SECTION I - Material Identification & Reporting Information

Chemical Name of Hazardous Components | OSHA PEL | ACGIH TLV
---------------------------------------|---------|---------
*Trichloroethylene (CAS # 79-01-6)    | 50 ppm  | 50 ppm  

Balance of ingredients not rated as hazardous as defined in 40 CFR 1910.1200

Special Reporting Requirements

*SARA TITLE III*: Ingredient "Trichloroethylene" (>50% by weight) - A) 311/312 Categories - Acute and Chronic, B) Listed in Section 313 under "Trichloroethylene", C) Not listed as an "Extremely Hazardous Substance" in Section 302.

*CERCLA*: Listed in Table 302.4 of 40 CFR Part 302 as a Hazardous Substance with a Reportable Quantity (RQ) of 100 pounds. Releases to air, land or water which exceed the RQ must be reported to the National Response Center, (800)424-8802.

*RCRA*: Waste Trichloroethylene and contaminated soils/materials from spill cleanup and U228 Hazardous Waste as per 40 CFR 261.33 must be disposed of accordingly under RCRA. See 40 CFR 261.33(C) and 261.7(8)(3) for cleaning requirements of Empty containers.

*California Proposition 65*: This product contains Trichloroethylene, which is a chemical known to the state of California to cause cancer.

*TSCA*: Trichloroethylene is on the TSCA Inventory under CAS # 79-01-6

Section II - Physical & Chemical Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>188°F</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg @ 20°C)</td>
<td>57.8mm</td>
</tr>
<tr>
<td>Vapor Density (Air = 1.00)</td>
<td>4.6</td>
</tr>
<tr>
<td>Solubility (wt. % in Water)</td>
<td>0.11</td>
</tr>
<tr>
<td>Specific Gravity (H₂O = 1.00)</td>
<td>1.45</td>
</tr>
<tr>
<td>Melting/Freezing Point (°C)</td>
<td>-86.4°C</td>
</tr>
<tr>
<td>Evaporation Rate (Ethyl Ether=1.0)</td>
<td>0.28</td>
</tr>
<tr>
<td>Water Reactivity</td>
<td>NE</td>
</tr>
<tr>
<td>Appearance &amp; Odor</td>
<td>Clear, mobile liquid with mildly sweet, ether-like odor. Irritating odor at high temperatures.</td>
</tr>
</tbody>
</table>

Section III - Fire & Explosion Hazard Data

Flash Point (Degrees F, TCC): None

Flammability Limits:
- LEL = 8%
- UEL = 52%

Extinguisher Media: Carbon Dioxide, Water Fog and/or Dry Chemical

Special Fire Fighting Procedures: Fire Fighters should wear NIOSH/MSHA approved pressure demand, self-contained breathing apparatus for possible exposure to Hydrogen Chloride and traces of Phosgene.

Unusual Fire and Explosion Hazards: Vapors concentrated in a confined or poorly ventilated area can be ignited upon contact with high energy spark, flame or high intensity source of heat. This can occur at concentrations ranging between 7.8% – 52.0% by volume. Decomposition or burning can produce Hydrogen chloride or traces of Phosgene.

(CONTINUED ON PAGE 2)
Section IV - Health Hazard Data

Inhalation and/or Skin Absorption

Acute Health Hazard

INHALATION: This product contains an ingredient known as a Central Nervous System Depressant which can cause irritation of the respiratory tract, dizziness, nausea, headache, loss of coordination and equilibrium, possible central nervous system damage, unconsciousness and death in confined or poorly ventilated areas.

EYE/SKIN CONTACT: This product splashed in the eye(s) can result in discomfort, pain and irritation. Prolonged or repeated contact with liquid on the skin can cause irritation and dermatitis.

INGESTION: Swallowing of Vulcanizing Fluid may result in irritation of the mouth and GI tract along with other effects as listed above for inhalation. Vomiting and subsequent aspiration into the lungs may lead to Chemical Pneumonia Edema which is a potentially fatal condition.

Chronic Health Hazard:

Prolonged exposure above the OSHA Permissible Limits may result in Liver and Kidney Damage. Trichloroethylene has been extensively studied for chronic effects in animals. While there are studies in which tumors were induced in mice, there is no evidence that Trichloroethylene poses a carcinogenic risk to humans. Trichloroethylene is listed in Group 3 by IARC and is not listed by NTP.

Medical Conditions Generally Aggravated by Exposure

Respiratory Illness, Liver and Kidney Diseases.

Classification: (Poison, Irritant, Etc.)

