



Stevens Roofing Systems[®]

Material Safety Data Sheet Stevens Hypalon[®] Solvent

Section 1: Chemical Product and Company Information

Stevens Roofing Systems
Carolina Plant
1535 Elastic Plant Road
Westfield, NC 27053
USA

Information Phone: (336) 351-3131
Emergency Phone: (413) 533-8100
CHEMTREC: (800) 424-9300 or
(703) 527-3887

Product Item Number: 2085011
CAS Number: 79-01-6
Synonyms: Trichloroethylene; trichloroethene; TCE; acetylene trichloride; ethinyl trichloride; trichlor
Molecular Weight: 131.39
Chemical Formula: C₂HCl₃
General Use: Cleaner for roofing membrane

HMIS Hazard Ratings
Health - 2
Fire - 1
Reactivity - 0

Section 2: Composition, Information on Ingredients

Ingredient Name	CAS #	% Wt
Trichloroethylene	79-01-6	> 99

Section 3: Hazard Identification

Emergency Overview

WARNING! May cause irritation to eyes and skin. Vapor harmful. Harmful if swallowed. Possible cancer hazard based on tests with laboratory animals -- overexposure may create cancer risk.

Precautions: Avoid contact with eyes. Avoid prolonged or repeated contact with the skin. Use only with adequate ventilation. Do not breathe vapors. High vapor concentrations can cause dizziness, unconsciousness, central nervous system depression or death. Long-term overexposure may cause liver/kidney injury. Do not use in poorly ventilated or confined spaces without proper respiratory protection. Ventilation must be sufficient to limit employee exposure to this product below permissible exposure limits. Eye irritation, dizziness and/or drunkenness are signs of overexposure. Do not swallow. Wash thoroughly every day after work. Do not eat, drink or smoke in work area.

Acute Effects of Overexposure

Inhalation: This product is primarily a central nervous system depressant. Inhalation can cause irritation of the respiratory tract, dizziness, nausea, headache, loss of coordination and equilibrium, unconsciousness and even death in confined or poorly ventilated areas. Fatalities following severe acute exposure to various chlorinated solvents have been attributed to ventricular fibrillation.

Eye/Skin: Liquid splashed in the eye can result in discomfort, pain and irritation. Prolonged or repeated contact with liquid on the skin can cause irritation and dermatitis. The problem may be accentuated by liquid becoming trapped against the skin by contaminated clothing and shoes. Skin absorption is not expected to be of toxicological significance under normal industrial use.

Ingestion: Swallowing of this material 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 and pulmonary edema which is a potentially fatal condition.



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Chronic Effects of Overexposure: Prolonged exposure above the OSHA permissible exposure limits may result in liver and kidney damage. Prudent handling practices should be followed to minimize human exposure.

Carcinogenicity: Chronic exposure to Trichloroethylene primarily produced renal toxicity and tumors in rats and liver and lung tumors in mice, with some reports of tumors at other sites.

Mutagenesis: When activated with microsomal enzymes, trichloroethylene has been shown to be weakly positive in certain microbial mutagen test systems.

Epidemiology: Extensive epidemiologic cohort studies of Trichloroethylene-exposed workers do not indicate significant increases in cancer incidence, but case-control studies suggest that prolonged exposure to high concentrations of Trichloroethylene can increase the incidence of renal cancer.

Reproductive/Developmental: Trichloroethylene was not embryotoxic or teratogenic in rats or mice inhaling the compound. In a teratology-reproduction study conducted by NTP, rats and mice fed microencapsulated trichloroethylene at doses as high as 300 mg/kg/day (rats) and 750 mg/kg/day (mice) showed little effect.

Section 4: First Aid Measures

Inhalation: Move person to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult. If breathing is difficult, give oxygen. Call a physician.

Eye or Skin Contact: In case of contact, immediately flush eyes and skin with plenty of water (soap and water for skin) for at least 15 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation persists. Thoroughly clean contaminated clothing and shoes before reuse or discard.

Ingestion: If swallowed, give at least 3-4 glasses of water, but do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Get medical attention.

