1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: MS-383A
Polyphenyl Ether Lubricants

Product Use: Lubricant

MANUFACTURER/DISTRIBUTOR:

Miller-Stephenson Chemical
55 Backus Ave.
Danbury, Conn. 06810 USA
(203) 743-4447

Emergency Phone Number:
(800) 424-9300

2. HAZARDS IDENTIFICATION

GHS Hazard classification
Physical Hazard: Not classified
Health Hazard: Not classified
Environmental Hazard: Not classified

GHS Label elements:
Pictogram: Not required
Signal word: Not required

Hazards not otherwise classified
Eye contact: No more than slightly irritating based on toxicity studies.
Skin contact: No more than slightly toxic or slightly irritating based on toxic studies.
Ingestion: No more than slightly toxic based on toxicity tests. No significant adverse health effects are expected to develop if only a small amount (less than a mouthful) are swallowed.
Inhalation: No information available.

NO SIGNIFICANT HAZARDS ASSOCIATED WITH THIS MATERIAL

Refer to Section 11 for toxicological Information

3. INGREDIENTS

Material (s)	CAS No.	Approximate %
6-ring Polyphenyl Ether	3705-62-2	85 – 95
5-ring Polyphenyl Ether	2455-71-2	8 – 12

4. FIRST AID MEASURES

Inhalation: If symptoms occur, immediately move individual from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet.

Skin: Immediate first aid is not likely to be required. However, this material can be removed with water. Wash heavily contaminated clothing before reuse.

Eye: Immediate first aid is not likely to be required. However, this material can be removed with water. Wash eyes if exposed.

Oral: Immediate first aid is not likely to be required. A physician or Poison Control Center can be contacted for advice. Wash heavily contaminated clothing before reuse.

Most important symptoms/effects, acute and delayed: See Section 11

Indication of immediate medical attention and special treatment needed: Treat symptomatically.

General information: Contact physician if discomfort continues.

5. FIRE FIGHTING MEASURES

Flash Point: approx. 570°F (299°C) **Method:** Cleveland Open Cup

Autoignition Temperature: 1170°F (632°C)

Extinguishing Media: Dry chemicals, alcohol resistant foam, carbon dioxide (CO2), water spray or fog. Do not use water jet as extinguisher, as this will spread the fire.

Special hazards arising from chemical: Carbon oxides, hydrocarbons.

Special Fire Fighting Instruction: Fire fighters and others exposed to products of combustion should wear self contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

General fire hazards: No data available.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: For personal protection see section 8.

Environmental precautions: Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container.

Methods for clean up: Absorb liquid on vermiculite, floor absorbent or other absorbent material.

7. HANDLING AND STORAGE

Handling:
HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. THESE PRACTICES INCLUDE AVOIDING UNNECESSARY EXPOSURE AND REMOVAL OF MATERIAL FROM EYES, SKIN AND CLOTHING.

Storage Conditions: Product is stable under normal conditions of storage and handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:	**TWA (ACGIH)**	**TWA (OSHA)**
6-ring Polyphenyl Ether	Not Established	Not Established
5-ring Polyphenyl Ether	Not Established	Not Established

General advice: These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow the guidelines established by local authorities.

Respiratory Protection: Avoid breathing vapor or mist. Use natural and mechanical ventilation to minimize exposure. If practical, use local exhaust ventilation at sources of air contamination such as open process equipment. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposure is excessive. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134.

Eye Protection: This product does not cause significant eye irritation or eye toxicity requiring special protection. Use good industrial practice to avoid eye contact.

Skin Protection: Although it does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N.A.

Density: approx. 1.2 gm/cc at 77^{O}F/25^{O}C

Vapor Density (Air=1): approx. 17

Viscosity: approx.. 2000 cst @100^{O}F/38^{O}C

Form: Viscous liquid

Color: Yellow

Viscosity: approx. 2000 @ 100^{O}F/38^{O}C (centistokes)

Vapor Pressure: approx. 1 – 2 mm Hg @ 600^{O}F/316^{O}C

Solubility in H_2O: less than 0.001% @ 77^{O}F/25^{O}C

Viscosity: approx.. 23 cst @210^{O}F/99^{O}C

Appearance: Clear yellow liquid

Odor: None

NOTE: These physical properties are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis for any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical stability: Stable.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Material and Conditions to Avoid: Heat, flames and sparks. Strong oxidizing agents.

Hazardous decomposition products: Upon decomposition, this product emits Carbon oxides (CO, CO_2), and/or low molecular weight hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: None of the components in this product are listed as a carcinogen by IARC, NTP, or OSHA.

Single exposure (acute) studies indicate:

Oral - Practically Nontoxic (Rat LD50 > 15,800 mg/kg)

Dermal - Practically Nontoxic (Rabbit LD50 > 7,940 mg/kg)

Eye Irritation - Practically Nonirritating (Rabbit, 0.8/110.0)

Skin Irritation - Nonirritating (Rabbit, 24-hr exposure, 0.0/8.0)

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: No data available

Environmental fate and pathways: No data available.

13. DISPOSAL CONSIDERATIONS

This material when discarded is not a hazardous waste as defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dispose of in accordance with all federal, state and local environmental regulations. Recommended method of disposal is by high temperature incineration in a RCRA approved TSDF.

14. TRANSPORT INFORMATION

U.S. DOT
Not Regulated

IATA
Not Regulated

IMDG
Not Regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA: All ingredients are listed in TSCA inventory.

16. OTHER INFORMATION

NPCA-HMIS Ratings:

Health	- 0
Flammability	- 1
Reactivity	- 0

Personal Protective rating to be supplied by user depending on the conditions.

FOR INDUSTRIAL USE ONLY

REVISION DATE: JUNE 2015