



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. TT 208  
Effective Date May 24, 1999

## SECTION V HEALTH HAZARD DATA

TT 208

**Threshold Limited Value** ACGIH 1992-93 (TLV): TWA = 50 ppm, 269 mg/m<sup>3</sup>, STEL = 200 ppm, 1070 mg/m<sup>3</sup>. OSHA (PEL): TWA = 100 ppm. Ceiling = 200 ppm.

**Effects of Overexposure** **TARGET ORGANS AFFECTED:** Liver, kidneys, central nervous system, heart. **INHALATION:** Can irritate nose and throat with dizziness, drowsiness, headache, nausea, unconsciousness and even death; resulting from exposure. **EYES:** Irritation and lacrimation can result from exposure to vapor or liquid. **SKIN:** Causes irritation and when prolonged or repeated; dermatitis. **INGESTION:** Causes irritation to the digestive tract and may cause nausea and rapid drowsiness, partial paralysis, unconsciousness and kidney failure in severe cases.

**Emergency and First Aid Procedures**  
**EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Flush thoroughly with water, then wash with mild soap and water. Remove contaminated clothing. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. Get immediate medical help. Do not induce vomiting. (Authorities differ; professional decisions required). Physician should be warned **not to use** adrenalin for treatment.

## SECTION VI REACTIVITY DATA

<b>Stability</b>	<b>Unstable</b>		<b>Conditions to Avoid</b>	Excessive temperature and heat. Sunlight requires stabilization against oxidation, degradation and polymerization.
	<b>Stable</b>	X		

**Incompatibility (Materials to Avoid)** Can react with sodium hydroxide, potassium hydroxide or other strong alkali to form explosive mixtures of chloroacetylenes. Soda ash does not react. Oxidizing materials.

**Hazardous Decomposition Products** When exposed to high temperature, hydrogen chloride and phosgene (highly toxic) can be produced.

<b>Hazardous Polymerization</b>		<b>Conditions to Avoid</b>	Polymerization of TCE is catalyzed by aluminum chloride. Magnesium or aluminum powder can react with TCE.
<b>May Occur</b>	<b>Will Not Occur</b>		
	X		

## SECTION VII SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled** Recover for use if not contaminated. Using proper safety equipment (good ventilation, proper gloves); mop, wipe or soak up with absorbent materials. Evaporate outdoors or in exhaust hood. Place absorbed waste in closed container for disposal by incineration. Do not allow to enter water supply sources.

**Waste Disposal Method** Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.

Dispose of in an approved incinerator equipped with an afterburner and scrubber or contract with a licensed waste disposal service. Reclaim by filtration and distillation.

## SECTION VIII SPECIAL PROTECTION INFORMATION

**Respiration Protection (Specify Type)** For laboratory use, work in ventilation hood. If needed, wear a NIOSH/MSHA-approved self-contained breathing apparatus or respirator containing an organic vapor cartridge.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Recommended.</b>	<b>Special</b>	No.
	<b>Mechanical (General)</b>	<b>Recommended.</b>	<b>Other</b>	No.

<b>Protective Gloves</b>	Neoprene, Vitron.	<b>Eye Protection</b>	Chemical safety glasses.
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**Other Protective Equipment** Goggles and shield, lab coat, apron, ventilation hood, proper gloves, eye wash station.

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Store in a cool, well-ventilated area and use with adequate ventilation, including floor level ventilation. Avoid contact of vapors with high temperature (toxic and corrosive decomposition products from TCE above 700°C).  
Keep container tightly closed when not in use.

**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals.

Use only in well-ventilated area. Avoid prolonged breathing of vapor. Avoid contact with eyes. Avoid collecting aluminum fines or chips in vapor degreaser. As vapor degreaser monitor TCE stabilizes level. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

<b>Revision</b> No. 4	<b>Date</b> 5/24/99	<b>Approved</b> Michael Raszeja	<b>Chemical Safety Coordinator</b> MR
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. \* Hazardous Materials Industrial Standards. Printed on recycled paper.

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

<b>Product</b>	TRICHLOROETHYLENE	 <b>CHEMTREC</b> <b>800-424-9300</b> Day 716-226-6177  <b>NFPA HAZARD RATING</b> LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4
<b>Chemical Synonyms</b>	Ethylene Trichloride (TCE)	
<b>Formula</b>	CHCl <sub>2</sub> CCl <sub>2</sub>	
<b>Unit Size</b>	up to 20 Lt.	
<b>C.A.S. No.</b>	79-01-6	

## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Trichloroethylene (Stabilized)	Ca 100%	See Section V.

**WARNING! VAPOR HARMFUL. MAY BE HARMFUL IF SWALLOWED.**

**NOTE: SUSPECTED CARCINOGEN. \***

## SECTION III PHYSICAL DATA

<b>Melting Point (°F)</b>	-73° to -86°C (-98 to -122°F)	<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	1.45 at 25°/4°C
<b>Boiling Point (°F)</b>	87.1°C (188°F)	<b>Percent Volatile by Volume (%)</b>	100%
<b>Vapor Pressure (mm Hg)</b>	58 mm at 20°C	<b>Evaporation Rate (Ether = 1)</b>	0.3
<b>Vapor Density (Air=1)</b>	4.53		
<b>Solubility in Water</b>	0.1% in water at 25°C.		
<b>Appearance &amp; Odor</b>	Stable, clear, colorless, heavy, mobile liquid; chloroform-like odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used)</b>	Non-flammable.	<b>Flammable Limits in Air % by Volume</b>	25°C	Lower	Upper
				8%	10.5%

**Extinguisher Media** Use any media suitable for extinguishing supporting fire.

**SPECIAL FIREFIGHTING PROCEDURES** Trichloroethylene is normally considered non-combustible. However, when 15% vapor in air at 33°C is exposed to intense heat (electric arc) or to ordinary flame at vapor-air temperatures exceeding 50°C, it can be made to burn mildly. Combustibility increases in oxygen-enriched air. In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 160)

**UNUSUAL FIRE AND EXPLOSION HAZARDS** Dangerous when heated to decomposition; it emits highly toxic and corrosive fumes (phosgene and hydrogen chloride), reacts with strong oxidizing materials.

Autoignition Temperature: 770°F (410°C)

\* RTECS No. KX4550000

Carcinogenic Review: Animal positive, human indefinite. Cancer hazard based on tests with laboratory animals.

It is listed in Group 3 by IARC and is not listed by HTP or OSHA.

D.O.T. TRICHLOROETHYLENE, 6.1, UN 1710, PG III

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20