SOLTROL® 10

November 30, 1998

A. Product Identification

Synonyms: Not Established
Chemical Name: Mixture
Chemical Family: Aliphatic Hydrocarbon
Chemical Formula: Mixture
CAS Reg. No.: Mixture
Product No.: AP0100

Canadian Inventory Listing Status: NDSL

This product contains ingredients that are NOT listed in the Domestic Substances List (DSL), but ARE listed in the Non-Domestic Substances List (NDSL). Impurities are exempt in accordance with Section 3 of the Canadian Environmental Protection Act (CEPA).

B. Components

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS Number</th>
<th>% By Wt.</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isooctane</td>
<td>540-84-1</td>
<td>62.0</td>
<td>NE</td>
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<tr>
<td>Heptane isomers</td>
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<td>Octane isomers</td>
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</table>

See Section F, Recommended Exposure Limits.

C. Personal Protection Information

Ventilation: Use adequate ventilation to control concentration below recommended exposure limits.

Respiratory Protection: For concentrations exceeding the recommended exposure limit, use NIOSH approved air purifying respirator.

Eye Protection: Use safety glasses with side shields.
Skin Protection: Use gloves resistant to the material being used. (Neoprene).

NOTE: Personal protection information shown in Section C is based upon general information as to normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified professional be sought.

D. Handling and Storage Precautions

Avoid contact with eyes, skin or clothing. Avoid breathing vapors, mist, fume or dust. Do not swallow, may be aspirated into lungs. Wear protective equipment and/or garments described in Section C if exposure conditions warrant. Wash thoroughly after handling. Launder contaminated clothing before reuse. Use with adequate ventilation.

Keep away from heat, sparks, and flames. Store in well-ventilated area. Store in tightly closed container. Bond and ground during transfer.

E. Reactivity Data

Stability: Stable
Conditions to Avoid: Not Established
Incompatibility (Materials to Avoid): Oxygen and strong oxidizing agents
Hazardous Polymerization: Will Not Occur
Conditions to Avoid: No
Hazardous Decomposition Products: Carbon oxides and various hydrocarbons formed when burned.

F. Health Hazard Data

Recommended Exposure Limits:

The Company recommends a permissible exposure level (8-hr. TWA) of 400 ppm for isooctane (2,2,4-Trimethylpentane).

Acute Effects of Overexposure:

Eye: May produce mild irritation.
Skin: May produce mild irritation. The dermal LD50 (rabbit) for isooctane is > 2000 mg/kg.
Inhalation: May cause slight mucous membrane irritation, rapid breathing, fatigue, headache, light headedness, dizziness and other central nervous system effects. Extreme exposures may cause respiratory arrest, convulsions or unconsciousness. The inhalation LC50 (rat) for isooctane is > 3078.44 ppm after a 4-hr. exposure and a 14-day postexposure observation period.
Ingestion: May cause diarrhea, slight central nervous system depression, difficulty breathing and fatigue. If swallowed, may be aspirated
resulting in inflammation and possible fluid accumulation in the lungs. The oral LD50 (rat) for isoctane is > 5000 mg/kg.

Subchronic and Chronic Effects of Overexposure:

In a subchronic oral laboratory study isoctane, a component of this product, has produced kidney damage in male rats only. No comparable health hazard for kidney disease is known to occur in humans.

Other Health Effects:

A Toxicity Study Summary for Isooctane is available upon request.

Health Hazard Categories:

CLASS D: POISONOUS AND INFECTIOUS MATERIAL CATEGORIES

1. Materials Causing Immediate and Serious Toxic Effects
   A. Very Toxic
   B. Toxic

2. Materials Causing Other Toxic Effects
   A. Very Toxic
      1. Chronic Toxic Effects
      2. Teratogen/Embryo Toxin
      3. Carcinogen
      4. Reproductive Toxin
      5. Respiratory Tract Sensitizer
      6. Mutagen
   B. Toxic
      1. Chronic Toxic Effects
      2. Skin or Eye Irritant X
      3. Skin Sensitizer
      4. Mutagen

Specify: Eye Irritant.

Other: Lung-Aspiration hazard

First Aid and Emergency Procedures:

Eye: Flush eyes with running water for at least fifteen minutes. If irritation or adverse symptoms develop, seek medical attention.

