1. PRODUCT AND COMPANY IDENTIFICATION


Synonyms: MaxPure Technical White Mineral Oil

General Uses: Fracking and Drilling Fluids and blends

Chemical Family: Petroleum Hydrocarbon, White Mineral Oil

Responsible Party:
Resolute Oil, LLC
102 Magellan Circle, Suite B
Webster, TX 77598
866-690-0417
www.resoluteoil.com

2. HAZARDS IDENTIFICATION

GHS Classification
Aspiration Hazard Category – 1

Label Elements
Hazard Symbols:

Signal Word: DANGER – Aspiration Hazard if it enters airways

Hazard Statements: H304 May be fatal if swallowed and enters airways.

Precautionary Statements:
Response: If SWALLOWED: Immediately call a poison center or doctor/physician
Do NOT induce vomiting
Avoid breathing vapors. If inhaled, remove person to fresh air
Wash thoroughly after handling

Storage: Store Locked up

Disposal: Dispose of contents / container to an approved waste disposal plant.
Supplemental Information Hazard Statement:

**Hazard Statement:** Static Accumulating material can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

**Prevention:** Keep away from heat/sparks/open flame/hot surfaces. No Smoking. Ground/Bond container and receiving equipment. These alone may be insufficient to remove static electricity.

**Response:** Eliminate all ignition sources if safe to do so

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS#</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Mineral Oil</td>
<td>8042-47-5</td>
<td>100%</td>
</tr>
<tr>
<td>Vitamin E</td>
<td>10191-41-0</td>
<td>Less than 20 ppm</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Eye Contact:** If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin Contact:** Cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops and persists, seek medical attention.

**Inhalation (Breathing):** First aid is not normally required. If breathing difficulties develop, move away from source and seek medical attention.

**Ingestion (Swallowing):** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Most Important symptoms/effects, acute and delayed:**

- **EYES:** May cause slight irritation, tears and a burning sensation
- **SKIN:** Causes mild irritation, potentially causing reddening, itching or inflammation
- **INHALATION:** Respiratory tract irritation may occur if exposed to fumes or mists
- **INGESTION:** Symptoms may include nausea, vomiting and diarrhea

**Medical Attention and Special Treatment needed:**

- Treat symptomatically
- **INGESTION:** If ingested, this material represents a significant aspiration and chemical pneumonitis hazard. Vomiting is not recommended.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Dry chemicals, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

**Unsuitable Extinguishing Media:** Avoid solid water stream as it may scatter and spread fire.

**Special hazards arising from the substance or mixture:** Elevated temperatures can lead to the formation of irritating fumes and vapors. Decomposing products may include the following materials: Carbon Dioxide and Carbon Monoxide. Product is a static accumulating liquid. Static accumulating liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor may cause flash fire. Static Electricity accumulation may be increased by the presence of small quantities of water or other contaminants. Restrict flow velocity to avoid build-up of static charge.
Advice for firefighters: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant. Isolate immediate hazard area, keep unauthorized personnel out. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate personal protective equipment to avoid direct contact. The material will burn, but will not ignite readily. Keep all ignition sources away from the spill/release.

Environmental Precautions: Stop spill/release if it can be done safely. Product is insoluble in water, so prevent it from entering drains or water ways. Notify appropriate state and local authorities.

Method for clean up: Use absorbent materials such as sand, earth or vermiculite on land spills. Use absorbent booms or skimming devices on water spills.

7. HANDLING AND STORAGE

Handling: Keep away from ignition sources. Be cautious of any drips or spills as product is extremely slippery. Do not enter confined spaces without appropriate equipment and procedures. Electrostatic charge may accumulate and create a hazardous condition when handling this material. Bond and Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire.

Storage: Store containers in a clean, dry location, away from strong sunlight and heat or flames. Keep containers sealed when not in use. Empty containers retain residue and should be handled with care and disposed of properly.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Mineral Oil</td>
<td>5 mg/m TWA</td>
<td>5 mg/m</td>
<td>As Oil Mist, if generated 5mg/m TWA</td>
</tr>
<tr>
<td></td>
<td>10 mg/m STEL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

STEL- Short Term Exposure Limit (15 minutes): TWA-Time Weighted Average

Appropriate Engineering Controls:
Consider the following when employing engineering controls and selecting personal protective equipment: Potential hazards of the material, applicable exposure limits, job activities and other substances in the work place.
If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Personal Protective Equipment (PPE):
Respiratory: If vapor or mist is generated by heating, spraying, etc, wear an air purifying respirator with mist filter.
No special respiratory protection is normally required.
Skin: Wear gloves and long sleeve clothing to minimize contact.
Eye/Face: Wear glasses with side shield or goggles in case of splashing.
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid, Water White
Odor: None
pH: N/A
Melting/Freezing Point: < 10°F
Initial Boiling Point: (SEE PRODUCT BULLETINS FOR SPECIFICS)
Flash Point: >245°F / 118°C (SEE PRODUCT BULLETINS FOR SPECIFICS)
Test Method: Cleveland Open Cup (COC), ASTM D92
Evaporation Rate: Not Applicable
Flammability (solid, gas): Not Applicable
LEL (vol % in air): No data
UEL (vol % in air): No data
Vapor Pressure: <0.1 kPa at 20°C
Specific Gravity: 0.81 – 0.88 (SEE PRODUCT BULLETINS FOR SPECIFICS)
Solubility in Water: Insoluble
Enthalpy of Vaporization: Not Applicable
Partition coefficient: log POW: >6 This product is soluble in oil
Auto-ignition Temperature: No data
Decomposition Temperature: No data
Viscosity: 40 – 110 SUS @100°F. (SEE PRODUCT BULLETINS FOR SPECIFICS)