- Slightly Toxic: LCD50 (Rat) = 8000 ppm/4hr.
- Not Determined: LD50 = ND
- Skin/Mild Irritant: Eye-Irritant
- Moderately Toxic: LD50 (Rat) = 4900-7000 Mg/Kg

Permissible Exposure Limits:

OSHA: 50 ppm, 8-Hour TWA (Time Weighted Average): 200 ppm, 15-Minute STEL (Short Term Exposure Limit); 29 CFR 1910.1000, Table Z.2, Revision 3/1/89.

Section V - Emergency First Aid Procedures

Inhalation

Remove to fresh air. If not breathing, give Artificial Respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

Eye or Skin Contact

Flush eyes and skin with plenty of water (soap & water for skin) for a minimum of 15 minutes while removing contaminated clothing and shoes. If irritation occurs, consult a physician. Thoroughly clean contaminated clothing and shoes before reuse or discard.

Ingestion

If conscious: Drink large quantities of water. Do not induce vomiting. Take immediately to a hospital or physician.

If unconscious or in convulsions: Take immediately to a hospital. Do not attempt to give anything by mouth to an unconscious person.

Notes to Physician (Including Antidotes)

- or administer Adrenaline following Trichloroethylene over exposure. Increased sensitivity of heart to Adrenaline may be caused by overexposure to Trichloroethylene.

(Continued on Page 3)
Section VI - Control and Protective Measures

Respirator Protection

TLV is exceeded or in the event of a spill, use NIOSH approved respiratory equipment for organic vapor. Use Self-contained Breathing Apparatus or Full Facepiece Airline Respirator with auxiliary SCBA operated in the pressure demand mode for work performed in storage vessels, poorly ventilated rooms, and other confined areas. Respiratory protection programs must be in accordance with 29 CFR 1910.134.

Ventilation

Use local exhaust or dilution ventilation as appropriate to control exposures to below permissible limits.

Eye Protection

Wear Splashproof Goggles when handling liquids and during emergencies.

Gloves

Use Viton or Silver Shield gloves to protect skin.

Other Protective Equipment

Boots, aprons, or chemical suits should be used when necessary to prevent skin contact. Personal Protective clothing and use of equipment must be in accordance with 29 CFR 1910.132 and 29 CFR 1910.133.

Section VII - Precautions for Safe Handling and Use

Handle with reasonable care. Avoid breathing vapors. Store in cool place, using closed containers that are labeled in accordance with State and Federal regulations. Concentrated vapors of this product are heavier than air and will collect in low areas. Do not enter areas where vapors of this product are suspected unless special breathing apparatus is used and an observer is present for assistance.

Avoid contamination of water supplies. Handling, storage and use procedures must be carefully monitored to avoid spills and/or leaks. Any spill or leak has the potential to cause underground water contamination which may, if sufficiently severe, render a drinking water source unfit for human consumption. Do not use cutting or welding torches on containers used to store Vulcanizing Fluid unless emptied and cleaned.

Section VIII - Reactivity Hazard Data

Stability: Is considered stable.

Conditions to Avoid: Avoid extreme heat, open flame and welding arcs.

Incompatibility (Materials to Avoid): Strong Alkalies (Caustic Soda, Potash), Oxidizers

Hazardous Polymerization: Will Not Occur

Conditions to Avoid: None

(continued on page 4)
Section IX - Spill or Leak Procedures

Steps to be taken if Spilled or Released

Immediately evacuate the area and provide maximum ventilation. Unprotected personnel should be evacuated. Wear PPE. Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on absorbent such as sawdust or vermiculite and sweep into approved containers for disposal. Do not flush to sewer. If spilled into environment, notify local and State officials in accordance with local, State and Federal regulations.

Waste Disposal Method

Contaminated adsorbent, soil, water must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reused, reprocessed or incinerated or must be treated in a permitted hazardous waste management facility. It is your duty to dispose of the chemical materials and/or their containers in accordance with the Clean Air Act, the Clean Water Act, RCRA, as well as applicable Federal, State, and local Regulations regarding disposal.

Section X - Supplemental Information

Special Precautions:

Do not breathe vapors. High vapor concentrations can cause dizziness, unconsciousness or death. Long term overexposure may cause liver and/or kidney injury and possible central nervous system damage. Use only with adequate ventilation. Ventilation must be sufficient to limit employee exposure to Trichloroethylene below permissible limits. Eye irritation, dizziness and/or drunkenness are signs of overexposure. Do not eat, drink or smoke in work areas.

Optional

Classification for this product is: D2B

U.S. D.O.T. Shipping Name: Trichloroethylene
U.S. D.O.T. Hazard Class: ORM-D

HNIS/NFPA Rating:
Health (2)
Flammability (1)
Reactivity (0)

The information herein is given in good faith. No warranty, express or implied, is made. Consult REMA TIP TOP/ NORTH AMERICA INC. for further information.