtures, hazard category was identified based on the classification criteria for mixtures.
Acute toxicity (inhalation):	Classification not possible (Gas) Classification not possible (Vapour) Classification not possible (Dust/Mist) For mixtures, hazard category was identified based on the classification criteria for mixtures.
Skin corrosion/irritation:	Category 2 For mixtures, hazard category was identified based on the classification criteria for mixtures.
Serious eye damage/irritation:	No Classification For mixtures, hazard category was identified based on the classification criteria for mixtures.
Respiratory sensitization:	Classification not possible For mixtures, hazard category was identified based on the classification criteria for mixtures.
Skin sensitization:	Classification not possible



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For mixtures, hazard category was identified based on the classification criteria for mixtures.

Mutagenicity:

Classification not possible

For mixtures, hazard category was identified based on the classification criteria for mixtures.

Carcinogenicity:

Classification not possible

For mixtures, hazard category was identified based on the classification criteria for mixtures.

Reproductive toxicity:

Classification not possible

For mixtures, hazard category was identified based on the classification criteria for mixtures.

Target organ effect/Single exposure:

Classification not possible

For mixtures, hazard category was identified based on the classification criteria for mixtures.

Target organ effect/Multi exposure:

Classification not possible

For mixtures, hazard category was identified based on the classification criteria for mixtures.

Respiratory toxic:

Category 1

For mixtures, hazard category was identified based on the classification criteria for mixtures.

Ingredient

Base Oil(s)

Acute toxicity (oral):

Classification not possible
LC50: > 5000 mg/kg[rat]

Acute toxicity (dermal):

Classification not possible
LC50: > 5000 mg/kg[rat]

Acute toxicity (inhalation):

Classification not possible (Gas)
Classification not possible (Vapour)
Classification not possible (Dust/Mist)
LC50: > 5 mg/L[rat]

Skin corrosion/irritation:

Classification not possible

Serious eye damage/irritation:

Classification not possible
Practically None

Respiratory sensitization:

Classification not possible



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Product Name: MAKINO SPINDLE LUBRICANT

Skin sensitization:	Classification not possible None Buehler method [guinea pig]
Mutagenicity:	Classification not possible Ames Test: Negative
Carcinogenicity:	No Classification EU: Category 2 : R45 need not apply. (NOTE L is Applicable), IARC: 3
Reproductive toxicity:	Classification not possible
Target organ effect/Single exposure:	Classification not possible
Target organ effect/Multi exposure:	Classification not possible
Respiratory toxic:	Classification not possible

12. Ecological information

Product

12.1 Toxicity

Ecotoxicity

Acute toxicity:

Fish: For mixtures, hazard category was identified based on the classification criteria for mixtures.

Daphnia: No information.

Algae: For mixtures, hazard category was identified based on the classification criteria for mixtures.

Chronic toxicity:

Fish: For mixtures, hazard category was identified based on the classification criteria for mixtures.

Daphnia: No information.

Algae: For mixtures, hazard category was identified based on the classification criteria for mixtures.

12.2 Persistence and degradability

Persistence and degradability: No information available on mixtures

12.3 Bioaccumulative potential

Bioaccumulative potential: No information for mixtures.

12.4 Mobility in soil

Mobility in soil: No information for mixtures.



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Hazardous to the ozone layer: Classification not possible

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Other adverse effects

Other impact: No information for mixtures.

Ingredient

Base Oil(s)

Ecotoxicity

Acute toxicity: Classification not possible

Fish: 96hLC50: > 5000 mg/L [Oncorhynchus mykiss]

Daphnia: 48hEC50: > 1000 mg/L [Daphnia magna]

Chronic toxicity: Classification not possible

Hazardous to the ozone layer: Classification not possible

13. Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Every customer/user of the product should dispose of industrial waste on its own responsibility, otherwise it must rely on a company authorized by prefectural governor for treating industrial waste or a local public body involved in the disposal of industrial waste for proper disposal.

Before disposal of used container, remove contents completely.

13.2 Other information

No additional information

14. Transport information

14.1 UN Number:

IATA UN number: Not regulated

IMDG UN number: Not regulated

14.2 UN proper shipping name:

IATA Proper shipping name: Not regulated

IMDG Proper shipping name: Not regulated

14.3 Transport hazard class(es):

IATA UN classification: Not regulated



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IMDG UN classification: Not regulated

14.4 Packing group:

IATA Packing group: Not regulated

IMDG Packing group: Not regulated

Domestic restriction: No information.

14.5 Special precautions for user:

Transport containers without causing any significant friction or shaking.

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance

Australia(AICS) : One or more components are not listed.

Canada(DSL) : One or more components are not listed.

China(IECSC) : All components are listed or exempted.

EU(REACH) : In the case where one or more components are not listed or, even if listed, in the case of importing to the country or area concerned, an application or notification is required.

Korea(K-REACH) : In the case where one or more components are not listed or, even if listed, in the case of importing to the country or area concerned, an application or notification is required.

New Zealand(NZIoC) : One or more components are not listed.

Philippines(PICCS) : All components are listed or exempted.

Taiwan(TCSI) : All components are listed or exempted.

USA(TSCA) : All components are listed or exempted.

15.2 Chemical safety assessment

Not conducted

16. Other information

Full text of H-Statements May be fatal if swallowed and enters airways.

referred to under section Causes skin irritation.

2 and 3:

Reference No information.



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Disclaimer:

We at ENEOS Corporation have prepared the copyrighted Safety Data Sheet to provide reference information on the hazardous chemical product of interest for our customers/users to ensure secure and safe handling. We would like every customer/user of the product to refer to the information and understand the necessity of taking appropriate measures for the actual handling conditions on their own responsibilities for optimum practical application of the product of interest. Consequently, the Safety Data Sheet is not intended to guarantee the safety of the product referenced to herein.