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

10. STABILITY AND REACTIVITY

Reactivity: Not chemically reactive
Chemical Stability: Stable under normal ambient and anticipated conditions of use
Possibility of hazardous reactions: Not anticipated under normal conditions
Conditions to Avoid: Extended exposure to high temperatures can cause decomposition.
Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidizing agents.
Hazardous Decomposition Products: Not anticipated under normal conditions

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Ingestion: Likely route of exposure
Inhalation: Likely route of exposure
Skin Contact: Likely route of exposure
Eye Contact: Likely route of exposure

Symptoms related to physical, chemical and toxicological characteristics:
Inhalation: Not expected to be a hazard for static vapor at ambient temperatures. Inhalation of mist or spray may be harmful and cause pulmonary edema or aspiration pneumonia. Oil deposits in the lung may lead to fibrosis and reduced pulmonary function.
Skin Irritation: May cause mild skin irritation, redness, itching and inflammation
Eye Damage/Irritation: May cause slight eye irritation, tears and a burning sensation
Ingestions: May cause gastrointestinal irritation, nausea, vomiting and diarrhea
### Information on toxicological effects:

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Mineral Oil (8042-47-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal – LD50</td>
<td>Rat</td>
<td>&gt;2000 mg/kg</td>
</tr>
<tr>
<td>Inhalation – LC50</td>
<td>Rat</td>
<td>&gt;5 mg/kg</td>
</tr>
<tr>
<td>Oral – LD50</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation** Not classified

**Serious eye damage/eye irritation** Not classified

**Respiratory sensitization** Not classified

**Skin sensitization** Not classified

**Germ cell mutagenicity** Not classified

**Carcinogenicity** Not classified

**Specific Target organ toxicity** Not classified

**Aspiration toxicity** Not classified

**Toxicological data** Mineral Oil mists from highly refined or hydro-treated oils are generally of low acute and sub-chronic toxicity. Overexposure to mists may cause inflammation of the lungs and lipoid pneumonia.

### 12. ECOLOGICAL INFORMATION

**Eco-toxicity** Not classified in terms of eco-toxicity

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<th>Test Results</th>
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<tbody>
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<td>White Mineral Oil (8042-47-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae – EC50</td>
<td>Algae</td>
<td>&gt; 1000 mg/l, 96 hr</td>
</tr>
<tr>
<td>Crustacea – EC50</td>
<td>Daphnia magna</td>
<td>&gt;100 mg/l, 48 hr</td>
</tr>
<tr>
<td>Fish – LC 50</td>
<td>Fish</td>
<td>&gt; 1000 mg/l</td>
</tr>
<tr>
<td>Chronic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea – NOEL</td>
<td>Daphnia magna</td>
<td>1000 mg/l, 21 d</td>
</tr>
</tbody>
</table>

**Persistence and degradability** Not readily biodegradable

**Bio-accumulative potential** May bio-accumulate in aquatic organisms

**Partition coefficient n-octanol/water (log Kow)**

| White Mineral Oil (CAS 8042-47-5) | >4 |

**Mobility in soil** May partition into air, soil and water

**Other adverse effects** No other adverse effects expected

### 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with appropriate local, state and federal regulations. Empty drums/containers should be sealed and returned to a re-conditioner.

### 14. TRANSPORTATION INFORMATION

**DOT - U.S. Department of Transportation**

**Shipping Description:** Not regulated.

**Trucking Freight description:** 65 Petroleum Oil, N.O.I.B.N

**Note:** The provisions of 49 CFR, Part 130 apply for shipments over 3,500 bulk gallons, requiring carrier emergency plans for spills and accidents.
15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)
- Acute Health: Yes
- Chronic Health: No
- Fire Hazard: No
- Pressure Hazard: No
- Reactive Hazard: No

CERCLA/SARA - Section 313 and 40 CFR 372:
This material does not contain toxic chemicals (in excess of the applicable de-Minimis concentration) that are subject to the reporting requirements of SARA 313 (40 CFR 372):

EPA (CERCLA) Reportable Quantity (in pounds): --None Known--

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):
This material does not contain extremely hazardous substances subject to the reporting requirements of SARA 302 (40 CFR 372)

California Proposition 65:
This material does not contain any component or chemical currently known to the State of California to cause cancer, birth defects or other reproductive harm at levels which are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5)

Carcinogen Identification:
This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any.

TSCA: All components are listed on the TSCA inventory, or not required to be listed on the TSCA inventory.

International Regulations:

Canadian Regulations: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Domestic Substances List: Listed

WHMIS Hazard Class: Not Regulated

International Inventories:
This material is listed on the following inventories:
- Australia (AICS)
- Canada (DSL)
- China (IECSC)
- Europe (EINECS)
- Japan (ENCS)
- Korea (ECL)
- New Zealand
- Philippines (PICCS)
16. OTHER INFORMATION

Disclaimer of Expressed and implied Warranties:
The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.

No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

Date of issue:        July 20, 2017
Previous issue date: November 2, 2016
Basis for revision:   Company address updated