

Material Safety Data Sheet

Pentachlorophenol

ACC# 63018

Section 1 - Chemical Product and Company Identification

MSDS Name: Pentachlorophenol**Catalog Numbers:** AC161120000, AC161120010**Synonyms:** PCP; 1-Hydroxypentachlorobenzene; 2,3,4,5,6-Pentachlorophenol.**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
87-86-5	Pentachlorophenol	>86	201-778-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: dark colored solid.

Danger! May be fatal if inhaled, absorbed through the skin or swallowed. Possible risks of irreversible effects. Causes eye, skin, and respiratory tract irritation. May cause blood abnormalities. May cause cancer based on animal studies. May cause lung damage. May cause liver and kidney damage. May cause cardiac disturbances. Dangerous for the environment. May cause fetal effects.

Target Organs: Kidneys, liver, lungs, immune system, nervous system, circulatory system.

Potential Health Effects

Eye: Causes eye irritation and possible burns. May cause visual damage, inflammation of the conjunctiva, corneal opacity and slight physiologic dilatation of the pupil.

Skin: May be fatal if absorbed through the skin. Substance is rapidly absorbed through the skin. Causes symptoms similar to those of inhalation. Causes skin irritation and possible burns.

Ingestion: May be fatal if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause effects similar to those of acute inhalation.

Inhalation: May be fatal if inhaled. May cause increased perspiration, increased temperature, increased heart rate, increased breathing, weakness, nausea, vomiting, abdominal pain, headache, Systemic intoxication is cumulative and has been fatal. May cause violent sneezing and coughing. Inhalation may cause damage to the circulatory system and heart and possible death due to cardiac failure. Causes irritation of the mucous membrane and upper respiratory tract.

Chronic: Possible cancer hazard based on tests with laboratory animals. May cause liver and kidney damage. Animal studies have reported that fetal effects/abnormalities may occur when maternal toxicity is seen. Chronic exposure has resulted in an increased prevalence of conjunctivitis, sinusitis, bronchitis, polyneuritis, and dermatitis. Exposure may cause blood effects and bone marrow damage. Chronic exposure may cause lung damage. Laboratory experiments have resulted in mutagenic effects.

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. Wash clothing before reuse.

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 breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively. Persons with pre-existing skin disorders or impaired respiratory or pulmonary function may be at increased risk to the effects of this substance. Effects may be delayed.

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. Water runoff can cause environmental damage. Dike and collect water used to fight fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use extinguishing media most appropriate for the surrounding fire. 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: 3; Flammability: 1; 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. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use only in a chemical fume hood.

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 only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Pentachlorophenol	0.5 mg/m ³ TWA; Skin - potential significant contribution to overall exposure by the cutaneous route	0.5 mg/m ³ TWA 2.5 mg/m ³ IDLH	0.5 mg/m ³ TWA

OSHA Vacated PELs: Pentachlorophenol: 0.5 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: 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: Solid

Appearance: dark colored

Odor: Benzene like

pH: Not available.

Vapor Pressure: 40 mm Hg @ 211.2 C

Vapor Density: 9.2

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 310 deg C @ 760 mmHg

Freezing/Melting Point: 190-191 C

Decomposition Temperature: 310 deg C

Solubility: slightly soluble

Specific Gravity/Density: 1.9790g/cm³

Molecular Formula: C₆HCl₅O

Molecular Weight:266.33

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, acid anhydrides, alkalis, acid chlorides, organic materials.

Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, carbon monoxide, carbon dioxide, chlorinated phenols.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 87-86-5: SM6300000; SM6314000; SM6321000

LD50/LC50:

CAS# 87-86-5:

Draize test, rabbit, eye: 100 uL/24H Mild;

Inhalation, mouse: LC50 = 225 mg/m³;

Inhalation, mouse: LC50 = 225 mg/m³;

Inhalation, rat: LC50 = 355 mg/m³;

Inhalation, rat: LC50 = 200 mg/m³;

Inhalation, rat: LC50 = 335 mg/m³;

Oral, mouse: LD50 = 36 mg/kg;

