Section 1: Identification

Product Identifier/Name: EDM Microfine 49

Product code: 10287

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

Recommended use: Dielectric machining fluid

Restrictions on use: For intended industrial use only

HMIRA Registration No.: 11281

HMIRA Registration Date: 2017-05-04

Details of the supplier of the safety data sheet

Manufacturer: Commonwealth Oil Corporation, A Houghton Company
2080 Ferriss Rd N., P.O. Box 370
Harrow, Ontario, N0R 1G0
Canada
www.houghtonintl.com/ www.commonwealthoil.com

Telephone (General): (519) 738-3503

Emergency telephone number: CANUTEC (613) 996-6666 Collect 24 hr

Section 2: Hazard Identification

Classification of the substance or mixture

In accordance with 29 CFR 1910.1200 OSHA HCS 2012 and the Canadian Hazardous Products Regulations and WHIMIS 2015

Aspiration hazard Category 1

Label elements

Signal word: DANGER

Hazard symbol

Hazard statements: May be fatal if swallowed or enters airways

Precautionary statements

Prevention: Not applicable

Response: IF SWALLOWED: Immediately call a POISON CENTER or physician

Do NOT induce vomiting

Disposal: Dispose of contents and container in accordance with local and national regulations

Hazards not otherwise classified: Defatting to the skin

Section 3: Composition/Information on Ingredients

Substances: Mixture

Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>%(Wt.)</th>
<th>CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum hydrocarbon #1</td>
<td>75 - 90</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Petroleum hydrocarbon #2</td>
<td>10 - 25</td>
<td>Proprietary</td>
</tr>
</tbody>
</table>
Section 4: First-Aid Measures

Description of first aid measures

Inhalation
▪ Move victim to fresh air if adverse effects are observed.

Skin
▪ IF ON SKIN: Wash skin with soap and water. Remove contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.

Eye
▪ IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion
▪ Do NOT induce vomiting. Seek medical attention.

Most important symptoms and effects

Acute
▪ Defatting to the skin. May cause skin dryness and irritation.

Delayed
▪ Prolonged/repeated exposure may cause skin irritation in susceptible individuals.

Indication of any immediate medical attention and special treatment needed

Note to Physician
▪ All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable Extinguishing Media
▪ Regular foam, carbon dioxide, dry chemical.

Unsuitable Extinguishing Media
▪ Avoid the use of water jet, as this may spread the fire.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion
▪ No unusual hazard noted. Treat as oil fire.

Hazardous Combustion
▪ Smoke, soot, fumes or vapors, oxides of carbon.

Products
▪ Structural firefighters' protective clothing will only provide limited protection. Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Wear positive pressure self-contained breathing apparatus (SCBA). Water spray may be used to cool containers exposed to fire.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions
▪ Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material.

Environmental precautions
▪ Avoid run off to waterways and sewers.

Methods and material for containment and cleaning up

Containment/Clean-up
▪ Recover free liquid for recycle or disposal. Add absorbent to spill area.

Measures
▪ LARGE SPILLS: Dike far ahead of liquid spill for later disposal.
Section 7: Handling and Storage

Precautions for safe handling

Handling
▪ Do not mix or store with strong oxidants.
▪ Empty container contains product residue which may exhibit hazards of product.

Conditions for safe storage, including any incompatibilities

Storage
▪ Store in a dry, well ventilated place. Keep container tightly closed when not in use.
▪ Keep away from open flame.
▪ Keep product from freezing. (Product will freeze at 4°C/39°F)

Incompatible Materials
▪ Strong oxidizing agents.

General Industrial Hygiene Considerations
▪ Handle in accordance with good industrial hygiene and safety practice.
Wash thoroughly with soap and water after handling and before eating or drinking. Safety shower and eye wash should be available close to work station.

Environmental Exposure Controls
▪ Follow best practice for site management and disposal of waste.
Avoid release to the environment.

Section 8: Exposure Controls/Personal Protection

Exposure Controls

PEL/TLV

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>OSHA (PEL)</th>
<th>ACGIH (TLV)</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Engineering Measures/Controls
▪ Use adequate mechanical (general) ventilation or local exhaust as needed to control concentration of airborne contaminants below applicable exposure limit values.

Personal Protective Equipment

Pictograms

Respiratory
▪ Not necessary under conditions of normal use. In case of insufficient ventilation, wear suitable respiratory equipment if exposure limits are exceeded.

Eye/Face
▪ Wear safety goggles.

Hands
▪ Wear protective gloves- neoprene, butyl or nitrile rubber with cuffs.

Skin/Body
▪ Where extensive dermal exposure may be expected, either a chemical suit or chemical apron will be needed.

