

MATERIAL SAFETY DATA SHEET

EnSolv[®] - SC
Aerosol Spray Cans

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EnSolv Vapor Degreasing & Cleaning Solvent U.S. Patents 5616549, 5824162, 5938859, 6176942 & 6402857B2. European Patent 781842: France, Great Britain, Italy, Netherlands; Sweden 781842. Germany 69604477.3 Canadian Patent 2284792. Israeli Patent 132000. Australian Patent 720172. Mexican Patent No. 212927.

Section I - Identification

Trade Name: *EnSolv*⁷ Precision Cleaning Solvent

Chemical Family: Mixture of n Propyl Bromide, stabilizers and CO₂ propellant.

Manufacturer: Enviro Tech International, Inc.
2525 West LeMoyne Ave, Melrose Park, IL 60160
Tel.: (708) 343-6641 FAX: (708) 343-4633

Section II - Hazardous Ingredients:

Component Material	CAS#	% wt.
n Propyl Bromide	106-94-5	> 90
Patented Stabilizer Package		< 10

OSHA PEL not established. Enviro Tech International, Inc. recommends a workplace exposure guideline of 100 ppm 8 hour time weighted average (TWA) based on the scientific assessment of the *EnSolv* mixtures, nPB and other existing toxicological data. Based on this data *EnSolv* is not expected to be a carcinogen.

Section III - Physical & Chemical Characteristics

Boiling Point: 155.8EF/ 68.8EC

Specific Gravity (H₂O = 1): 1.32 ±0.01

Vapor Pressure: 130 @ 25EC

Vapor Density in air: 4.2

Water Solubility (g/100 ml): Negligible 0.24 g/100ml

Evaporation Rate (n-Butyl acetate = 1) 4.7

Appearance: Clear and Free of Suspended Matter

Section IV - Fire & Explosion Data

Flash Point: None (ASTM-D-92, D93 & D-56)

Flammable Limits in Air: LEL 3.8 %; UEL 9.5%

Autoignition Temperature: 480EC

Extinguisher Media: Material is not flammable. Extinguishing media should be chosen based on surrounding conditions.

Special Fire Fighting Procedures: Wear NIOSH approved, self contained breathing apparatus in positive pressure mode. Use water spray or fog to cool exposed equipment and containers.

Unusual Fire and Explosion Hazards: Product will form flammable mixture with air between 3.8% - 9.5% by volume. Avoid contact with flame, sparks or high intensity heat sources.

Section V - Reactivity Data

Stability: Stable

Conditions to Avoid: Avoid strong oxidizers, strong acids, strong bases, reactive metals, natural rubber, free water, open flame, electric arc or other high energy ignition source or hot surface that could cause thermal decomposition

Hazardous Decomposition or Byproducts: Thermal decomposition may produce carbon monoxide, carbon dioxide, hydrogen halide and bromides.

Hazardous Polymerization: Will not occur.

Section VI - Health Hazard Data

Routes of Entry: Inhalation, Irritant; Skin, Irritant; Ingestion, Irritant. **Health Hazards (Acute and Chronic):** Can produce eye and skin irritation. High concentrations are irritating to the respiratory tract. May cause headache, dizziness, nausea, vomiting or narcosis in confined or poorly ventilated areas. LD50 oral, rat 4260 mg/g; LC50 inhalation rat 253000 mg/m³/30 min.; 14, 374 ppm.

Carcinogenicity: NTP: Not listed; IARC: Not listed.

Signs and Symptoms of Exposure: Inhalation in high concentrations produces irritation to upper respiratory tract and eyes. May include discomfort such as nausea, headache or weakness. Prolonged skin contact may produce irritation with discomfort or rash. Eye contact may cause irritation or pain. Ingestion may result in irritation of mouth and gastro-intestinal tract.

Medical Conditions Generally Aggravated by Exposure: Persons having pre-existing diseases of the lungs, eyes or skin may have increased susceptibility to the hazards of excessive exposure.