Oral, mouse: LD50 = 117 mg/kg;

Oral, mouse: LD50 = 30 mg/kg;

Oral, rabbit: LD50 = 200 mg/kg;

Oral, rat: LD50 = 27 mg/kg;

Oral, rat: LD50 = 27 mg/kg;

Oral, rat: LD50 = 50 mg/kg;

Skin, rat: LD50 = 96

Carcinogenicity:

CAS# 87-86-5:

- **ACGIH:** A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **California:** carcinogen, initial date 1/1/90
- **NTP:** Not listed.
- **IARC:** Group 2B carcinogen

Epidemiology: No data available.

Teratogenicity: Oral, rat: TDLo = 60 mg/kg (female 9 day(s) after conception) Effects on Embryo or Fetus - fetotoxicity (except death, e.g., stunted fetus).; Oral, rat: TDLo = 50 mg/kg (female 6-15 day(s) after conception) Specific Developmental Abnormalities - musculoskeletal system.; Oral, rat: TDLo = 4 gm/kg (female 77 day(s) pre-mating - 28 day(s) post-birth) Effects on Newborn - weaning or lactation index (e.g., # alive at weaning per # alive at day 4) and Effects on Newborn - growth statistics (e.g.%, reduced weight gain).; Subcutaneous, mouse: TDLo = 450 mg/kg (female 6-14 day(s) after conception) E

Reproductive Effects: No information found

Mutagenicity: Morphological Transformation: Hamster, Embryo = 100 mg/L.; Cytogenetic Analysis: Hamster, Ovary = 80 mg/L.; Sister Chromatid Exchange: Hamster, Ovary = 3 mg/L.

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Rainbow trout: LC50 = 0.052 mg/L; 96 Hr; Static bioassay at 11C (pH 7.2-7.5) Fish: Fathead Minnow: LC50 = 0.205 mg/L; 96 Hr; Static bioassay at 20C (pH 7.2-7.5) Fish: Bluegill/Sunfish: LC50 = 0.032 mg/L; 96 Hr; Static bioassay at 15C (pH 7.2-7.5) Bacteria: Phytobacterium phosphoreum: EC50 = 0.519 mg/L; 30 min; Microtox test Algae: Green algae: EC50 = 0.09 mg/L; 96 Hr; Unspecified In soil, pentachlorophenol will slowly biodegrade and leaching into ground water is expected. When released into water it adsorbs considerably to sediment, photodegrades (especially at higher pHs) and slowly biodegrades. Pentachlorophenol is expected to moderately bioconcentrate in fish.

Environmental: POPs, World Wildlife Fund proposes adding to Stockholm Convention list of banned substances.

Physical: No information available.

Other: Harmful to aquatic life in very low concentrations.

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:	PENTACHLOROPHENOL	PENTACHLOROPHENOL
Hazard Class:	6.1	6.1
UN Number:	UN3155	UN3155
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 87-86-5 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# 87-86-5: 10 lb final RQ; 4.54 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

This material contains Pentachlorophenol (CAS# 87-86-5, >86%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR

Clean Air Act:

CAS# 87-86-5 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:

CAS# 87-86-5 is listed as a Hazardous Substance under the CWA. CAS# 87-86-5 is listed as a Priority Pollutant under the Clean Water Act. CAS# 87-86-5 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# 87-86-5 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 Pentachlorophenol, a chemical known to the state of California to cause cancer.

California No Significant Risk Level: CAS# 87-86-5: 40 µg/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T N

Risk Phrases:

R 26 Very toxic by inhalation.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 40 Limited evidence of a carcinogenic effect.

R 24/25 Toxic in contact with skin and if swallowed.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 22 Do not breathe dust.

S 36/37 Wear suitable protective clothing and gloves.

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

S 52 Not recommended for interior use on large surface areas.

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# 87-86-5: 3

Canada - DSL/NDSL

CAS# 87-86-5 is listed on Canada's DSL 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

CAS# 87-86-5 is not listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information
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MSDS Creation Date: 5/12/1999

Revision #6 Date: 11/20/2008

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.