



Safety Data Sheet

Mission Critical - MC-10 Lubricant

This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements of other countries.

Emergency Contact

Chemtrec: 800-424-9300

International Chemtrec: 703-527-3887

SECTION 1. PRODUCT AND COMPANY INFORMATION		
Product Name	Mission Critical - MC-10 Lubricant	
Chemical Family	Fluorinated Solvent Extended Lubricating Oil	
Product Use	Firearm Lubricant	
Manufacturer	Otis Technology, 6987 Laura St. Lyons Falls, NY 13368	
SECTION 2. HAZARDS IDENTIFICATION		
GHS Classification	None	
GHS Label Elements	Hazard Pictograms Signal Word Hazard Statements	None
Precautionary Statements	P260 Do not breathe dust, mist, or vapors. P281 Use personal protective equipment as required. P314 Get medical attention if you feel unwell. P402 + P404 Store in a dry place, in a closed container. P501 Dispose of content and container according to local and national regulations.	
SECTION 3. COMPOSITION		
CAS Number	Chemical Name	Content by Mass
N/A	Perfluoropolyether oil	10%
	Methoxynonofluorobutane	90%
SECTION 4. FIRST AID MEASURES		
Eye Contact	Flush thoroughly with clear water for 15 minutes or until irritation subsides. Remove contact lenses if easy to do. If signs or symptoms persist, get medical attention.	
Skin Contact	Wash with soap and water. Remove any contaminated clothing and wash with soap and warm water. Get medical attention if symptoms occur.	
Inhalation	Move to fresh air. If you feel unwell, get medical attention.	
Injection	Consult physician immediately.	
Ingestion	Rinse mouth. Do not induce vomiting. Contact physician immediately.	
Other	Exercise ordinary measures of personal hygiene.	
SECTION 5. FIRE-FIGHTING MEASURES		
Extinguishing Media	Non-combustible. Use material suitable for the surrounding fire.	
Unusual Fire or Explosion Hazards	Dense smoke can form in a fire. In a fire, decomposition of fluorinated compounds can generate hydrogen fluoride, fluorophosgene, and carbon monoxide.	
Special Fire-Fighting Methods	Avoid smoke inhalation. Water or foam may cause frothing. Cool exposed containers with water. Use air supplied rescue equipment for enclosed areas.	
SECTION 6. ACCIDENTAL RELEASE MEASURES		
Spill or Leak Procedures	Ventilate area with fresh air. Wipe or scrape up spillage and place it in a container for disposal. Product may be absorbed with an inert material such as sand, soil, or vermiculite. Wash walking surfaces thoroughly with detergent and water to reduce slipping hazard. Keep out of sewers and water courses. Advise authorities if product has or may enter sewers or water courses.	
Waste Management and Disposal	Assure conformity with applicable regulations. Consult local, state and federal regulations applicable to your area.	

SECTION 7. HANDLING AND STORAGE	
Handling	Avoid contact with skin and eyes. Enforce No Smoking in areas where fluoropolymers are handled or stored. Use with adequate ventilation. Adequate ventilation should be used.
General Hygiene Advice	Laundry contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.
Storage	Keep container closed and in a dry, well-ventilated place. Store away from heat, acids, strong bases.
SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION	
Control Parameters	
Exposure Guidelines	Particulates Not Otherwise Regulated (PNOR)
OSHA PEL	15 mg/m ³ (Total Dust), 5 mg/m ³ (Respirable Particulate)
ACGIH TLV	10 mg/m ³ (Inhalable Particulate)
Methoxynonofluorobutane (vapor)	750 ppm TWA (AIHA)
Exposure Controls	
Ventilation	Provide local exhaust if product is heated. In situations where the product may be exposed to extreme over-heating due to misuse or equipment failure, use with appropriate local exhaust. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Exposure Limits and to control mist.
Personal Protective Equipment	
Goggles	Safety glasses recommended.
Gloves	Oil resistant gloves recommended, especially to avoid prolonged or repeated skin contact.
Respirator	Not required unless mists, smoke or vapors are produced at hightemperatures or if vapor concentration exceeds exposure limits.
Other	Use oil resistant apron, if needed.
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES	
Appearance	Liquid
Color	Colorless
Odor	None
Odor Threshold	Not available
Physical State	Liquid
pH	Not applicable
Melting Point	-135°C (solvent)
Initial Boiling Point	61°C (solvent)
Flash Point	NONE
Auto-ignition Temperature	None
Evaporation Rate	49 (BUOAC=1 - solvent)
Lower Explosive Limit	None
Upper Explosive Limit	None
Vapor Pressure	202 mmHg at 25°C (solvent)
Vapor Density	8.6 (Air = 1)
Specific Gravity	1.5 at 25°C
Solubility in Water	Insoluble (<12ppm - solvent)
Partition Coefficient	3.9 (30°C – solvent)
Decomposition Temperature	Not available
Viscosity	Approx. 1 cP at 25°C
SECTION 10. STABILITY AND REACTIVITY	
Reactivity	Stable
Hazardous Polymerization	Will not occur
Chemical Incompatibilities	Avoid contact with strong oxidizing agents, strong acids and strong bases.
Hazardous Decomposition Products	Burning may produce carbon monoxide, carbon dioxide, hydrogen fluoride, fluorophosgene, carbonyl fluoride, perfluoroisobutylene and other fumes.
Other	Avoid contamination of cigarettes or other tobacco products.

