SAFETY DATA SHEET

1. **Product and Company Identification**

   1.1 **Product Identifier**
   
   **Product Name:** Marvel Mystery Oil
   **Product Code (SKU):**
   - MM12R (50094), MM13R (50095), MM13RC (50096)
   - MM14R (50097) – See section 15 for discontinued SKU’s

   1.2 **Relevant Identified Uses Of The Substance**
   **Product Use:** Engine Oil Additive – Fuel additive (EPA Registered)

   1.3 **Details of the Supplier of the SDS**
   **Company Name:** Marvel Oil Company, Inc.
   **Street Address:** 2250 W. Pinehurst Blvd., Suite 150
   **City, State, Zip Code:** Addison, IL 60101

   1.4 **Emergency Telephone Numbers**
   **Phone Number:** 1(630)455-3700
   **Fax Number:** 1(630)455-3868
   **Transportation:** 1(800)424-9300 (CHEMTREC)
   **Medical Assistance:** Call your local Poison Control Center

2. **Hazard Identification:**

   2.1 **Classification of the Substance or Mixture**
   **Hazard Classification:** Flammable liquid 3
   - Skin irritation 2
   - Reproductive Toxicity 2
   - Aspiration toxicity 1

   2.2 **Label Elements**
   **Pictogram:**
   ![Pictogram]
   **Signal Word:** Danger

   **Hazard Statement:** Flammable liquid and vapor. Causes skin irritation. Suspected of damaging fertility of the un-born child. May be fatal if swallowed and enters airways.

   **Precautionary Statement:** Keep away from heat, sparks, open flames or hot surfaces. Do not smoke. Keep containers tightly closed. Ground all containers and receiving equipment. Use explosion proof electrical, ventilation, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static
discharge. Wear protective gloves, clothing, eye glasses and face shield. Do not handle until all safety precautions have been read and understood. Wash hands thoroughly after handling. If exposed, get medical attention. If on skin or hair, remove immediately all contaminated clothing and launder before re-use. Wash skin with soap and water. If skin irritation occurs, get medical attention. If swallowed, immediately call a poison control center or doctor. Do NOT induce vomiting. Store in a well ventilated place. Dispose of contents and container in accordance with all local, state, national and international regulations.

2.3 Other Hazards
Description of additional HNOC: None

3. Information on Ingredients:

3.1 Substance not applicable

3.2 Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Concentration (wt%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Distillates (Hydrotreated Heavy Naphthenic)</td>
<td>64742-52-5</td>
<td>60-100%</td>
</tr>
<tr>
<td>Petroleum Distillates (Stoddard Solvent)</td>
<td>8052-41-3</td>
<td>10-30%</td>
</tr>
<tr>
<td>Tricresyl Phosphate</td>
<td>1330-78-5</td>
<td>0.1-1.0%</td>
</tr>
<tr>
<td>Ortho Dichlorobenzene</td>
<td>95-50-1</td>
<td>0.1-1.0%</td>
</tr>
<tr>
<td>Para Dichlorobenzene</td>
<td>106-46-7</td>
<td>&lt;0.1%</td>
</tr>
</tbody>
</table>

4. First Aid Measures:

4.1 Description of First Aid Measures

**Inhalation:** Remove to fresh air and promote deep breathing. Get medical attention if effects persist or you feel un-well.

**Skin:** In case of skin contact, wash thoroughly with soap and water. Remove contaminated clothing and footwear. Launder clothing before re-use. Call a physician if irritation develops or persists.

**Eyes:** In case of eye contact, immediately flush eyes with plenty of water. Remove contact lenses if worn. If irritation persists, get medical attention

**Ingestion:** If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a poison control center or physician.

4.2 Most important symptoms and effects – acute and chronic

**Inhalation:** May cause respiratory tract irritation. Vapors may cause drowsiness or dizziness.

**Skin:** Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.

**Eyes:** May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.

**Ingestion:** May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.
4.3 Indication of any immediate medical attention and special treatment

Symptoms may not appear immediately. Seek medical attention if effects develop or persist and you feel un-well.

5. Fire Fighting Measures:

5.1 Extinguishing media

Carbon dioxide, dry chemical, and alcohol foam

5.2 Special hazards arising from the substance or mixture

CO₂, CO, and hydrocarbons

5.3 Advice for Fire Fighters

Keep up wind of fire. Wear full firefighting turn out gear (full bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water. See Section 8 for personal protection.

6. Accidental Release Measures:

6.1 Personal precautions, protective equipment, and emergency procedures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate all source of ignition.

