Material Safety Data Sheet
1,2,4-Trichlorobenzene, 99+%

ACC# 95589

Section 1 - Chemical Product and Company Identification

MSDS Name: 1,2,4-Trichlorobenzene, 99+%
Catalog Numbers: AC220200000, AC220200100
Synonyms: unsym-Trichlorobenzene.
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
120-82-1	1,2,4-Trichlorobenzene	>99	204-428-0

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid.
Warning! Causes severe eye irritation. Harmful if swallowed. Causes respiratory tract irritation. May cause severe skin irritation. May cause central nervous system depression. May cause blurred vision.
Target Organs: Kidneys, central nervous system, liver.

Potential Health Effects
Eye: May cause severe eye irritation.
Skin: Causes skin irritation. May cause dermatitis.
Ingestion: Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause a narcotic effect with possible coma. May cause central nervous system depression.
Inhalation: May cause respiratory tract irritation.
Chronic: Prolonged or repeated skin contact may cause dermatitis. May cause liver and kidney damage.

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: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
Ingestion: Do not induce vomiting. 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.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Do NOT adminster adrenaline after exposure via inhalation or ingestion.

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. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. Combustible material; may burn but does not ignite readily.
Extinguishing Media: For small fires, use dry chemical, carbon dioxide, halon, or water spray. Do NOT get water inside containers. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.
Flash Point: 105 deg C (221.00 deg F)
Autoignition Temperature: 571 deg C (1,059.80 deg F)
Explosion Limits, Lower:2.5 vol% @ 150°
Upper: 6.6 vol% @ 150°
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. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Scoop up with a nonsparking tool, then place into a suitable container for disposal. Remove all sources of ignition. Provide ventilation. Do not get water inside containers.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Avoid ingestion and inhalation.
Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
1,2,4-Trichlorobenzene	5 ppm Ceiling	none listed	none listed

OSHA Vacated PELs: 1,2,4-Trichlorobenzene: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear chemical splash goggles.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to minimize contact with skin.
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, colorless
Odor: Characteristic aromatic odor
pH: Not available.
Vapor Pressure: 2 hPa @ 50 deg C
Vapor Density: 6.25 (air=1)
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 214 deg C @ 760 mm Hg
Freezing/Melting Point:16 deg C
Decomposition Temperature: Not available.
Solubility: insoluble
Specific Gravity/Density:1.450g/cm3
Molecular Formula:C6H3Cl3
Molecular Weight:181.45

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.
Hazardous Decomposition Products: Hydrogen chloride, phosgene, carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 120-82-1: DC2100000
LD50/LC50:
CAS# 120-82-1:
Draize test, rabbit, skin: 1950 mg/13W (Intermittent) Moderate;
Oral, mouse: LD50 = 300 mg/kg;
Oral, mouse: LD50 = 756 mg/kg;
Oral, rat: LD50 = 756 mg/kg;
Oral, rat: LD50 = 756 mg/kg;
Skin, rat: LD50 = 6139 mg/kg;

Carcinogenicity:
CAS# 120-82-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: orl-rat TDL0: 1800 mg/kg (9-13D preg) ipr-rat TDL0: 750 mg/kg (3D pre)

Mutagenicity: mnt-mus-ipr: 210 mg/kg/24H
Neurotoxicity: No information available.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. Acute fish toxicity: LC50 on Poecilia reticula: approx. 2,4 mg/l. Duration of test: 14 d (Verschueren,K. Handb.of Environm. Data on Org.Chem., 2 ed., 1983); LC50 on Lepomis macrochirus: approx. 3,4 mg/l (Buccafusco,R.J. et al. Bull.Environm.Toxicol.26,446-452,1981).
Environmental: According to WORNE biological degradation with complete ring cleavage occurs within 46 hours at 30C in the presence of Pseudomonas sp. The test was conducted with adapted bacteria (Worne,H.E. Magazine from BECEWA, Liege, Belgium 22, 1972, 61-71).
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: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	DOT regulated - small quantity provisions apply (see 49CFR173.4)	TRICHLOROBENZENES, LIQUID
Hazard Class:		6.1
UN Number:		UN2321
Packing Group:		III

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 120-82-1 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 120-82-1: 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 # 120-82-1: acute, chronic.
Section 313
This material contains 1,2,4-Trichlorobenzene (CAS# 120-82-1, >99%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR
Clean Air Act:
CAS# 120-82-1 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# 120-82-1 is listed as a Priority Pollutant under the Clean Water Act.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 120-82-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:

XN N

Risk Phrases:

R 22 Harmful if swallowed.
R 38 Irritating to skin.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 23 Do not inhale gas/fumes/vapour/spray.
S 37/39 Wear suitable gloves and eye/face protection.
S 60 This material and its container must be disposed of as hazardous waste.
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 120-82-1: 3

Canada - DSL/NDSL

CAS# 120-82-1 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D1B, D2B.

Canadian Ingredient Disclosure List

CAS# 120-82-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/08/1998
Revision #4 Date: 6/27/2002