

MATERIAL SAFETY DATA SHEET

Issued: December 02, 2010

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1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY

Product name: μSC
Product type: Additive for dielectric oil
Supplier: MAKINO MILLING MACHINE CO.,LTD.
Address: 3-19,Nakane2-chome,Meguro-ku,Tokyo152,Japan
Telephone Number: +81-3-3724-7701
Fax Number: +81-3-3724-2815
Emergency telephone number +81-3-3724-2815

2. HAZARDS IDENTIFICATION

GHS Classification: Classification criteria do not apply.
Other hazards not included : No information.
in the GHS classification
Main symptoms: No information.
Emergency overview: No information.

3.COMPSITION/INFORMATION ON INGREDIENTS

Single substance or mixture: Mixture
Common chemical name (generic name): Synthetic hydrocarbons and Carbon
Preparation description: Synthetic hydrocarbons > 60%, Carbon > 30%
Publication number in Japanese official : Not relevant.
gazette (Law Concerning the Examination and Regulation of the Manufacture, etc. of Chemical Substances; Chemical Substance Control Law)
Publication number in Japanese official : Not relevant.
gazette(Industrial Safety and Health Act)

4.FIRST AID MEASURES

Symptoms and effects: Not expected to give rise to an acute hazards under normal condition of use.
First Aid - Inhalation: In the unlikely event of dizziness or nausea, remove casualty to fresh air. If symptoms persist, obtain medical attention.
First Aid - Skin: Remove contaminated clothing and wash affected skin with soap and water. If persistent irritation occurs, obtain medical attention immediately.
First Aid - Eye: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
First Aid - Ingestion: Wash out mouth with water and obtain medical attention. DO NOT INDUCE VOMITING.
Advice to physicians: Treat symptomatically. Aspiration into the lungs may result in chemical pneumonitis.

Dermatitis may result from prolonged or repeated exposure

5. FIRE FIGHTING MEASURES

Specific hazards:	Combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide, oxides of sulphur, and unidentified organic and inorganic compounds.
Extinguishing media:	Foam and dry chemical powder. Carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media:	Water in a jet. Use of Halon extinguishers should be avoided for environmental reasons.
Protective equipment:	Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Avoid contact with: skin and eyes.
Personal protection:	wear impermeable gloves and boots.
Environmental precautions:	Prevent from spreading or entering into drains, ditches rivers by using sand, earth, or other appropriate barriers. Inform local authorities if this cannot be prevented.
Clean-up methods-small spillage:	Absorb liquid with sand or earth. Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations.
Clean-up methods-large spillage:	Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Dispose of as for small spills.

7. HANDLING AND STORAGE

Handling:	When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Prevent spillages.
Storage:	Keep in a cool, dry, well-ventilated place. Use properly labeled and closed containers. Avoid direct sunlight, heat sources, and strong oxidizing agents.
Storage temperature:	0°C minimum to 50°C maximum.
Recommended materials:	For container linings, use: mild steel or high density polyethylene.
Unsuitable materials:	For containers or container linings, avoid: PVC.
Other information:	Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering control measures:	Use local exhaust ventilation if there is a risk of inhalation of vapours, mists or aerosols.			
Occupational exposure standards:	Threshold limit values are given below. Lower exposure limits may apply locally:			
Component name	Limit type	Value	Unit	Other information
Oil mist, mineral	8-hour TWA	5	mg/m ³	ACGIH
	15-mini STEL	10	mg/m ³	ACGIH
Hygiene measures:	Wash hands before eating, drinking, smoking and using the toilet.			
Respiratory protection:	Not normally required. If oil mist cannot be controlled, a respirator fitted with an organic vapour cartridge combined with a particulate pre-filter should be used.			
Hand protection:	PVC or nitrile rubber gloves.			
Eye protection:	Wear safety glasses or full face shield if splashes are likely to occur.			
Body protection:	Minimize all forms of skin contact. Wear overalls to minimize contamination of personal clothing. Launder overalls and undergarments regularly.			

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Compound of individual and liquid at ambient temperature.
Color:	Black
Odor:	No odor
Initial boiling point:	>210°C
Density:	0.85
Vapor density (air=1):	>1 at 20°C
Flash point:	86°C
Flammability limit - lower:	1% v/v (typical)
Flammability limit - upper:	7% v/v (typical)
Auto-ignition temperature:	>200°C (typical)
Solubility in water:	Negligible

10. STABILITY/REACTIVITY

Stability:	stable
Condition to avoid:	Extremes of temperature and direct sunlight.
Material to avoid:	Strong oxidizing agents
Hazardous decomposition product:	Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL UNFORMATION

Basis for assessment:	Toxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the toxicology of similar products.
Acute toxicity - oral:	Believed to be greater than 5g/kg (rat) Practically non-toxic
Acute toxicity - dermal:	Believed to be greater than 3g/kg (rabbit) Practically non-toxic
Acute toxicity - inhalation:	Data not available.
Eye irritation:	Expected to be slightly irritant.
Skin irritation:	Expected to be slightly irritant.
Respiratory irritation:	If mists are inhaled, slightly irritation of respiratory tract may occur.
Skin sensitization:	Not expected to be a skin sensitizer.
Carcinogenicity:	Product is based on the types of shown to be non-carcinogenic in animal skin-painting studies.
Mutagenicity:	Not considered to be a mutagenic hazard.
Other information:	Prolonged and /or repeated contact with this product can result in defatting of skin, particularly at elevated temperatures. This can lead to irritation and possibly dermatitis, especially under conditions of poor personal hygiene. Skin contact should be minimized. Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. All used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Basis for assessment:	Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and ecotoxicology of similar products.
Mobility:	Liquid under most environmental conditions. Floats on water. If it enters soil, it will absorb to soil particles and will not be mobile.
Persistence/degradability:	Not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that

Bioaccumulation:	may persist in the environment.
Ecotoxicity:	Has the potential to bioaccumulate. Poorly soluble mixture. Product is expected to be practically non-toxic to aquatic organisms. (LC/EC ₅₀ expressed as the nominal amount of product required to prepare aqueous test extract)

13.DISPOSAL CONSIDERATIONS

Waste disposal:	Recycle or dispose of in accordance with prevailing regulation, preferably to a recognized collector or contractor. The competence of the contractor to deal satisfactorily with this type of product should be established beforehand.
Container disposal:	200 liter drums should be emptied and returned to the supplier or sent to a drum reconditioner without removing or defacing markings or labels. Non-reusable small metal and plastic containers should be recycled where possible, or disposed of as domestic refuse.

14.TRANSPORT INFORMATION

Not dangerous for conveyance under UN, IMO, ADR/RID and IATA/ICAO codes.

15.REGULATORY INFORMATION

EC Classification:	Not classified as Dangerous under EC criteria
EINECS(EC):	All components listed or polymer exempt.
TSCA(USA):	All components listed.
MITI(JAPAN):	All components listed.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not be construed as guaranteeing any specific property of the product.