

# Material Safety Data Sheet

## 2,2-Bis-(4-Chlorophenyl)-1,1-Dichloro-Ethane, 99+%

ACC# 02635

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** 2,2-Bis-(4-Chlorophenyl)-1,1-Dichloro-Ethane, 99+%

**Catalog Numbers:** AC106330000, AC106330250

**Synonyms:** 1,1-Bis(P-Chlorophenyl)-2,2-Dichloroethane; 1,1-Dichloro-2,2-Bis(Parachlorophenyl)Ethane; Tetrachlorodiphenylethane.

#### 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
72-54-8	DDD	99+	200-783-0

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white crystals.

**Warning!** Harmful if swallowed. May be harmful if absorbed through the skin. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. May cause cancer in humans. May cause central nervous system effects. Potential cancer hazard. May cause liver and kidney damage. This substance has caused reproductive effects in humans.

**Target Organs:** Kidneys, central nervous system, liver.

#### Potential Health Effects

**Eye:** Causes mild eye irritation. May cause opacity and scarring. May cause blurred vision, tearing, and conjunctivitis.

**Skin:** May cause skin irritation. May be harmful if absorbed through the skin.

**Ingestion:** Harmful if swallowed. May cause irritation of the digestive tract. May cause liver and kidney damage. May cause central nervous system effects and/or neurological effects. May cause visual changes with blurred vision. Opacities may form in the cornea.

**Inhalation:** May cause liver and kidney damage. Inhalation may produce headache, dizziness, blurred vision, lowered blood pressure, slow pulse and respiratory tract irritation.

**Chronic:** May cause liver and kidney damage. May cause cancer in humans. Repeated exposure may cause central nervous system damage. Adverse reproductive effects have been reported in humans.

### 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.

**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:** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**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. Do NOT use mouth-to-mouth resuscitation.

**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. 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. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.

**Extinguishing Media:** Do NOT get water inside containers. For small fires, use dry chemical, carbon dioxide, or water spray. 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:** Not applicable.

**Autoignition Temperature:** Not applicable.

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

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 0

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Do not breathe dust, vapor, mist, or gas. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Poison room locked.

## 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 ventilation to keep airborne concentrations low.

**Exposure Limits**

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
DDD	none listed	none listed	none listed

**OSHA Vacated PELs:** DDD: No OSHA Vacated PELs are listed for this chemical.

**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:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Crystals

**Appearance:** white

**Odor:** practically odorless

**pH:** Not available.

**Vapor Pressure:** Negligible

**Vapor Density:** 11.0

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 193 deg C @ 1mm Hg

**Freezing/Melting Point:** 109.00 - 111.00 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Negligible.

**Specific Gravity/Density:** 1.385

**Molecular Formula:** C14H10Cl4

**Molecular Weight:** 320.03

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Incompatible materials.

**Incompatibilities with Other Materials:** Oxidizing agents.

**Hazardous Decomposition Products:** Hydrogen chloride, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization:** Has not been reported

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 72-54-8: KI0700000

**LD50/LC50:**

CAS# 72-54-8:

Oral, rat: LD50 = 113 mg/kg;

Skin, rabbit: LD50 = 1200 mg/kg;

Skin, rabbit: LD50 = 1200 mg/kg;

**Carcinogenicity:**

CAS# 72-54-8:

- **ACGIH:** Not listed.

- **California:** carcinogen, initial date 1/1/89

- **NTP:** Not listed.
- **IARC:** Not listed.

**Epidemiology:** IARC Group 2B: Proven animal carcinogenic substance of potential relevance to humans.

**Teratogenicity:** No information found

**Reproductive Effects:** Adverse reproductive effects have occurred in humans. No information found

**Mutagenicity:** Mutagenic effects have occurred in experimental animals.

**Neurotoxicity:** No information found

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** Fish: Fathead Minnow: 4400ug/L; 96H; StaticFish: Channel catfish: 1500ug/L; 96H; StaticDaphnia: Daphnia: 3.2ug/L; 48H; Not Specified No data available.

**Environmental:** Terrestrial: Will adsorb very strongly to the soil and should not leach to the groundwater, although its presence in groundwater illustrates that it can be transported there. It will not appreciably hydrolyze under normal environmental conditions and biodegradation is expected to be slow. Aquatic: Will adsorb very strongly to sediment and will bioconcentrate in aquatic organisms. Atmospheric: Will not be expected to directly photolyze. The estimated vapor phase half-life in the atmosphere is 1.71 days. Expected to biodegrade very slowly with a high bioconcentration potential.

**Physical:** No information available.

**Other:** For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

## 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# 72-54-8: waste number U060.

## Section 14 - Transport Information

	<b>US DOT</b>	<b>Canada TDG</b>
<b>Shipping Name:</b>	DOT regulated - small quantity provisions apply (see 49CFR173.4)	TOXIC SOLID ORGANIC NOS (CHLOROPHENYL-DICHLOROETHANE)
<b>Hazard Class:</b>		6.1
<b>UN Number:</b>		UN2811
<b>Packing Group:</b>		III

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 72-54-8 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

CAS# 72-54-8: 1 lb final RQ; 0.454 kg final 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:

CAS# 72-54-8 is listed as a Hazardous Substance under the CWA. CAS# 72-54-8 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# 72-54-8 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, 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 DDD, a chemical known to the state of California to cause cancer.

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

#### **Risk Phrases:**

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

#### **Safety Phrases:**

S 23 Do not inhale gas/fumes/vapour/spray.

S 24/25 Avoid contact with skin and eyes.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 28A After contact with skin, wash immediately with plenty of water

## **WGK (Water Danger/Protection)**

CAS# 72-54-8: 3

### **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 D1B, D2A, 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# 72-54-8 is not listed on the Canadian Ingredient Disclosure List.

## **Section 16 - Additional Information**

**MSDS Creation Date:** 9/02/1997

**Revision #6 Date:** 10/03/2005

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