

## Material Safety Data Sheet (MSDS)

### 1 PRODUCT AND COMPANY IDENTIFICATION

Product name	Optical Helicoid Grease #10
Company name	Japan Hobby Tool Co, Ltd.
Address	1-10-5 Sugamo, Toshima-ku, Tokyo
Department	Sales Department
Phone number	03-3944-1683
Emergency phone number	03-3944-1683
Fax number	03-3944-1684

### 2 HAZARDS IDENTIFICATION

#### GHS classification

Physical hazards:	Flammable liquids	Not classified
	Pyrophoric liquids	Not classified
Health hazards:	Acute Toxicity (oral)	Not classified
	Skin corrosion/irritation	Not classified
	Serious eye damage/eye irritation	Not classified
	Skin sensitization	Not classified
	Specific target organ/systemic toxicity (single exposure)	Category 3 (Respiratory tract irritation)

#### Environmental hazards:

Note: Items not listed above fall under either Not applicable or Classification not possible

#### Label elements

#### Pictogram or symbol:



Signal word: Warning

Hazard information: May cause respiratory irritation

Precautionary statement: [Safety measures]

Do not handle until all safety precautions have been read and understood.

Obtain special instructions before use.

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

Avoid breathing mist/vapors/sprays.

Wash hands thoroughly after handling.

[First-aid]

IF INHALED: Move to fresh air and keep at rest.

If feeling unwell, seek medical advice/attention.

IF SWALLOWED: Seek medical advice/attention. Rinse mouth.

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easily done, and rinse the eyes.  
If eye irritation persists, seek medical advice/attention.  
If skin irritation occurs, seek medical advice/attention.

[Storage]

Keep containers tightly closed in a well-ventilated, cool place.

[Disposal]

When disposing of the substance and container, contract with an industrial waste treatment firm authorized by the prefectural governor.

National or regional information:

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### 3 COMPOSITION/ INFORMATION ON INGREDIENTS

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Substance/Mixture: Mixture

Chemical or generic name: Grease (hydrocarbon oil, thickener, and additive)

Ingredients and composition:

Ingredients	Content	Chemical formula	Reference number in Japan gazette list
Base oil (Polyalphaolefin)	80%	$C_nH_{2n+2}$	(6)-1109 (JCSCL/ISHL)
Thickener (Lithium soap)	5%	Not disclosed	Not disclosed
Lubricant additive	15%	Not disclosed	Not disclosed

Article 57-2 of the Industrial Safety and Health Law: Not applicable

PRTR\*: Not applicable

(\*Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof)

Impurities and stabilizing additives which contribute to the classification: Does not contain regulated substances and designated hazardous substances in additives.

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### 4 FIRST-AID MEASURES

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If affected by the product, cover with blanket to keep warm and keep at rest after first aid measures. Immediately seek medical attention.

Inhalation:	Move to fresh air and keep at rest in a position comfortable for breathing. If feeling unwell, seek medical advice/attention.
Skin contact:	Immediately wash skin. If skin irritation occurs, seek medical advice/attention.
Eye contact:	Rinse cautiously with water for several minutes. And remove contact lenses, if present and easily done. Continue rinsing. If eye irritation persists, seek medical advice/attention.
Ingestion:	Contact a doctor immediately. Do not induce vomiting. Rinse mouth.
Most important signs and symptoms:	
Protection of first-aider:	Wear protective equipment to avoid skin contact.

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## 5 FIRE-FIGHTING MEASURES

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Extinguishing media:	Foam, powder, carbon dioxide, dry sand, atomized fire extinguishing liquid
Unsuitable extinguish media:	Pouring water may spread fire and be dangerous.
Protection of fire fighters:	Wear appropriate self-contained compressed-air breathing apparatus and protective clothing during firefighting.
Firefighting measures for fire area:	Keep unauthorized persons away from fire area. Cool down surrounding combustible materials and facility by spraying water. Remove combustible materials to a safe place if movable.

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## 6 ACCIDENTAL RELEASE MEASURES

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Personal precautions:	Do not touch leaked product.
Emergency measures:	Isolate appropriate spill or leak area immediately in all directions. Keep unauthorized persons away from the area. The worker must wear appropriate protective equipment to avoid eye/skin contact or inhalation. Ventilate enclosed areas before entering. When not wearing appropriate protective clothing, do not touch damaged container or leaked product.
Environmental precautions:	Do not release into the environment. Do not release into rivers and sea.
Salvage/neutralization:	If a small spill, wipe off with paper or cloth. If large spill, absorb it with dry sand or noncombustible material, or put it into an empty container that can be sealed by covering it. Then, wipe off the remaining with a waste cloth.
Prevention of secondary hazards	Immediately eliminate all ignition sources (no smoking, sparks, or flames in immediate area). Prevent the spillage from entering drains, sewers, basement, or closed area.

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## 7 HANDLING AND STORAGE

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### Handling

Safe handling precautions:	Prohibit high-temperature materials, sparks, and fire in vicinity. Avoid handling of the container such as turning over, falling, or impacting. Do not contact, inhale, or swallow. Wash hands thoroughly after handling the product. Do not eat, drink or smoke when using this product. Avoid environmental release.
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## Storage

Technical measures	Take measures in accordance with the regulations of the Fire Service Act.
Storage conditions	Store away from ignition sources, such as heat, sparks, and open fire. Store away from oxidizing agents. Store in a tightly closed container in a cool and well-ventilated place away from direct sunlight. Lowest/highest temperatures for storage: -10°C to 40°C.

