SAFETY DATA SHEET

MIL-PRF-14107D LUBRICATING OIL, WEAPONS, LOW TEMPERATURE

1. PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: MIL-PRF-14107D LUBRICATING OIL, WEAPONS, LOW TEMPERATURE
Inventory ID: PRF14107

COMPANY INFORMATION
MACH-DYNAMICS® Cage Code 1RRC4
494 Main Street
Susquehanna, PA 18847
Phone: (570) 213-5603
Fax: (570) 213-5574
Contact: Mark Gingerella
http://www.mach-dynamics.com/

2. HAZARDS IDENTIFICATION

Emergency Overview
Appearance: Liquid
Color: amber
Odor: mild
Hazard summary: No information available.

GHS Classification
Acute toxicity (Inhalation): Category 4
Aspiration hazard: Category 1

GHS Label element

Hazard pictograms

Signal word: DANGER

Hazard statements
H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.

Precautionary statements

Prevention
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P271 Use only outdoors or in a well-ventilated area.

Response
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P331 Do NOT induce vomiting.

Storage
P405 Store locked up.

Disposal
P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

IARC
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

3. COMPOSITION/ CHEMICAL INFORMATION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Weight %</th>
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<tbody>
<tr>
<td>1-Decene, dimer, hydrogenated</td>
<td>68649-11-6</td>
<td>70 to 90</td>
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Substance / Mixture: Mixture
4. FIRST AID MEASURES

General advice: Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.

If inhaled: Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.

In case of skin contact: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed: Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Foam, Dry chemical, Carbon dioxide (CO2).

Unsuitable extinguishing media: High volume water jet.

Hazardous combustion products: Carbon oxides.

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information: Standard procedure for chemical fires.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for fire-fighting if necessary.

NFPA Flammable and Combustible Liquids Classification: Combustible Liquid Class IIIB

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
**COMMENTS:** KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition.

### 8. EXPOSURE CONTROLS/PERSOAL PROTECTION

**Components with workplace control parameters:** Contains no substances with occupational exposure limit values.

**Personal protective equipment:**

**Respiratory protection:** No personal respiratory protective equipment normally required. In the case of vapor formation use a respirator with an approved filter.

**Hand protection Remarks:** The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection:** Eye wash bottle with pure water. Tightly fitting safety goggles.

**Skin and body protection:** Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures:** When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Liquid
- **Color:** Amber
- **Odor:** Mild
- **Odor Threshold:** No data available
- **pH:** No data available
- **Freezing Point:** No data available
- **Boiling Point:** No data available
- **Flash point:** 151.7° C (305.1° F)
- **Evaporation rate:** No data available
- **Flammability (solid, gas):** No data available
- **Burning rate:** No data available
- **Upper explosion limit:** No data available
- **Lower explosion limit:** No data available
- **Vapor pressure:** No data available
- **Relative vapor density:** No data available
- **Relative density:** No data available
- **Density:** < 1 g/cm³ @ 15.6° C (60.1° F)
- **Bulk density:** No data available
- **Solubility(ies) Water solubility:** Insoluble
- **Solubility in other solvents:** No data available
- **Partition coefficient: n-octanol/water:** No data available
- **Auto-ignition temperature:** No data available
- **Thermal decomposition:** No data available
- **Viscosity**
  - **Viscosity, kinematic:** 6 mm²/s @ 40° C (104° F)
10. STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: No hazards to be specially mentioned.
Conditions to avoid: Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials: Oxidizing agents.
Hazardous decomposition products: Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Product: Acute inhalation toxicity: Acute toxicity estimate: 14.67 mg/l.
Exposure time: 4 h.
Test atmosphere: Vapor.
Method: Calculation method.

Components: 1-Decene, dimer, hydrogenated, CAS#68649-11-6.
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg.
Acute inhalation toxicity: LC50 (Rat): 10 mg/l.
Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute dermal toxicity: LD50 (Rabbit): > 3,000 mg/kg.

Skin corrosion/irritation
Product: Result: No skin irritation.
Components: 1-Decene, dimer, hydrogenated, CAS#68649-11-6.
Species: Rabbit.
Result: No skin irritation.

Serious eye damage/eye irritation
Product: Result: No eye irritation.
Components: 1-Decene, dimer, hydrogenated, CAS#68649-11-6.
Species: Rabbit.
Result: No eye irritation.

Germ cell mutagenicity
Components: 1-Decene, dimer, hydrogenated, CAS#68649-11-6.
Genotoxicity in vitro:
Test Type: Ames test
Test species: Salmonella typhimurium
Result: negative
Genotoxicity in vivo:
Test Type: In vivo micronucleus test
Test species: Mouse  
Method: OECD Test Guideline 474  
Result: negative  

**Germ cell mutagenicity - Assessment:** Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

**Carcinogenicity**  
**Components:**  
1-Decene, dimer, hydrogenated, CAS#68649-11-6.  
**Carcinogenicity - Assessment:** Carcinogenicity classification not possible from current data.