Section 9: Physical and Chemical Properties

Information on physical and chemical properties

Appearance
Clear water white or pale yellow liquid

Odor
Mild

Odor Threshold
Not Determined

pH
None

Melting Point/Freezing Point
4°C (39°F)
Boiling Point Range  Not Available
Flash Point  > 100°C (212°F)  Cleveland Open Cup
Evaporation Rate  (N-butyl acetate = 1) < 0.1
Flammability Limits  Upper explosion limit: 4.7% volume, lower explosion limit: 0.5%
Vapor Pressure  < 0.1mm Hg @ 20°C (68°F)
Vapor Density (Air=1)  > 1.0 (Air=1)
Specific Gravity/Relative 0.720 @ 16°C, 61°F
Solubilities  Insoluble in water
Octanol/Water Partition coefficient  Not Determined
Auto ignition temperature  Not Determined
Decomposition temperature  Not Determined
Viscosity  2.4 cSt @ 40°C, 104°F

Section 10: Stability and Reactivity

Reactivity  • No dangerous reaction known under conditions of normal use.
Chemical stability  • Stable under normal temperatures and pressures.
Possibility of hazardous reaction  • Not determined
Conditions to avoid  • Not determined
Incompatible materials  • Do not mix with strong oxidants.
Hazardous decomposition products  • None known under normal use.

Section 11: Toxicological Information

Information on the likely routes of exposure; symptoms; and acute, delayed and chronic effects
Inhalation  • Overexposure to mists or vapors may irritate respiratory tract. May be fatal if swallowed and enters airways.
Aspiration Hazard  • If swallowed can be aspirated into the lungs and cause chemical pneumonia, varying degrees of pulmonary injury or death.
Ingestion  • Ingestion of concentrate may cause gastrointestinal irritation. Do not induce vomiting. Vomiting may increase risk of product aspiration.
Eye  • Direct contact with concentrate may cause eye irritation based on component information.
Skin corrosion/irritation  • Prolonged/repeated exposure to concentrate may cause skin irritation in some individuals.

Numerical measures of toxicity

<table>
<thead>
<tr>
<th>Route</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>This product is classified as an Aspiration hazard, Category 1.</td>
</tr>
</tbody>
</table>
Carcinogenicity

- Not listed in NTP, OSHA, or IARC monographs.

Additional Information

- Practical experience has not demonstrated any adverse effects with normal use dilutions of this product.
- Contains petroleum oil, which if misted in excess at exposure limits may cause respiratory irritation, coughing, and extreme overexposure may cause oil pneumonitis.

Section 12: Ecological Information

Toxicity
- Not determined.

Persistence and degradability
- Not determined.

Bioaccumulative potential
- Not determined.

Mobility in Soil
- Not determined.

Other adverse effects
- Oil spills are generally hazardous to the environment.

Section 13: Disposal Considerations

Waste treatment methods

Product waste
- Do not discard into any sewers, on the ground, or any body of water.
- Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.
- This product, as manufactured in its present state, is not considered to be a hazardous waste according to 40CFR 261.4(b)(4). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This product should be recycled if possible, otherwise it should be disposed of in accordance with all applicable federal, state, and local regulations.

Contaminated containers or packaging
- Contaminated containers should be offered for professional cleaning before reuse
- Dispose of spent container in accordance with local, regional, national, and/or international regulations.

Section 14: Transport Information

UN Number
- Not regulated for transport.

UN Proper Shipping Name
- Not applicable

Transport Hazard Class(es)
- Not applicable

Packing Group
- Not applicable

Environmental Hazards
- Not determined

Transport in Bulk
- Not regulated

Special Precautions for user
- None specified
Section 15: Regulatory Information

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

Global Chemical Inventories

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>USA</td>
<td>All components of this material are on the US TSCA Inventory or</td>
</tr>
<tr>
<td></td>
<td>are exempt.</td>
</tr>
<tr>
<td>Other TSCA Reg.</td>
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<td>Australia</td>
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<td>Canada</td>
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<td>China</td>
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<td>New Zealand</td>
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</tr>
<tr>
<td>Switzerland</td>
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</tbody>
</table>

Other U.S. Federal Regulations

SARA Ext. Haz. Subst. • This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazardous Substances list.

SARA Section 313 • This product does not contain greater than 1.0% (> 0.1% for carcinogenic substance) of any chemical substances listed under SARA Section 313.

SARA 311 Classifications

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
</tr>
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<tbody>
<tr>
<td>Acute Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Hazard</td>
<td>No</td>
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<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactivity Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

CERCLA Hazardous Substances • None known.

FDA Approval • Not Applicable.

State Regulations

Cal. Prop. 65 • This product does not contain any Proposition 65 chemicals.

Section 16: Other Information

HMIS Ratings

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<table>
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<tr>
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<tbody>
<tr>
<td>Health</td>
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<tr>
<td>Flammability</td>
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<td>Physical</td>
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<td>Personal Protection</td>
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NFPA Ratings

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</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>
Acronyms/Abbreviations

- **NTP**: National Toxicology Program Report on Carcinogens (latest edition)
- **IARC**: International Agency for the Research on Cancer
- **TSCA**: Toxic Substance Control Agency

Revision Date: 8/15/2018
Last Revision Date: 5/23/2017

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