SECTION 11. TOXICOLOGICAL INFORMATION	
Perfluoropolyether oil: Acute Oral LD50 (rat) >5,000 mg/kg	
Inhalation	Thermal decomposition (above 300°C) can cause polymer fume fever with flu-like symptoms in humans.
Skin	Irritation (rabbit): No skin irritation.
Sensitization	Not expected to be a sensitizer based on component data.
Carcinogenicity	No components classifiable as a human carcinogens.
Aspiration Hazard	Not classified
Methoxynonofluorbutane: Acute Oral LD50 (rat) >5,000 mg/kg	
Inhalation	(4 hours) LC50 (rat) >1,000 mg/l
Skin	Irritation (rabbit): No significant irritation.
Sensitization	(guinea pig): Non-sensitizing.
Eye Damage/Irritation	(rabbit) No significant irritation.
Respiratory Sensitization	No data/Not classified.
Germ Cell Mutagenicity	Non mutagenic in vitro or in vivo.
Carcinogenicity	No data/Not classified
	Reproductive toxicity: Ingestion (rat, m/f) NOAEL 1,000 mg/kg/day, 28 days, not toxic.
	Inhalation (rat, m/f) NOAEL 129 mg/l, 1 generation, not toxic.
	Inhalation (rat, gestation) NOAEL 307 mg/l, some positive data exist, but the data are not sufficient for classification.
Target Organs	Inhalation, nervous system (dog) LOAEL 913 mg/l, 10 min, some positive data exist, but the data are not sufficient for classification.
	Inhalation, cardiac sensitization (dog) NOAEL 913 mg/l, 10 min, all data negative.
	Inhalation, liver (rat) NOAEL 155 mg/l, 13 weeks, some positive data exist, but the data are not sufficient for classification.
	Inhalation, bone, teeth, nails, and hair (rat) NOAEL 129 mg/l, 11 weeks, some positive data exist, but the data are not sufficient for classification.
	Inhalation, heart, skin, endocrine system, hematopoietic system, immune system, muscles, nervous system, eyes, kidney/bladder, respiratory system (rat) NOAEL 155 mg/l 13 weeks, all data are negative.
	Ingestion, endocrine system/liver (rat) NOAEL 1,000 mg/kg/day 28 days, some positive data exist, but the data are not sufficient for classification.
	Ingestion, heart, hematopoietic system, immune system, nervous system, eyes, kidney/bladder, respiratory system (rat) NOAEL 1,000 mg/kg/day 28 days, all data are negative.
SECTION 12. ECOLOGICAL INFORMATION	
Perfluoropolyether Oil	Not expected to produce toxic effects.
Methoxynonofluorbutane	Please contact The TorrLube Company for additional ecotoxicological information on this component.
SECTION 13. DISPOSAL CONSIDERATIONS	
According to RCRA (40 CFR 261), this material is not hazardous waste when the as received lubricant is discarded.	
Dispose of in accordance with all local, state, provincial, and federal regulations.	
SECTION 14. TRANSPORT INFORMATION	
DOT (49 CFR 171.101)	Not hazardous
IMDG (Ocean)	Not hazardous
IATA (Air)	Not hazardous
SECTION 15. REGULATORY INFORMATION	
Contents of this MSDS comply with OSHA HAZARD Communication Standard 29 CFR 1910.1200.	
EPA SARA Title III Chemical Listing	This product contains no extremely hazardous or hazardous substances.
CERCLA Hazardous Substances	None
TSCA Status	All chemical substances listed are included or exempt from listing on TSCA

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