Mace Personal Defense, Inc.
160 Benmont Avenue - Ste. 1
Bennington, VT 05201
802-447-1503

1. IDENTIFICATION

Chemical Name: OC/CS Personal Protection Spray
Chemical Family: Irritant agent

CAS #: 8023-77-6
CAS Name: Capsaicin
Synonyms / Common Name: OC/CS Spray

DOT Information:

2. PHYSICAL DATA

Appearance: Amber liquid
Color: Light amber
State: Liquid
Odor Characteristics: Pungent, highly irritating
pH: Between 4.5 and 6.0
Viscosity: Not known
Specific Gravity (Water = 1): Not known
Vapor Density (Air = 1): Not known
Vapor Pressure: Not known

Melting Point: Not known
Boiling Point: Between 212°F and 374°F
Flash Point: 120°F
Freezing Point: Not known
Percent Volatility: Not known
Evaporation Rate (BAc = 1): Not known
Solubility in Water: Not known
Solubility in Oil: Not known
Solubility in Acetone: Not known

3. INGREDIENTS

<table>
<thead>
<tr>
<th>Material / Components</th>
<th>CAS #:</th>
<th>CAS Name</th>
<th>TLV Units</th>
<th>Approx. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oleoresin Capsicum</td>
<td>8023-77-6</td>
<td>Capsaicin</td>
<td>None established</td>
<td></td>
</tr>
<tr>
<td>Dipropylene Glycol</td>
<td>34590-94-8</td>
<td>Dipropylene Glycol</td>
<td>100 ppm (ACGIH)</td>
<td></td>
</tr>
<tr>
<td>D-Limonene</td>
<td>5989-27-5</td>
<td>D-Limonene</td>
<td>30 ppm (8H TWA AIHA)</td>
<td></td>
</tr>
<tr>
<td>O-chlorobenzalmononitrile</td>
<td>2698-41-1</td>
<td>O-chlorobenzalmononitrile</td>
<td>LC50 25000 mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

4. FIRE AND EXPLOSION HAZARD DATA

Flash Point: 120°F, Closed cup
Flammable Limits in Air % by volume:
- Lower: Not known
- Upper: Not known

Extinguishing Media: Dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Special Fire Fighting Procedures:
- Use air-supplied respirator to protect against gases and fumes.

Unusual Fire & Explosion Hazards:
- Containers may burst in the heat of a fire.
5. HEALTH HAZARD DATA

Threshold Limit Value: Not known

Effects of Overexposure:

Inhalation: May cause gagging and coughing with irritation to the lungs.

Skin Contact: May cause skin irritation to sensitive parts upon direct contact.

Eye Contact: May cause eye irritation upon direct contact.

Ingestion: May cause irritation to mouth, throat and stomach upon direct contact.

Delayed Effects: Not known

Medical Conditions Aggravated by Exposure: Not known

6. FIRST AID MEASURES

Inhalation: Remove the victim from immediate source of exposure and assure that the victim is breathing. If breathing is difficult, administer oxygen. If the victim is not breathing, administer CPR. Seek immediate medical attention.

Skin Contact: If case of contact, remove contaminated clothing and wash area with plenty of soap and cool water. Do not apply salves or creams to affected area. Seek medical attention if irritation develops or persists.

Eye Contact: Hold eyelids open and flush with a steady gentle stream of cool water for at least 15 minutes. Seek medical attention if irritation develops or persists.

Ingestion: Give 1 glass of water to drink and do not induce vomiting. Contact the Poison Control Center at 1-800-222-1222.

NOTES TO PHYSICIAN: Contact the Poison Control Center at 1-800-222-1222.

7. REACTIVITY DATA

Stability: Presents no significant reactivity hazard.

Incompatibility: Not known

(materials to avoid)

Hazardous Combustion or Decomposition Products: Thermal decomposition may form carbon dioxide, carbon monoxide or hydrocarbons.

Hazardous Polymerization: Product will not undergo hazardous polymerization.