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## 8 EXPOSURE PREVENTING MEASURES

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Control concentration:	Not specified
Permissible concentration:	
Technical facility controls:	
Protective equipment, respiratory protection:	Wear mask as required.
Hand protection:	Upon prolonged or repeated contacts, wear the oilproof protective gloves.
Eye protection:	When splashes are expected, wear eye protection.
Skin and body protection:	Wear the oilproof work clothing for prolonged handling.
Specific hygiene measures:	Wash hands thoroughly after handling.

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## 9 PHYSICAL AND CHEMICAL PROPERTIES

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Physical state, shape, color, etc.:	Semi-solid. White
Odor:	Subtle scent
pH:	No data available
Pour point:	No data available
Melting point, freezing point:	No data available
Boiling point, initial boiling point, and boiling range:	No data available
Flash point:	Not less than 200°C
Explosive range:	Explosive range of base oil was estimated as follows: Upper limit 7%, Lower limit 1%
Vapor pressure:	No data available
Vapor density (air = 1):	No data available
Specific gravity (density):	No data available
Solubility:	Solubility in water: Insoluble
Octanol-water-partition coefficient:	No data available
Auto-ignition temperature:	No data available

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## 10 STABILITY AND REACTIVITY

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Stability:	Stable at normal temperature.
Possibility of hazardous reactions:	No self-reactive, non-oxidizing, no pyrophoric, non explosive.
Conditions to avoid:	Avoid contacting with strong oxidizing agents.
Incompatible materials:	Strong oxidizing agents

Hazardous decomposition products: Incomplete combustion may produce carbon monoxide.

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## 11 TOXICITY INFORMATION

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Acute toxicity: oral	Rat LD50: Not less than 5 g/kg (estimation) "No irritation" according to the description of Chevron Philips Chemical Company. Applicable as "Not classified" under GHS based on the product MSDS (June 27, 2008).
Dermal	Rat LD50: Classification not possible because of insufficient data.
Inhalation (vapor)	No information available
Inhalation (mist)	No information available
Skin corrosion, skin irritation:	"No irritation" according to the description of Chevron Philips Chemical Company Applicable as "Not classified" under GHS based on the product MSDS (June 27, 2008).
Serious Eye Damage/eye Irritation:	"No irritation" according to the description of Chevron Philips Chemical Company Applicable as "Not classified" under GHS based on the product MSDS (June 27, 2008).
Respiratory sensitization:	No information available
Skin sensitization/irritation:	"No skin irritation" according to the description of Chevron Philips Chemical Company. Applicable as not classified under GHS based on the product MSDS (June 27, 2008).
Germ cell mutagenicity:	No information available
Carcinogenicity:	Not classified as carcinogen by IARC and NTP. Reference 4 Evaluation by EU: No notification of carcinogenicity is required. Reference 5
Reproductive toxicity:	No information available
Specific target organ/systemic toxicity (single exposure):	"May cause damage to respiratory tract system" according to the description of Chevron Philips Chemical Company Applicable as "Not classified" under GHS based on the product MSDS (June 27, 2008).
Specific target organ/systemic toxicity (repeated exposure):	No information available
Aspiration hazard:	No information available

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## 12 ECOLOGICAL INFORMATION

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Ecotoxicology:	
Acute fish toxicity	No information available
Immobilization of crustaceans	No information available
Growth inhibition of algae	No information available
Persistence/degradability:	No information available
Bioaccumulation:	No information available

Mobility in soil:	No information available
Other adverse effects:	No information available
Acute hazards to aquatic environment:	Classification not possible because of insufficient data
Chronic toxicity to aquatic environment:	Classification not possible because of insufficient data

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### 13 DISPOSAL CONSIDERATIONS

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Residues:	Dispose of in accordance with the applicable laws and regulations and local requirements. Dispose of by entrusting disposal to an industrial waste disposal company authorized by the prefectural governor.
Contaminated containers and packages:	Clean up containers for recycling or dispose of them in accordance with the applicable laws and regulations and local requirements.

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### 14 TRANSPORT INFORMATION

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International regulations	
Maritime regulatory information:	Non-dangerous articles
Aviation regulatory information:	Non-dangerous articles
Domestic regulations	
Rail and road regulatory information:	Non-dangerous articles
Maritime regulatory information:	Non-dangerous articles
Aviation regulatory information:	Non-dangerous articles
Specific safety measures:	When transporting, avoid direct sunlight, load carefully to prevent damage, corrosion, and leakage. Secure the product to prevent the stack from collapsing. Follow directions in Section "7 HANDLING AND STORAGE"

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### 15 REGULATORY INFORMATION

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Fire Service Act	
Industrial Safety and Health Law	Not applicable
PRTR	Not applicable
(Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof)	
Water Pollution Control Law:	Oil effluent regulations (Detected as an n-hexane extract.)
Sea Water Protection Law:	Oil effluent regulations (prohibited in principle) (Mineral oil)
Wastes Disposal and Public Cleansing Act:	Rules for industrial waste (prohibition of diffusion and spillage)
Sewage Act	Mineral oil effluent regulations (5 mg/L permissible concentration)

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## 16 OTHER INFORMATION

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Reference: Data from other company

- 1) National Institute of Technology and Evaluation: Chemical Risk Information Platform (CHRP)
- 2) National Institute of Technology and Evaluation: GHS classification result database
- 3) Japan Chemical Industry Association: Guidelines for the preparation of MSDS (2nd revised edition)
- 4) IARC MONOGRAPHS ON THE EVALUATION OF THE CARCINOGENIC RISK OF CHEMICALS TO HUMANS: VOLUME 33
- 5) Annex 1 of the EU Council Directive 67/548/EEC, "List of Dangerous Substances"

This MSDS is based on information available at the time of preparation; however, the data and assessments described herein are not guaranteed in any sense. The precautions are applicable to normal handling. For handling under special conditions, users should implement their own safety measures appropriate to their purposes or new applications.