SAFETY DATA SHEET

1. Product and Company Identification

1.1 Product Identifier
Product Name: Marvel Air Tool Oil
Product Code (SKU): MM85R1 (50100), MM080R (50093) - 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: 625 Willowbrook Centre Parkway
City, State, Zip Code: Willowbrook, Illinois 60527

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: 
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>Exposure Limits</th>
<th>8 hr TWA:</th>
<th>(OSHA PEL)</th>
<th>(ACGIH TWA)</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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Form</td>
<td>thin liquid</td>
</tr>
<tr>
<td>Color</td>
<td>clear red</td>
</tr>
<tr>
<td>Odor</td>
<td>typical oily</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>not available</td>
</tr>
<tr>
<td>pH</td>
<td>not applicable – oil based product</td>
</tr>
<tr>
<td>Melting Point/Freeze Point</td>
<td>-51°C (-60°F)</td>
</tr>
<tr>
<td>Initial Boiling Point</td>
<td>not available</td>
</tr>
<tr>
<td>Flash Point (Seta Closed Cup)</td>
<td>53°C (128°F)</td>
</tr>
<tr>
<td>Flammability Limits</td>
<td>Explosive Limits: Upper: not available Lower: not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>not available</td>
</tr>
<tr>
<td>Flammability Solid/Gas</td>
<td>not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>not available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.876</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>insoluble</td>
</tr>
<tr>
<td>Auto Ignition Temperature</td>
<td>not available</td>
</tr>
<tr>
<td>Partition coefficient (n/octonol/water)</td>
<td>not available</td>
</tr>
<tr>
<td>Viscosity (Kinimatic @ 100°C)</td>
<td>2.0 – 3.0 cSt</td>
</tr>
</tbody>
</table>

9.2 Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% NVM by Weight</td>
<td>75.0%</td>
</tr>
<tr>
<td>% VOC Content (California)</td>
<td>24.92%</td>
</tr>
</tbody>
</table>

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

Marvel Mystery Oil
LD₅₀ – Oral Rat >2000 mg/Kg
LD₅₀ – Dermal Rabbit >2000 mg/Kg
LC₅₀ – Inhalation Rat >20 mg/L (4 hr)

Petroleum Distillates Hydrotreated Heavy Naphthenic (64742-52-5)
LD₅₀ – Oral Rat >5000 mg/Kg
LD₅₀ – Dermal Rabbit >5000 mg/Kg
LC₅₀ – Inhalation Rat >5 mg/L (4 hr)

Tricresyl Phosphate (1330-78-5)
LD₅₀ – Oral Rat 3000 mg/Kg

O-Dichlorobenzene (95-50-1)
LD₅₀ – Oral Rat 500 mg/Kg
LD₅₀ – Dermal Rabbit >10000 mg/Kg
LC₅₀ – Inhalation Rat 8.15 mg/L (4 hr)

p-Dichlorobenzene (106-46-7)
LD₅₀ – Oral Rat >2000 mg/Kg
LD₅₀ – Dermal Rabbit >2000 mg/Kg

Skin corrosion/irritation
Serious eye damage/irritation
Respiratory or skin sensitization
Germ cell mutagenicity
Carcinogenicity

Causes skin irritation
Based on available data, classification data are not met
Based on available data, classification data are not met
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

Reproductive toxicity
Specific target organs – single exposure
Specific target organs – repeated exposure

Suspected of damaging fertility of un-born child
Based on available data, classification data are not met
Based on available data, classification data are not met
Aspiration hazard May be fatal if swallowed and enters air ways.
Symptoms/injuries after inhalation May cause respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Symptoms/injuries after skin contact Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.
Symptoms/injuries after eye contact May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.
Symptoms/injuries after 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.

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 HIMS & NFPA Classifications

HIMS Classification: Health 2  
Flammability 2  
Reactivity 0  

NFPA Classification: Health 2  
Flammability 2  
Reactivity 0  

15.5 Discontinued SKU’s
All discontinued SKU’s used this same formula.

MM080, MM085, MM85R, MM086, MM088R, MM089

16. Other Information:

Reason For Issue Conversion to OSHA GHS SDS Format  
Prepared By James Heidel  
Preparer's Title Technical Director, R&D  
SDS Administrator Jean Mayszak - Technical Compliance Manager, R&D
Approval Date          March 10, 2015  
Supersedes Date        December 27, 2012  
Revision Number        #11  

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