MATERIAL SAFETY DATA SHEET

Original Rapid Tap®

Manufacturer's Name: Relton Corporation
Address: 317 Rolyn Place, Arcadia, CA 91007-2838

Chemical Name and Synonyms: mixture containing predominantly 1,1,1-Trichloroethane (methyl chloroform)
Trade Name and Synonyms: Original Rapid Tap®
Chemical Family: Inhibited Chlorinated Hydrocarbon
Formula: Mixture (See Section II)
DOT: 1,1,1-Trichloroethane
Shipping Name: UN Number: UN2831 Hazard Class: 6.1 Packaging Group III

CAS Registry No. | % Vol | OSHA PEL
--- | --- | ---
71-55-6 | < 80 | 350 ppm
646-06-0 | < 2 | NA
78-92-2 | < 1.5 | 150 PPM
-- | < 10 | NE
-- | Trace | NE

Plants containing Chlorinated Hydrocarbon: Inhibited Chlorinated Hydrocarbon

Health 3
Fire 1
Reactivity 1

Boiling Point: 72°C 162°F
Specific Gravity (H₂O=1) @ 25°C: 1.17
Vapor Pressure (mm Hg) @ 20°C: 100
Vapor Density (AIR=1): 4.6
Evaporation Rate (1,1,1-Trichloroethane=1): 1.3
Solubility in Water: .07g/100g @25°C: Slight
Appearance and Odor: Liquid - clear, amber; cinnamon odor

Flash Point (Method Used): None to boiling(162° F) TCC (162° F) COC
Flammable Limits @ 25° C: LFL in air (% by vol.) 8.1 10.5
Extinguishing Media: Water Fog
Special Fire Fighting Procedures: Avoid exposure to open flame; use self-contained respiratory equipment.
However, Rapid Tap is not considered a flammable-liquid hazard in normal use.

Unusual Fire and Explosion Hazards: Products of combustion in open flame: CO₂, CO, HCl, COCl₂

Warning: Contains Methyl Chloroform, a substance which harms public health and environment by destroying ozone in the upper atmosphere.
Threshold Limit Value (TLV) of Rapid Tap® as a mixture containing 1,1,1-Trichloroethane: 350 pmm

Routes of Entry: inhalation (major potential route of entry), skin, eyes, ingestion (unlikely)

Effects of Overexposure:

Acute:
- **Inhalation**: minimal anesthetic or narcotic effects in the range of 500 to 1,000 PPM 1,1,1- Trichloroethane. Progressively higher levels over 1,000 ppm may cause dizziness, drunkenness, and uncoordination. Concentrations as low as 10,000 ppm can cause unconsciousness, irregular heartbeats, and even death.
- **Skin**: defatting, drying, and slight irritation. (Absorption is minimal in acute exposure; LD50 for rabbits is approximately 15,000 mg/kg.)
- **Eyes**: temporary irritation from vapors; liquid can cause temporary irritation and slight corneal injury.
- **Ingestion**: unlikely route of entry; single-dose toxicity is low. LD50 for rats ranges from 7,950 to 15,800 mg/kg. If aspirated (liquid enters the lung), liquid may be rapidly absorbed through the lungs and may cause chemical pneumonia and liver damage. Nausea, vomiting, diarrhea, and fatigue are signs of poisoning through ingestion of 1,1,1-Trichloroethane.

Chronic:
- **Inhalation**: Chronic overexposure has caused liver toxic effects in experimental animals and congestion of bronchial vessels and passive congestion throughout the lungs of a human. 1,1,1-Trichloroethane did not cause cancer in long-term animal studies, and is not on the OSHA, IARC, or NTP carcinogen lists. Two of three studies of 1,1,1-Trichloroethane indicated no reproductive toxicity; the third study noted delays in normal development, but these delays did not affect later life.
- **Skin**: Contact: Prolonged or repeated exposure may cause irritation, drying, or flaking of skin. Absorption: Absorption is unlikely and would occur only as a result of such contact as prolonged immersion of the hand, etc. Alveolar traces of 1,1,1-Trichloroethane were found after 10 minutes of such (experimental) immersion. (The LD50 for rabbits is approximately 15,000 mg/kg for 1,1,1-Trichloroethane.)
- **Eye**: Initial irritation may become corneal injury with prolonged or repeated exposure.
- **Ingestion**: Ingestion (swallowing) is likely to occur only on an acute basis; chronic ingestion problems are improbable. The primary problem could occur from aspiration of 1,1,1-Trichloroethane if vomiting occurs. (See Acute effects of Ingestion, above.)

First Aid:
- **Inhalation**: remove to fresh air
- **Skin**: wash with soap and water
- **Eye**: flush with water and call doctor
- **Ingestion**: do not induce vomiting; call doctor; (Doctor: maintain adequate oxygenation; do not give sympathomimetic amines such as epinephrine, which may cause arrhythmia’s.)
SECTION VI - REACTIVITY DATA

<table>
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<th>STABILITY</th>
<th>UNSTABLE</th>
<th>CONDITIONS TO AVOID: Exposure to high temperature sources (open flame, welding arcs, etc.), which induce thermal decomposition</th>
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<tr>
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<td>STABLE</td>
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INCOMPATIBILITY (materials to avoid): Avoid mixing with water (forms HCl) Avoid use with aluminum. Avoid contact with caustic soda or other strong alkali.

HAZARDOUS DECOMPOSITION PRODUCTS: CO₂, CO, HCl, COCl₂

HAZARDOUS POLYMERIZATION MAY OCCUR CONDITIONS TO AVOID: WILL NOT OCCUR NA

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED.

Prevent contact with open flame. Small leaks: mop, wipe, or soak up immediately and remove absorbent material outdoors. Large spills: evacuate area; contain liquid and transfer to closed metal containers. Keep out of water supply.

WASTE DISPOSAL METHOD

For small amounts: none needed; material will evaporate, leaving very slight oily coating. For large amounts: considered a toxic waste #U226 under RCRA 40 CFR 261.33; incinerate or landfill in permitted hazardous waste facility.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type) Below 350 ppm - none**
Normal ventilation: Limit concentration to TLV.

Ventilation: Local exhaust: At point of cutting-tool contact. Mechanical (General): NA Special: NA Other: NA

PROTECTIVE GLOVES: Not under normal use, when skin contact is minimal. EYE PROTECTION: Protective goggles to guard against splashing.

OTHER PROTECTIVE EQUIPMENT: None Needed

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
None necessary except to store away from open flame and in a cool, dry place. Do not torch-cut drums which contain or have contained Rapid Tap until the fluid and vapors have been completely expelled.

OTHER PRECAUTIONS Use with adequate ventilation

** If no environmental control exists, use full face mask with organic canister for levels up to 2% for 1/2 hr. or less. Above 2% and for emergencies, use a self-contained breathing apparatus.