



MATERIAL SAFETY DATA SHEET

1,4-Dichlorobenzene, 97%

01149

****** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ******

MSDS Name: 1,4-Dichlorobenzene, 97%

p-DCB, 1,4-Dichlorobenzene, Dichlorocide, Paracide,
Paradichlorobenzol, p-Chlorophenyl chloride.

Company Identification: Acros Organics N.V.
One Reagent Lane
Fairlawn, 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	%	EINECS#
106-46-7	P-DICHLOROBENZENE	>99%	203-400-5

Hazard Symbols: XN

Risk Phrases: 22 36/38

****** SECTION 3 - HAZARDS IDENTIFICATION ********EMERGENCY OVERVIEW**

Appearance: Not available. Flash Point: 67 deg C.

Warning! Cancer suspect agent. May cause eye and skin irritation.

May cause respiratory and digestive tract irritation. May cause
liver and kidney damage. May cause cancer in humans. May cause blood
abnormalities.

Target Organs: Blood, kidneys, liver.

Potential Health Effects**Eye:**

Exposure to solid may cause pain and redness. Exposure to high
vapor concentrations may cause irritation.

Skin:

May cause skin irritation.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and
diarrhea. May cause liver and kidney damage.

Inhalation:

May cause respiratory tract irritation. May cause liver and kidney

damage.

Chronic:

Overexposure may cause delayed kidney injury. Possible cancer hazard based on tests with laboratory animals. Chronic ingestion may cause liver damage. May cause anemia and other blood cell abnormalities.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

Skin:

Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Treat symptomatically and supportively.

Antidote:

No specific antidote exists.

**** 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. Dusts at sufficient concentrations can form explosive mixtures with air. Use water spray to keep fire-exposed containers cool.

Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

Autoignition Temperature: 640 deg C (1,184.00 deg F)

Flash Point: 67 deg C (152.60 deg F)

NFPA Rating: health-2; flammability-2; reactivity-0

Explosion Limits, Lower: 2.20 vol %

Upper: 12.00 vol %

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

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

Spills/Leaks:

Wear a self contained breathing apparatus and appropriate Personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Carefully scoop up and place into appropriate disposal container.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not get on skin or in eyes. Do not ingest or inhale. Do not pressurize, cut, weld, braze,

solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

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
P-DICHLOROBENZENE	10 ppm ; 60 mg/m3	NIOSH Potential Occupational Carcinogen - see Appendix A Potential NIOSH carcinogen.	75 ppm TWA; 450 mg/m3 TWA

OSHA Vacated PELs:

P-DICHLOROBENZENE:

75 ppm TWA; 450 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 impervious gloves.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Solid
 Appearance: Not available.
 Odor: Distinctive mothball-like.
 pH: Not available.
 Vapor Pressure: 1.18 mm Hg @25C
 Vapor Density: 5.07 (air=1)
 Evaporation Rate: Negligible.
 Viscosity: Not available.
 Boiling Point: 174 deg C @ 760.00mm Hg
 Freezing/Melting Point: 53.0 - 56.0 deg C
 Decomposition Temperature: Not available.
 Solubility: insoluble
 Specific Gravity/Density: 1.2410g/cm3
 Molecular Formula: C6H4Cl2
 Molecular Weight: 147.00

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:

High temperatures, incompatible materials, ignition sources.

Incompatibilities with Other Materials:

Aluminum, oxidizing agents.

Hazardous Decomposition Products:

Hydrogen chloride, chlorine, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:

CAS# 106-46-7: CZ4550000

LD50/LC50:

CAS# 106-46-7: Oral, mouse: LD50 = 2950 mg/kg; Oral, rabbit: LD50 = 2830 mg/kg; Oral, rat: LD50 = 500 mg/kg; Skin, rabbit: LD50 = >2 gm/kg; Skin, rat: LD50 = >6 gm/kg.

Carcinogenicity:

P-DICHLOROBENZENE -

ACGIH: A3-animal carcinogen

California: carcinogen - initial date 1/1/89

NIOSH: occupational carcinogen

NTP: Suspect carcinogen

OSHA: Possible Select carcinogen

IARC: Group 2B carcinogen

Epidemiology:

No information available.