6.2 Methods and materials for containment and clean up

For containment: Contain and absorb spill with inert material. Place in suitable container for disposal. Do not flush to sewer or allow to enter waterways. See section 8 for PPE.

For clean up: Take up material and place in a suitable container. Vapors may be heavier than air and may travel along the ground to a distant source of ignition. Provide adequate ventilation.

7. Handling and Storage

7.1 Precautions for safe handling

Keep away from source of ignition. Do not smoke. Take precaution to eliminate static discharge. Avoid contact with skin and eyes. Avoid breathing vapor or mist. Do not swallow. Do not eat or drink while handling. Wash hands with soap and water after handling. Use only non-sparking tools.

7.2 Conditions for safe storage including incompatibilities

Keep out of reach of children. Store in a well ventilated place. Do not store above 49°C (120°F).

7.3 Specific end uses

Shelf Life: Shelf life is considered to be 7 – 10 years when properly stored.
8. **Exposure Control/Personal Protection:**

8.1 **Control parameters**

<table>
<thead>
<tr>
<th>Compound</th>
<th><strong>8 hr TWA</strong>:</th>
<th><strong>OSHA PEL</strong>:</th>
<th><strong>ACGIH TWA</strong>:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Distillates (Hydrotreated Heavy Naphthenic)</td>
<td>not applicable</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Petroleum Distillates (Stoddard Solvent)</td>
<td>500 ppm</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td>Tricresyl Phosphate</td>
<td>not applicable</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Ortho Dichlorobenzene</td>
<td>50 ppm</td>
<td>25 ppm</td>
<td></td>
</tr>
<tr>
<td>Para Dichlorobenzene</td>
<td>75 ppm</td>
<td>10 ppm</td>
<td></td>
</tr>
</tbody>
</table>

8.2 **Exposure controls**

Use adequate ventilation to keep exposure below recommended limits. Ensure that eye wash station and safety shower are close to work station.

- **Hand Protection Equipment:** Wear chemical resistant gloves to prevent skin contact.
- **Eye Protection Equipment:** Wear safety glasses or splash goggles to prevent eye contact.
- **Skin and Body Protection:** Wear suitable protective clothing.
- **Respiration/Ventilation Protection Requirements:** Provide good ventilation.
- **Ingestion Protection Requirements:** Do not eat, drink or smoke while handling. Wash hands with soap and water after handling. Launder all clothing and foot wear before re-use.

9. **Physical And Chemical Properties:**

9.1 **Information of basic chemical and physical properties**

- **Physical Form:** thin liquid
- **Color:** clear red
- **Odor:** oil of wintergreen - minty
- **Odor Threshold:** not available
- **pH:** not applicable – oil based product
- **Melting Point/Freeze Point:** -51°C (-60°F)
- **Initial Boiling Point:** not available
- **Flash Point (Seta Closed Cup):** 53°C (128°F)
- **Flammability Limits:**
  - **Explosive Limits:** Upper: not available  Lower: not available
- **Evaporation Rate:** not available
- **Flammability Solid/Gas:** not applicable
- **Vapor Pressure:** not available
- **Vapor Density:** not available
- **Specific Gravity:** 0.876
- **Solubility in Water:** insoluble
- **Auto Ignition Temperature:** not available
- **Partition coefficient (n/octanol/water):** not available
- **Viscosity (Kinimatic @ 100°C):** 2.0 – 3.0 cSt

9.2 **Other information**

- **% NVM by Weight:** 75.0%
- **% VOC Content (California):** 24.31%

10. **Stability and Reactivity:**
10.1 **Reactivity**
Does not react under normal conditions

10.2 **Chemical stability**
Stable

10.3 **Possibility of hazardous reactions**
Does not react under normal conditions

