Material Safety Data Sheet
1,1,2-Trichloroethane Density Standard

ACC# 01748

Section 1 - Chemical Product and Company Identification

MSDS Name: 1,1,2-Trichloroethane Density Standard
Catalog Numbers: AC421500000, AC421501000
Synonyms: Vinyl trichloride; beta-Trichloroethane; Ethane trichloride; 1,2,2-Trichloroethane.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
79-00-5	1,1,2-trichloroethane	ca. 100	201-166-9

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear almost colorless liquid.
Warning! Harmful if swallowed. May cause eye and skin irritation. May cause respiratory tract irritation. May be harmful if absorbed through skin or if inhaled. May cause central nervous system depression.
Target Organs: Kidneys, central nervous system, liver.

Potential Health Effects

Eye: May cause eye irritation.
Skin: May be absorbed through the skin in harmful amounts. Exposure may cause irritation characterized by redness, dryness, and inflammation.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May be harmful if swallowed.
Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. Long-term vapor exposure to 1,1,2-trichloroethane causes chronic gastric symptoms, fat deposition in the kidneys, and damage to the lungs.
Chronic: May cause liver and kidney damage. Mice, but not rats, that were given high doses of 1,1,2-trichloroethane by mouth for most of their life developed liver cancer, but we do not know whether humans exposed to this chemical would develop cancer. From the limited information available in animals, it appears that 1,1,2-trichloroethane does not cause birth defects or otherwise inhibit normal development.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. 1,1,2-trichloroethane has no flash point in conventional closed tester; however, vapors in containers can explode if subjected to a high energy source.
Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire. Cool containers with flooding quantities of water until well after fire is out.
Flash Point: None
Autoignition Temperature: 459 deg C (858.20 deg F)
Explosion Limits, Lower:6.0 vol %
Upper: 15.5 vol %
NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Flush spill area with water. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not reuse this container. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist.
Storage: Store in a cool, dry place. Keep from contact with oxidizing materials. Do not store in metal containers. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
1,1,2-trichloroethane	10 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous r oute	10 ppm TWA; 45 mg/m3 TWA 100 ppm IDLH	10 ppm TWA; 45 mg/m3 TWA

OSHA Vacated PELs: 1,1,2-trichloroethane: 10 ppm TWA; 45 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear almost colorless
Odor: sweetish odor
pH: Not available.
Vapor Pressure: 17 mm Hg @ 20 deg C
Vapor Density: 4.63 (Air=1)
Evaporation Rate: Not available.
Viscosity: 1.69 cP @ 25C
Boiling Point: 110 - 115 deg C @ 760mm Hg
Freezing/Melting Point:-37 deg C
Decomposition Temperature: Not available.
Solubility: 0.45% @ 20°C
Specific Gravity/Density:1.4350g/cm3
Molecular Formula:C2H3Cl3
Molecular Weight:133.40

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, ammonia, Active metals (such as potassium and magnesium)..
Hazardous Decomposition Products: Hydrogen chloride, phosgene, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 79-00-5: KJ3150000
LD50/LC50:
CAS# 79-00-5:
Draize test, rabbit, eye: 162 mg Mild;
Draize test, rabbit, eye: 500 mg/24H Mild;
Draize test, rabbit, skin: 810 mg/24H Severe;

Draize test, rabbit, skin: 500 mg/24H Mild;
Oral, mouse: LD50 = 378 mg/kg;
Oral, mouse: LD50 = 378 mg/kg;
Oral, rat: LD50 = 836 mg/kg;
Skin, rabbit: LD50 = 3730 uL/kg;
.
LCLo ihl rat: 500 ppm/4H. skn gpg: 970 mg/kg.
Carcinogenicity:
CAS# 79-00-5:

- **ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans
- **California:** carcinogen, initial date 10/1/90
- **NTP:** Not listed.
- **IARC:** Not listed.

Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Mutagenicity: No information available.
Neurotoxicity: No information available.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: In air, substance should degrade by reaction with hydroxyl radicals.
Physical: No information available.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series:
CAS# 79-00-5: waste number U227.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 79-00-5 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 79-00-5: Effective 6/1/87, Sunset 6/1/97
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
CAS# 79-00-5: Section 4
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 79-00-5: 100 lb final RQ; 45.4 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 79-00-5: immediate, delayed.
Section 313
1,1,2-trichloroethane is not at a high enough concentration to be reportable under Section 313. No chemicals are reportable under Section 313.
Clean Air Act:
CAS# 79-00-5 is listed as a hazardous air pollutant (HAP).
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA. CAS# 79-00-5 is listed as a Priority

Pollutant under the Clean Water Act. CAS# 79-00-5 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 79-00-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains 1,1,2-trichloroethane, a chemical known to the state of California to cause cancer.

California No Significant Risk Level: CAS# 79-00-5: 10 æg/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

Safety Phrases:

S 9 Keep container in a well-ventilated place.

WGK (Water Danger/Protection)

CAS# 79-00-5: 3

Canada - DSL/NDSL

CAS# 79-00-5 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 79-00-5 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 2/25/1999

Revision #5 Date: 3/04/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.