MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: D Limonene
Synonyms: 4-Isopropenyl -1-Methylcyclohexane
Chemical Family: None Known
Application: Aromatic
Distributed By: Chem-Wipe Industries Ltd.
24 - Hour Emergency Telephone Number (CANUTEC): (613) 996 6666 - Collect Calls Accepted
*666 Cellular Service
Preparation Date of MSDS: February 22/10
Prepared By: Chem-Wipe Industries Ltd.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percent</th>
<th>LD50s &amp; LC50s Route &amp; Species:</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-limonene 5989-27-5</td>
<td>100</td>
<td>Oral LD50 (Rat) 4400 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral LD50 (Mouse) 5600 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dermal LD50 (Rabbit) 5gm/kg</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: May irritate eyes.
Skin Contact: May cause moderate skin irritation.
Inhalation: Vapor may be irritating to throat, lungs and pulmonary tract.
Ingestion: May be harmful if swallowed.

4. FIRST AID MEASURES

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
Skin Contact: Remove contaminated clothing and launder before reuse. Wash contaminated skin with mild soap and water for 15 minutes. Get medical attention if irritation persists.
Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.
Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing. Get immediate medical attention.

Notes to Physician: No specific antidote. Treatment based on sound judgment of physician and individual reactions of the patient.

5. FIRE FIGHTING MEASURES

Flash Point (°C): 109.94
Flash Point Method: Closed cup
Auto Ignition Temperature (°C): Not available
Flammable Limits in Air - Lower (%): Not available
Flammable Limits in Air - Upper (%): Not available
Extinguishing Media: Carbon dioxide, dry chemicals, foam.
Special Exposure Hazards: Spray extinguishing media directly into base of the flames. Water is unsuitable for use on burning materials, but may be used to cool containers exposed to heat.
Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.
HMIS Ratings for this product are: Not available

6. ACCIDENTAL RELEASE MEASURES

Procedure for Clean Up: Eliminate all ignition sources. Ventilate area. Absorb with inert dry material and place in an appropriate waste disposal container.
Personal Precautionary Measures: Wear appropriate protective equipment.
Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed.

7. HANDLING AND STORAGE

Handling: Do not ingest. Avoid prolonged contact with eyes or skin. Use good personal hygiene.
Storage: Store in accordance with good industrial practice.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation as necessary to maintain exposures to within applicable limits.
Respiratory Protection: If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator. Organic vapor respirator.
Gloves: Oil resistant gloves.
Skin Protection: The selection of personal protective equipment varies depending upon conditions of use. Impervious clothing.
Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.
Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Hazardous Components:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percent</th>
<th>Exposure limit - OSHA</th>
</tr>
</thead>
</table>

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: Colorless
Odor: Citrus
pH: Not available
Specific Gravity: 0.84
Boiling Point (°C): Not available
Freezing Point (°C): Not available
Vapor Pressure: Not available
Vapor Density: Not available
% Volatile by Volume: Not available
Evaporation Rate: Not available
Solubility: Not available
VOCs (lbs/gallon): Not available
Viscosity: Not available
Molecular Weight: Not available

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Keep away from heat, flames and sparks. Avoid hot work and sources of ignition on or near empty containers.
Materials to Avoid: Strong oxidizing agents.
Hazardous Decomposition Products: Oxides of carbon. Smoke unidentified organic compounds.
Additional Information: No additional remarks.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: May be harmful if swallowed.
Shin Contact: May cause moderate skin irritation.
Inhalation: Vapor may be irritating to throat, lungs and pulmonary tract.
Eye Contact: May irritate eyes.
Other: Has been shown to cause kidney effects in laboratory animals through ingestion. Similar effects have not been reported in humans.

Acute Test of Product:
Acute Oral LD50: Not available
Acute Dermal LD50: Not available
Acute inhalation LC50: Not available

Carcinogenicity:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percent</th>
<th>IARC - Group 1 (carcinogenic to humans)</th>
<th>IARC - Group 2A (probably carcinogenic)</th>
<th>IARC - Group 2B (possibly carcinogenic)</th>
<th>IARC - Group 3 (not classified)</th>
<th>IARC - Group 4 (probably not carcinogenic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-limonene 5989-27-5</td>
<td>100</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Hazardous Components:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percent</th>
<th>ACGIH 2000 - Carcinogens</th>
<th>Genotoxicity: Not available</th>
<th>Reproductive / Developmental Toxicity: Not available</th>
<th>Teratogenicity: Not available</th>
<th>Embryo Toxicity: Not available</th>
<th>Mutagenicity: Not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-limonene 5989-27-5</td>
<td>100</td>
<td>Not listed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Carcinogenicity Comment:

Genotoxicity: Not available
Reproductive / Developmental Toxicity: Not available
Teratogenicity: Not available
Embryo Toxicity: Not available
Mutagenicity: Not available

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percent</th>
<th>Ecotoxicity - Fish Species Data</th>
<th>Acute Crustaceans Toxicity: Not available</th>
<th>Ecotoxicity - Freshwater Algae Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-limonene 5989-27-5</td>
<td>100</td>
<td>96 hr LC50 (fathead minnow)702 mg/l</td>
<td></td>
<td>Not available</td>
</tr>
</tbody>
</table>

Other Information: No additional remarks.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be in accordance with municipal, provincial and federal regulations.
Contaminated Packaging: Empty container should be recycled or disposed of through an approved waste management facility.

14. TRANSPORTATION INFORMATION

TDG (Canada):
TDG Proper Shipping Name: Terpene Hydrocarbons n.o.s (d’limonene)
Hazard Class: 3
UN Number: 2319
Packaging Group: III
Note: Not regulated under the Transportation of Dangerous Good Act when transported by road or rail when in packaging or containers of 450L or less (waste excluded).

15. REGULATORY INFORMATION

Canadian DSL Inventory Status: Listed.
WHMIS Hazardous Class: B3 COMBUSTIBLE LIQUIDS
D2B TOXIC MATERIALS

Symbols:

16. OTHER INFORMATION

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

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