10.4 **Conditions to avoid**
Heat and incompatible materials

10.5 **Incompatible materials**
Strong oxidizers such as bleach and peroxides

10.6 **Hazardous decomposition products**
CO₂, CO and hydrocarbons

11. **Toxicological Information:**

11.1 **Information on Toxicological effects**

<table>
<thead>
<tr>
<th>Material</th>
<th>LD₅₀ Oral Rat</th>
<th>LD₅₀ Dermal Rabbit</th>
<th>LC₅₀ Inhalation Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marvel Mystery Oil</td>
<td>&gt;2000 mg/Kg</td>
<td>&gt;2000 mg/Kg</td>
<td>&gt;20 mg/L (4 hr)</td>
</tr>
<tr>
<td>Petroleum Distillates Hydrotreated Heavy Naphthenic (64742-52-5)</td>
<td>&gt;5000 mg/Kg</td>
<td>&gt;5000 mg/Kg</td>
<td>&gt;5 mg/L (4 hr)</td>
</tr>
<tr>
<td>Tricresyl Phosphate (1330-78-5)</td>
<td>3000 mg/Kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>o-Dichlorobenzene (95-50-1)</td>
<td>500 mg/Kg</td>
<td>&gt;10000 mg/Kg</td>
<td>8.15 mg/L (4 hr)</td>
</tr>
<tr>
<td>p-Dichlorobenzene (106-46-7)</td>
<td>&gt;2000 mg/Kg</td>
<td>&gt;2000 mg/Kg</td>
<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Cause skin irritation
Serious eye damage/irritation: Based on available data, classification data are not met
Respiratory or skin sensitization: Based on available data, classification data are not met
Germ cell mutagenicity: Based on available data, classification data are not met
Carcinogenicity: Based on available data, classification data are not met

o-Dichlorobenzene (95-50-1): IARC Group 3 – Not Classified
p-Dichlorobenzene (106-46-7): IARC Group 2B – Possible carcinogen to humans.
NTP 1-Evidence of Carcinogenicity 3, Reasonably anticipated to be a human Carcinogen

<table>
<thead>
<tr>
<th>Reproductive toxicity</th>
<th>Suspected of damaging fertility of un-born child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific target organs – single exposure</td>
<td>Based on available data, classification data are not met</td>
</tr>
<tr>
<td>Specific target organs – repeated exposure</td>
<td>Based on available data, classification data are not met</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>May be fatal if swallowed and enters air ways.</td>
</tr>
<tr>
<td>Symptoms/injuries after inhalation</td>
<td>May cause respiratory tract irritation. Vapors may cause drowsiness and dizziness.</td>
</tr>
<tr>
<td>Symptoms/injuries after skin contact</td>
<td>Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.</td>
</tr>
<tr>
<td>Symptoms/injuries after eye contact</td>
<td>May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.</td>
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<tr>
<td>Symptoms/injuries after ingestion</td>
<td>May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.</td>
</tr>
</tbody>
</table>

12. **Ecological Information:**

12.1 **Toxicity**
Not recommended for release into aquatic systems without treatment

12.2 **Persistence and degradability**
Not established

12.3 **Bioaccumulative potential**
Not established

12.4 **Mobility in soil**
Not established

12.5 **Other adverse effects**
None known

13. **Disposal Considerations:**

13.1 **Waste treatment methods**

RCRA Hazardous Waste: Regulated as a hazardous waste (D-001 Ignitable).
Waste Disposal Method: Dispose of in accordance with local, state and federal regulations
Waste Disposal Vessel: Metal drums are recommended.

14. **Transportation Information:**

14.1 **UN number**
1268

14.2 **UN Proper shipping name**
Petroleum Distillate n.o.s.
14.3 Transport Hazard class
3

14.4 Packaging group
III

14.5 Marine Pollutant
No

14.6 Transportation in Bulk
Not applicable

14.7 Special precautions
Use limited quantities

15. Regulatory Information:

15.1 US Federal Regulations

TSCA Status: All ingredients are commercially available and listed by the manufacturer under TSCA.

15.2 Foreign Regulations

Canadian Status: All materials contained in this product are listed on the Canadian Domestic Substance List (DSL). Consult Turtle Wax, Inc. regarding status of ingredients.

European Union: All materials contained in this product are listed on EINECS.

AICS: All materials are registered for AICS (Australia)

15.3 State Regulations

State Regulatory Information:
The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, contact the appropriate agency in your state.

California Prop 65:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Concentration</th>
<th>State Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Dichlorobenzene (106-46-7)</td>
<td>&lt;0.1%</td>
<td>Cancer</td>
</tr>
</tbody>
</table>

15.4 HMIS & NFPA Classifications

HMIS Classification:
- Health: 2
- Flammability: 2
- Reactivity: 0

NFPA Classification:
- Health: 2
15.5 Discontinued SKU’s

These all utilized to same formula.

MM003, MM007, MM08, MM010, MM011, MM012R, MM013R, MM014R, MM015, MM016, MM017, MM018, MM613, MM005

16. Other Information:

Reason For Issue  Address Update
Prepared By      James Heidel
Preparer’s Title Technical Director, R&D
SDS Administrator Jean Mayszak - Technical Compliance Manager, R&D
Approval Date    January 26, 2017
Supersedes Date  March 10, 2015
Revision Number  #12

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