Notes to Physicians or First Aid Providers: Only administer adrenaline after careful consideration following overexposure. Increased sensitivity of the heart to adrenaline may be caused by overexposure to this product.

Section 5: Fire-Fighting Measures

Flash Point: None (by DOT test method)

Flammable Limits in Air - Lower (%): 7.8%

Flammable Limits in Air - Upper (%): 52%

Extinguishing Media: Carbon dioxide, dry chemical, water

Special Firefighting Procedures: Emits toxic fumes under fire conditions. When this product is involved in fires, it can decompose to toxic, corrosive hydrogen chloride and possible traces of phosgene. Fire-fighters must wear NIOSH approved pressure demand, self-contained breathing apparatus and full protective clothing when fighting chemical fires. Vapor concentration in a confined or poorly ventilated area can be ignited upon contact with a high energy spark, flame, or high intensity source of heat. This can occur at concentrations ranging between the lower and upper limits (by volume) listed above.

Section 6: Accidental Release Measures

Accidental Release Measures: Immediately evacuate the area. Provide maximum ventilation. Unprotected personnel should move upwind of spill. Only personnel equipped with proper respiratory and eye/skin protection should be permitted in the area. Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on adsorbents, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including ignitable vapors, have been removed, thoroughly wet



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vacuum the area. Do not flush to sewer. If area of spill is porous, remove as much earth and gravel, etc. as necessary and place in closed containers for disposal.

Section 7: Handling and Storage

Handling and Storage Precautions: Vapors are heavier than air and will collect in low areas. Keep container closed when not in use. Store only in closed, properly labeled containers. This material or its vapors when in contact with flames, hot glowing surfaces or electric arcs can decompose to form hydrogen chloride gas and possible traces of phosgene. Avoid contamination of water supplies. Handling, storage and use procedures must be carefully monitored to avoid spills 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. Contamination that does occur cannot be easily corrected. A chlorinated solvent used as a flashpoint suppressant must be added in sufficient quantity or the resultant mixture may have a flashpoint lower than the flammable component. Do not use cutting or welding torches on pails that contained this product.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

	8-hour Time Weighted Average	15-minute Short-Term Exposure Limit
OSHA	50 ppm TWA	200 ppm STEL. (1989 Vacated PEL's)
ACGIH	10 ppm TWA	25 ppm STEL
ONTARIO	50 ppm TWAEV	100 ppm STEV (Short Term Exposure Value)

Ventilation: Use local exhaust or general room/dilution ventilation sufficient to maintain employee exposure below permissible exposure limits.

Administrative Controls:

Respiratory Protection: Airborne concentrations should be maintained below the exposure limits.

When respiratory protection is required for certain operations (<10x exposure limit), use an air purifying respirator. The effectiveness of an air purifying respirator is limited. Use only for a single short-term exposure. Use self-contained breathing apparatus (SCBA) or full face piece airline respirator with auxiliary SCBA operated in the pressure demand mode for emergencies and for all work performed in storage vessels, poorly ventilated rooms, and other confined areas.

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH-approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

Eye Protection: Use splashproof goggles.

Skin Protection: Use Viton[®], Silver Shield[®], or polyvinyl alcohol (degrades in water) protective gloves.

Protective Clothing or Equipment: Boots, aprons, or chemical suits should be used when necessary to prevent skin contact.

Section 9: Physical and Chemical Properties

Physical State: Liquid

Odor: Ether like

Color: Clear, colorless

Boiling Range: 187 - 190 °F (86 - 88 °C)

Vapor Density (Air = 1): 4.54

Specific Gravity (H₂O = 1): 1.465 @ 68/68 °F (20/20 °C)



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pH: 6.7 – 7.5
Freezing/Melting Point: -123 °F (-86.4 °C)
Solubility in Water: 0.11 wt% in water
Bulk Density: 12.2 lb/gal @ 68 °F (20 °C)
Percent Volatile: 100%
Vapor Pressure: 57.8 mmHg @ 68 °F (20 °C)
Evaporation Rate: 0.28 (ethyl ether = 1)