Emergency and First Aid: Inhalation - Remove to fresh air. Provide oxygen if breathing is difficult. Administer CPR if individual is not breathing and seek medical attention. Skin - use soap and water on contacted area. **Eye** - Irrigate for a minimum of 15 minutes and seek medical attention. **Ingestion** - If swallowed, if individual is conscious, DO NOT induce vomiting. Have victim drink large amounts of water. **For eye contact or ingestion, seek immediate medical attention**

Section VII - Precautions for Safe Handling & Use Steps to be taken in case material is released or spilled: Contain spill with dikes or absorbent material to prevent migration into sewer or water ways. For large spill, evacuate and ventilate the area. Use recommended personal protection equipment. Clean up spills with earth, sand, or other non-combustible absorbent material. Pick up and keep in closed container.

Waste Disposal Method: Follow federal, state, and local regulations. Burn in incinerator with afterburner and scrubbers. DO NOT flush into sanitary sewer or waterway.

Precautions to be taken in Handling and Storing: Store in a well ventilated, cool, dry area. Keep container closed when not in use. Avoid moisture.

Other Precautions: Do not inhale vapors. Do not use *EnSolv* in open top containers unless appropriate safety equipment and safeguards are used to reduce evaporative solvent loss to the atmosphere. Do not weld or cut with a torch any drums that have contained *EnSolv*. Residual vapors in the drum could be in the flammable range and an explosion could occur. **Keep out of reach of children**

Aerosol containers: Follow above guidelines. **DO NOT** puncture or incinerate container.

Section VIII - Control Measures

Respiratory Protection (Specify Type): In non-ventilated areas, in confined spaces or when exposure is deemed excessive, use a NIOSH approved organic respirator.

Ventilation: Local Exhaust: Maintain adequate ventilation; general mechanical ventilation recommended; Special ventilation not necessary;

Other: Not applicable.

Protective Gloves: Viton gloves recommended. Nitrile, neoprene or butyl gloves offer less than 30 minutes of protection and should be used for splash protection only. DO NOT use natural rubber gloves.

Eye Protection: Chemical safety goggles/full face shield. Contact lenses should NOT be worn when working with this material.

Other Protective Clothing or Equipment: Chemical resistant protective clothing to avoid skin contact. DO NOT use natural rubber aprons or boots.

Work/Hygienic Practices: Avoid unnecessary and prolonged exposures beyond recommended exposure levels. Avoid breathing vapors and or/mists. DO NOT drink, eat, or smoke while working with this product. Launder soiled clothes. Provide emergency eye bath and safety shower.

Section IX – Transportation

Ground Transportation: Consumer Commodity, ORM-D.

IATA Air Transportation Classification: Aerosols, Non-flammable, 2.2, UN1950, Limited Quantity

Section X - Regulatory Information

TSCA Status: The ingredients of this product are on the TSCA inventory and in compliance with 15 USC 2601-2629.

SARA 313 Components subject to reporting: 1,2, butylene oxide CAS 106-88-7 < 0.6% by weight.

CERCLA: 40 CFR 302.4 Component: 1,2, butylene oxide CAS 106-88-7 < 0.6% by weight. Requires a discharge of 20,000 pounds (@ 1,800 gallons) of EnSolv mixture to reach RQ of 100 lbs.

NESHAP: No **HAP:** No **RCRA:** No.

STATE REGULATION: n propyl bromide is known to the State of California to cause reproductive effects. NJ & PA - RTK. WHMIS - HC-1. nitromethane is known to the State of California to cause cancer. NJ-RTK. 1,2, butylene oxide NJ-RTK

SNAP: Proposed Approved by USEPA June 3, 2003

EC (EINECS)	Ingredients listed
Canada (DSL)	Ingredients listed
Australia (AICS)	Ingredients listed
Japan (MITI)	Ingredients listed

Section XI - Emergency Telephone Numbers

Emergency contact phone numbers for CHEM-TEL Inc.: In the U.S.A., Canada, Puerto Rico and the US Virgin Islands call Direct or Collect:

(800) 255-3924.

Outside of the North American Continent call:

(800) 248-0585