Skin: Wash skin with soap and water for at least fifteen minutes. If irritation or adverse symptoms develop, seek medical attention.

Inhalation: Remove from exposure. If breathing is difficult, give oxygen. If breathing ceases, administer artificial respiration followed by oxygen. Seek immediate medical attention.

Ingestion: Do not induce vomiting. Seek immediate medical attention.
Note to Physician: Gastric lavage using a cuffed endotracheal tube may be performed at your discretion.

G. Physical Data

Appearance: Colorless liquid
Odor: Mild
Boiling Point: 204°F (96°C)
Vapor Pressure: 2.2 psia @ 100°F (37.8°C)
Vapor Density (Air = 1): <1
Solubility in Water: Negligible
Specific Gravity (H2O = 1): 0.698 @ 60/60°F (15.6./15.6°C)
Percent Volatile by Volume: 100
Evaporation Rate (Butyl Acetate=1): >1
Viscosity: 0.57 cSt @ 100°F (38°C)

H. Fire and Explosion Data

Flash Point (Method Used): < 13°F (-11°C) (TCC, ASTM D56)
Flammable Limits (% by Volume in Air): LEL - Not Established
UEL - Not Established

Fire Extinguishing Media: Dry chemical, foam or carbon dioxide (CO2)

Special Fire Fighting Procedures: Evacuate area of all unnecessary personnel. Shut off source, if possible. Use NIOSH approved self-contained breathing apparatus and other protective equipment and/or garments described in Section C if conditions warrant. Water fog or spray may be used to cool exposed equipment and containers. Do not spray water directly on fire product will float and could be reignited on surface of water.

Fire and Explosion Hazards: Carbon oxides formed when burned. Highly flammable vapors which are heavier than air may accumulate in low areas and/or spread along ground away from handling site.

I. Spill, Leak and Disposal Procedures

Precautions Required if Material is Released or Spilled:
Evacuate area of all unnecessary personnel. Wear protective equipment and/or garments described in Section C if exposure conditions warrant. Shut off source, if possible and contain spill. Protect from ignition. Keep out of water sources and sewers. Absorb in a dry, inert material (sand, clay, etc). Transfer to disposal drums using non-sparking equipment.

Waste Disposal (Insure Conformity with all Applicable Disposal Regulations): Incinerate or place in permitted waste management facility.
J. DOT Transportation

Shipping Name: Petroleum distillates, n.o.s.
Hazard Class: 3 (Flammable liquid)
ID Number: UN 1268
Packing Group: II
Marking: Petroleum distillates, n.o.s., UN 1268
Label: Flammable liquid
Placard: Flammable/1268
Hazardous Substance/RQ: Not applicable
Shipping Description: Petroleum distillates, n.o.s., 3 (Flammable liquid), UN 1268, PG II
Packaging References: 49 CFR 173.150, 173.202, 173.242

K. RCRA Classification - Unadulterated Product

Ignitable (D001)

Prior to disposal, consult your environmental contact to determine if TCLP (Toxicity Characteristic Leaching Procedure, EPA Test Method 1311) is required. Reference 40 CFR Part 261.

L. Protection Required for Work on Contaminated Equipment

Contact immediate supervisor for specific instructions before work is initiated. Wear protective equipment and/or garments described in Section C if exposure conditions warrant.

M. Hazard Classification

Class B-Flammable and Combustible Material

Class D-Poisonous and Infectious Material
Division 2. Materials Causing Other Toxic Effects

N. Additional Comments

SARA 313

As of the preparation date, this product did not contain a
chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

NFPA 704
Hazard Codes - - - - - - - Signals

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<td>Flammability:</td>
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<td>Reactivity</td>
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<td>Special Haz.:</td>
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</table>

REFERENCES

ACGIH American Conference of Government Industrial Hygienists
ASTM American Society of Testing and Materials
DOT Department of Transportation, U.S.
EPA Environmental Protection Agency, U.S.
IARC International Agency for Research on Cancer
MSHA Mine Safety and Health Administration, U.S.
NFPA National Fire Protection Association
NIOSH National Institute of Occupational Safety and Health, U.S.
NTP National Toxicology Program, U.S.
OSHA Occupational Safety and Health Administration, U.S.
RCRA Resource Conservation and Recovery Act, U.S.
SARA Superfund Amendments and Reauthorization Act, U.S.
TSCA Toxic Substances Control Act, U.S.