Conditions to Avoid: Product will decompose at temperatures above 200F.

8. SPILL OR LEAK PROCEDURES

Actions to take for Leaks & Spills: Absorb spills with vermiculite or other suitable absorbent material and remove to an approved disposal container.

Waste Disposal Method: Dispose of in accordance with current laws and regulations.
9. SPECIAL PROTECTION INFORMATION

Respiratory Protection: Respiratory protection is normally not required in well-ventilated areas, however, NIOSH approved respiratory protection may be required when the material is used in a confined area.

Eye Protection: Splash-resistant safety glasses should be worn.

Skin Protection: Oil/chemical-resistant gloves should be worn.

Other Clothing: Oil/chemical-resistant clothing should be worn.

Other Equipment: Provide ventilation if working in confined area.

10. HANDLING AND STORAGE

Special Precautions: Store in cool dry area away from direct heat, flame or strong light. Use with adequate ventilation.

Other Precautions:

11. REGULATORY INFORMATION

Workplace Classification:

12. TOXICOLOGICAL INFORMATION

Acute Data: 

Reproductive / Teratology Data

13. ECOLOGICAL INFORMATION

Fate in the Environment:

14. DISPOSAL CONDITIONS

Procedures: Dispose of in accordance with applicable environmental laws and regulations.

15. TRANSPORTATION INFORMATION

DOT Classification:

Warning Labels:
16. OTHER INFORMATION

The information contained herein is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages. Various governmental agencies may have specific regulations concerning the transportation, handling, storage, use or disposal of this product which may not be reflected in this MSDS. The user should review these regulations to ensure full compliance.

4. FIRE AND EXPLOSION HAZARD DATA - Ref. Pg. 1

If product is heated above its flash point, it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and may be ignited by heat, pilot lights or other ignition sources near point of release.

5. HEALTH HAZARD DATA - Ref. Pg. 2

The health hazards of a mixture not tested as a whole are based upon the hazardous chemical present in the mixture at concentrations of greater than one percent.

The health hazard information is based upon laboratory animal test data for the individual components of this product in their pure form as provided under 29 CFR 1910.1200(d)(5)(ii). The user should consider the relevancy of this information in a manner consistent with its particular purpose.
12. TOXICOLOGICAL INFORMATION - Ref. Pg. 3

Toxicity: Strong skin and eye irritant. Exposure to capsaicin pepper spray results in temporary blindness, lacrimation (tear production), burning sensation, pain, and redness of the skin, nasal irritation, coughing, bronchoconstriction, and dyspnea.

The following LD values were obtained from the "Capsaicin Technical Fact Sheet" of the National Pesticide Information Center, 1-800-858-7378.

Acute oral LD50 values were determined to be 97.4 mg/kg and 118.8 mg/kg in female and male mice, respectively, and 148.1 mg/kg and 161.2 mg/kg in female and male rats, respectively.

Additional LD50 values for male mice were 60-75 and 190 mg/kg depending on the carrier solution when the capsaicin was administered within the stomach.

Studies using mice have reported LD50 values ranging from 47.2 mg/kg to 2500 mg/kg.

The LD50 in humans has been estimated at 0.5-5 g/kg.

Primary routes of entry: Inhalation, skin and ingestion.

High inhaled amounts may cause dizziness, unconsciousness and asphyxia. Skin contact may cause local irritation and a general allergic reaction in sensitive individuals.

15. TRANSPORTATION INFORMATION - Ref. Pg. 3

GROUND (USA) 49 CFR, 172.101
Proper Shipping Name: Consumer Commodity
Hazard Class or Division: ORM-D
Shipper must be trained and certified. Refer to 49 CFR.

AIR (USA), IATA
Proper Shipping Name: Consumer Commodity
Hazard Class or Division: 9
UN/ID: ID 8000
Shipper must be trained and certified. Refer to IATA Dangerous Goods Regulations.

ADDENDUM for Section - Other Information