

# Material Safety Data Sheet

## 1,1,2,2-Tetrachloroethane-d2, 99 atom % d

ACC# 32738

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** 1,1,2,2-Tetrachloroethane-d2, 99 atom % d  
**Catalog Numbers:** AC133580000, AC133580050, AC133580200

**Synonyms:**

**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
33685-54-0	1,1,2,2-TETRACHLOROETHANE-D2, 99 ATOM % D		251-634-1

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Not available.

**Target Organs:** Kidneys, central nervous system, liver, respiratory system, gastrointestinal system, eyes, skin.

**Potential Health Effects**

**Eye:** May cause eye irritation. Lachrymator (substance which increases the flow of tears). Causes redness and pain. Lachrymator (substance which increases the flow of tears).

**Skin:** May be fatal if absorbed through the skin. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

**Ingestion:** Harmful if swallowed. May cause headache. May cause nausea and vomiting. May cause effects similar to those of acute inhalation.

**Inhalation:** May be fatal if inhaled. May cause narcotic effects in high concentration. May cause drowsiness, unconsciousness, and central nervous system depression.

**Chronic:** May cause liver and kidney damage. May cause digestive tract and cardiac disturbances. Prolonged exposure may produce a narcotic effect. Prolonged or repeated exposure may cause nausea, dizziness, and headache.

### Section 4 - First Aid Measures

**Eyes:** Immediately 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 immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:** Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**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. Persons exposed to this liquid should be evaluated with a full battery of tests for the liver, kidneys and CNS systems, as well as the blood.

### 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. Substance is noncombustible.

**Extinguishing Media:** Use extinguishing media most appropriate for the surrounding fire.

**Flash Point:** 0 deg C ( 32.00 deg F)

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: ; Flammability: ; Instability:

### 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.

## Section 7 - Handling and Storage

**Handling:** Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

**Storage:** Store in a cool, dry place. Store in a tightly closed container. Store under an inert atmosphere.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
1,1,2,2-TETRACHLOROETHANE-D2, 99 ATOM % D	none listed	none listed	none listed

**OSHA Vacated PELs:** 1,1,2,2-TETRACHLOROETHANE-D2, 99 ATOM % D: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Not available.

**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:** Clear liquid

**Appearance:** colorless

**Odor:** sweetish odor

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 146 deg C @ 760.00m

**Freezing/Melting Point:** Not available.

**Decomposition Temperature:** Not available.

**Solubility:** practically insoluble in water

**Specific Gravity/Density:** 1.6118g/cm<sup>3</sup>

**Molecular Formula:** C<sub>2</sub>D<sub>2</sub>Cl<sub>4</sub>

**Molecular Weight:** 169.86

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, light, exposure to air, exposure to moist air or water.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong bases, aluminum, iron, zinc, potassium, sodium, dinitrogen tetraoxide, potassium hydroxide, sodium potassium alloys.

**Hazardous Decomposition Products:** Hydrogen chloride, carbon monoxide, carbon dioxide, oxides of chlorine.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

### RTECS#:

**CAS#** 33685-54-0 unlisted.

### LD50/LC50:

Not available.

### Carcinogenicity:

CAS# 33685-54-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** 1,1,2,2-Tetrachloroethane CAS# 79-34-5: Tumorigenic: orl-rat TDLo: 42 gm/kg/78W-I orl-mus TDLo: 55 gm/kg/78W-I orl-mus TD: 110 gm/kg/78W-I

**Teratogenicity:** 1,1,2,2-Tetrachloroethane CAS# 79-34-5: Treatment of mice with 300-400 mg/kg/day for various periods during gestation produced dose-related embryotoxic effects and a low incidence of malformations (exencephaly, cleft palate, anophthalmia, fused ribs and vertebrae)(route of administration and total exposure unspecified) (Schmidt, R. Biol. Rundschau 1976, 14, 220-223).

**Reproductive Effects:** No data available.

**Mutagenicity:** 1,1,2,2-Tetrachloroethane CAS# 79-34-5: Mutation: mmo-sat 10 ug/platednr-esc 15866 ug/platesIn-asn 200 ppmdni-hmn-hla 6 mmol/Lsce-ham-ovr 56 mg/LEPA GENETOX PROGRAM 1988, Positive: E coli polA without S9; S cerevisiae gene conversionEPA GENETOX PROGRAM 1988, Positive: S cerevisiae-homozygosis; S cerevisiae-reversionEPA GENETOX PROGRAM 1988, Positive/limited: Carcinogenicity-mouse/ratEPA TSCA Section 8(b) CHEMICAL INVENTORYOn EPA IRIS databaseGenotoxicity:Drosophila melanogaster sex-linked recessive lethal assay negative (Callen, D.F. et al Mutat. Res. 1980, 7, 55-63).

**Neurotoxicity:** No data available.

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. 1,1,2,2-Tetrachloroethane CAS# 79-34-5:Water Danger/Protection: WGK 3Fish toxicity:LC50 fathead minnow, American flagfish 16-20 mg/L - flowthrough bioassay (Blum, D.J.W. et al Res.J. Water Pollut. Control Fed. 1991, 63(3), 198-207; Smith, A.D. et al Arch. Environ. Contam. Toxicol. 1991, 20, 94-102).LC50 guppy 37 ppm/7day (Konemann, W.H. Quantitative Structure - Activity Relationships for Kinetics and Toxicity of Aquatic Pollutants and their Mixtures in Fish 1979, Univ. Utrecht).

**Environmental:** 1,1,2,2-Tetrachloroethane CAS# 79-34-5:Nitrification inhibition:IC50 Nitrosomonas sp. 1.4 mg/L/25day (Blum, D.J.W. et al Res. J. Water Pollut. Control Fed. 1991, 63(3), 198-207).Carbonaceous inhibition:IC50 aerobic heterotrophs isolated from activated sludge 130 mg/L/5day (Blum, D.J.W. et al Res. J. Water Pollut. Control Fed. 1991, 63(3), 198-207).Anaerobic effects:IC50 methanogenic bacterial culture 4.1 mg/L/50day (Blum, D.J.W. et al Res. J. Water Pollut. Control Fed. 1991, 63(3), 198-207).

**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
<b>Shipping Name:</b>	DOT regulated - small quantity provisions apply (see 49CFR173.4)	TETRACHLOROETHANE
<b>Hazard Class:</b>		6.1
<b>UN Number:</b>		UN1702
<b>Packing Group:</b>		II

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 33685-54-0 is not listed on the TSCA inventory. It is for research and development use only.

#### 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

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

**Section 313** No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

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# 33685-54-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

#### 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:

T+ N

##### Risk Phrases:

R 26/27 Very toxic by inhalation and in contact with skin.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

##### Safety Phrases:

S 38 In case of insufficient ventilation, wear suitable respiratory equipment.  
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

**WGK (Water Danger/Protection)**

CAS# 33685-54-0: No information available.

**Canada - DSL/NDSL**

None of the chemicals in this product are listed on the DSL or NDSL list.

**Canada - WHMIS**

This product has a WHMIS classification of D1A, D2A.

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**

Section 16 - Additional Information

**MSDS Creation Date:** 1/05/1999

**Revision #3 Date:** 10/03/2005

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