**Reproductive toxicity**  
**Components:**  
1-Decene, dimer, hydrogenated, CAS#68649-11-6.  
**Reproductive toxicity - Assessment:** Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.

**STOT - single exposure**  
**Product:** No data available.  
**Components:**  
1-Decene, dimer, hydrogenated, CAS#68649-11-6: No data available.  
**STOT - repeated exposure**  
**Product:** No data available.  
**Components:**  
1-Decene, dimer, hydrogenated, CAS#68649-11-6: No data available.

**Aspiration toxicity**  
**Product:** May be fatal if swallowed and enters airways.  
**Components:**  
1-Decene, dimer, hydrogenated, CAS#68649-11-6: May be fatal if swallowed and enters airways.

**Further information**  
**Product:**  
Remarks: Solvents may degrease the skin.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**  
**Components:**  
1-Decene, dimer, hydrogenated, CAS#68649-11-6.  
**Toxicity to fish:** LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l. Exposure time: 96 h  
**Toxicity to daphnia and other aquatic invertebrates:** EL50 (Daphnia magna (Water flea)): > 1,000 mg/l. Exposure time: 48 h. Method: OECD Test Guideline 202.  
**Toxicity to algae:** EL50 (Desmodesmus subspicatus (green algae)): > 1,000 mg/l. Exposure time: 72 h. Method: OECD Test Guideline 201.

**Persistence and degradability**  
**Product:** Biodegradability: Remarks: No data available.
Bioaccumulative potential: No data available.
Mobility in soil: No data available.

Other adverse effects: No data available.
Product: Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances.
Remarks
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information: No data available.

13. DISPOSAL INFORMATION

Disposal methods
Waste from residues: Dispose of in accordance with all applicable local, state and federal regulations.
Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

EMPTY CONTAINER: KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition.

RCRA/EPA WASTE INFORMATION: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT
UN number None
Proper shipping name Not Regulated
Hazard class None
Packing group None
ERG# None

IATA/ICAO
UN number None
Proper shipping name Not Regulated
Hazard class None
Packing group None

IMO/IMDG
UN number None
Proper shipping name Not Regulated
Hazard class None
Packing group None
Marine pollutant No data available

*** MACH-DYNAMICS verifies that the material was supplied and shipped in the proper packages in accordance with DOT and federal regulations that are applicable to the mode of transportation selected. The shipper must verify that the packaging supplied is acceptable to be re-shipped in per the federal regulations applicable to the mode of transportation for re-shipment. Regulations may change depending on mode of transportation selected.***

15. REGULATORY INFORMATION

OSHA Hazards: Harmful by inhalation. Aspiration hazard.
WHMIS Classification: Not Rated.

EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity: This material does not contain any components with a CERCLA RQ.
SARA 304 Extremely Hazardous Substances Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.
SARA 311/312 Hazards: Acute Health Hazard.
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act: This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A. This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3. This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.

US State Regulations

Massachusetts Right To Know: No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know: CAS#68649-11-6, 1-Decene, dimer, hydrogenated, 70 - 90 %.
New Jersey Right To Know: CAS#68649-11-6, 1-Decene, dimer, hydrogenated, 70 - 90 %.
Proprietary Base Oil - Highly Refined: 1 - 5 %.
Proprietary Calcium AlkylarylSulfonate: 1 - 5 %.
California Prop 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:
United States TSCA Inventory: y (positive listing) (On TSCA Inventory).
Canadian Domestic Substances List (DSL): q (quantity restricted).
Australia Inventory of Chemical Substances (AICS): n (Negative listing) (Not in compliance with the inventory).
New Zealand. Inventory of Chemical Substances: n (Negative listing) (Not in compliance with the inventory).
Japan. ENCS - Existing and New Chemical Substances Inventory: n (Negative listing) (Not in compliance with the inventory).
Korea. Korean Existing Chemicals Inventory (KECI): n (Negative listing) (Not in compliance with the inventory).
Philippines Inventory of Chemicals and Chemical Substances (PICCS): n (Negative listing) (Not in compliance with the inventory).
China. Inventory of Existing Chemical Substances in China (IECSC): n (Negative listing) (Not in compliance with the inventory).
16. OTHER INFORMATION

APPROVED BY: Mark Gingerella

TITLE: President / QC Manager

<table>
<thead>
<tr>
<th>HMIS III</th>
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<tbody>
<tr>
<td>Health:</td>
<td>1</td>
</tr>
<tr>
<td>Flammability:</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazard:</td>
<td>0</td>
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