Section 10: Stability and Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur
Chemical Incompatibility: Avoid contamination with caustic soda, caustic potash or oxidizing materials. Shock sensitive compounds may be formed.
Conditions to Avoid: Avoid open flames, hot glowing surfaces or electric arcs.
Hazardous Decomposition Products: Hydrogen chloride gas, possible traces of phosgene

Section 11: Toxicological Information

Toxicological Information:
Acute Inhalation LC50: (mouse) 8450 ppm (4 hours); Slight to very low toxicity
Acute Dermal LD50: (rabbit) >2000 mg/kg; Slight to very low toxicity
Skin Irritation: Mildly irritating
Eye Irritation: Moderately irritating
Acute Oral LD50: (rat) 5650 mg/kg; Slight to very low toxicity
Carcinogenicity Status: Trichloroethylene is listed by NTP as a suspect carcinogen, and by IARC as a Group 2A carcinogen. Trichloroethylene is listed by ACGIH as A2, a suspected human carcinogen.
Medical Conditions Aggravated: Prolonged exposure above the OSHA permissible exposure limit may complicate existing liver and kidney diseases.

Section 12: Ecological Information

Ecotoxicological Information: Extreme toxicity.
LC₅₀: 52 ppm (96 hr, Sheepshead Minnow)
LC₅₀: 14 ppm (96 hr, Mysid Shrimp)
EC₅₀: 95 ppm (96 hr, Marine Alga)
Environmental Fate: No data at this time.

Section 13: Disposal Considerations

Waste Disposal Method: Contaminated sand, sawdust, vermiculite, soil or porous surface must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated or must be treated in a permitted hazardous waste management facility. Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

Section 14: Transportation Information

Proper Shipping Name: Trichloroethylene



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Shipping Symbols:**Hazard Class:** 6.1 (Toxic)**UN Number:** UN1710**Packing Group:** III**USA-RQ, Hazardous Substance and Quantity:** 100 lb (45.4 kg)**Marine Pollutant:** None

Section 15: Regulatory Information

USA TSCA: All components of this product are listed on the TSCA Inventory.**EU EINECS:** All components in this product are listed on EINECS.**Canada Domestic Substances List (DSL):** This product and/or all of its components are listed on the Canadian DSL.**Australia AICS:** All components of this product are listed on AICS.**Korea ECL:** All components in this product are listed on the Korean Existing Chemicals Inventory (KECI).**Japan MITI (ENCS):** All components in this product are listed on the Japanese Existing and New Chemical Substances (ENCS) chemical inventory.**Philippines PICCS:** All of the components in this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS).**China IECSC:** All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC) or otherwise exempt.**SARA Title III:****SARA (311, 312) Hazard Classes:** Acute Health Hazard; Chronic Health Hazard**SARA (313) Chemicals:** This product contains toxic chemical listed below which is subject to the reporting requirement of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Ingredient Name	CAS #	% Wt
Trichloroethylene	79-01-6	> 99

SARA Extremely Hazardous Substance: Not listed**CERCLA Hazardous Substance:** The following materials are listed as CERCLA Hazardous Substances in Table 302.4 of 40 CFR Part 302:

Ingredient Name	CAS #	Reportable Quantity
Trichloroethylene	79-01-6	100 lb (45.4 kg)

California Proposition 65: This product is a chemical known to the State of California to cause cancer.**NJ Right-To-Know List:** Also contains butylene oxide (CAS No. 106-88-7).**Canada Regulations (WHMIS)****Class:** D1B - Toxic Materials**Sensitization to Product:** None known**Odor Threshold:** Approximately 80 ppm**Product Use:** Degreasing solvent

Section 16: Other Information

Preparation Date: August 9, 2007**Revision History:** New formant and based on information from MSDS from PPG Industries.**Disclaimer:** This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Stevens Roofing Systems. The data on this sheet relates only to the specific material designated herein. Stevens Roofing Systems assumes no legal responsibility for use or reliance upon these data.