Teratogenicity:

No information available.

Reproductive Effects:

No information available.

Neurotoxicity:

No information available.

Mutagenicity:

No information available.

Other Studies:

None.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:

Fish (fresh water) 50ppm lethal (no time interval specified) Rainbow trout (fresh water) TLm= 880mg/48H

Environmental Fate:

Substance can be adsorbed in soil, and leaching is possible.

Substance is volatile from water, but has potential for sediment adsorption.

Physical/Chemical:

Substance (in soil and water) has low probability for chemical transformation by hydrolysis, oxidation, or direct photolysis.

Other:

Please refer to the Handbook of Environmental Fate and Exposure Data (Vol I) for additional information.

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA D-Series Maximum Concentration of Contaminants:

CAS# 106-46-7: waste number D027; regulatory level = 7.5 mg/L.

RCRA D-Series Chronic Toxicity Reference Levels: CAS# 106-46-7: chronic toxicity reference level = 0.075 mg/L.

RCRA F-Series: None listed.

RCRA P-Series: None listed.

RCRA U-Series: CAS# 106-46-7: waste number U072.

CAS# 106-46-7 is banned from land disposal according to RCRA.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT

Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.
(1,4-DICHLOROBENZENE)

Hazard Class: 6.1

UN Number: UN2811

Packing Group: III

IMO

No information available.

IATA

Not regulated as a hazardous material.

RID/ADR

Not regulated as a hazardous material.

Canadian TDG

No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL

TSCA

CAS# 106-46-7 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

CAS# 106-46-7: Testing required by manufacturers; processors (40 CFR 7 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.

SARA

Section 302 (RQ)

CAS# 106-46-7: final RQ = 100 pounds (45.4 kg)

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 106-46-7: acute, chronic, flammable.

Section 313

This material contains P-DICHLOROBENZENE (CAS# 106-46-7, 99%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 106-46-7 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 106-46-7 is listed as a Hazardous Substance under the CWA.

CAS# 106-46-7 is listed as a Priority Pollutant under the Clean Water Act.

CAS# 106-46-7 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

P-DICHLOROBENZENE can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

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

WARNING: This product contains P-DICHLOROBENZENE, a chemical known to the state of California to cause cancer.

California No Significant Risk Level:

CAS# 106-46-7: no significant risk level = 20 ug/day

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 22 Harmful if swallowed.

R 36/38 Irritating to eyes and skin.

Safety Phrases:

S 2 Keep out of reach of children.

S 22 Do not inhale dust.

S 24/25 Avoid contact with skin and eyes.

S 46 If swallowed, seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

CAS# 106-46-7: 2

Canada

CAS# 106-46-7 is listed on Canada's DSL/NDSL List.

WHMIS: Not available.

CAS# 106-46-7 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 106-46-7: OEL-AUSTRALIA:TWA 75 ppm (450 mg/m³);STEL 110 ppm (675 mg/m³). OEL-BELGIUM:TWA 75 ppm (451 mg/m³);STEL 110 ppm (661 mg/m³)

);STEL 115 ppm (690 mg/m³);Skin. OEL-FRANCE:TWA 75 ppm (450 mg/m³);STEL 110 ppm (675 mg/m³). OEL-GERMANY:TWA 75 ppm (450 mg/m³). OEL-JAPAN:TWA 50 ppm (300 mg/m³). OEL-THE NETHERLANDS:TWA 75 ppm (450 mg/m³). OEL-THE PHILIPPINES:TWA 75 ppm (450 mg/m³). OEL-POLAND:TWA 20 mg/m³. OEL-RUSSIA:TWA 50 ppm. OEL-SWEDEN:TWA 75 ppm (450 mg/m³);STEL 110 ppm (700 mg/m³). OEL-SWITZERLAND:TWA 75 ppm (450 mg/m³);STEL 150 ppm (900 mg/m³). OEL-TURKEY:TWA 75 ppm (450 mg/m³). OEL-UNITED KINGDOM:TWA 75 ppm (450 mg/m³);STEL 11 ppm. OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV. OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 2/07/1996 Revision #1 Date: 9/17/1997

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 way 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.

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