

1. Identification

Product Identifier: Pentachlorophenol (Penta) Treated Wood

CHEMTREC #: 800-424-9300
EMERGENCY #: 800-537-1765
DATE PREPARED: August 11, 1994

2. Hazardous Ingredients/Identity

Hazardous Component(s)	OSHA PEL	ACGIH TLV	% Approx.	CAS #
Chemical & Common Name(s)				
Pentachlorophenol, Technical	0.5 mg/M ³	0.5 mg/M ³	1	87-86-5
Petroleum Solvents	---		15	N/A
Natural Wood Fiber, Dust	---	5 mg/M ³	84	N/A

3. Physical & Chemical Characteristics

Boiling Point: N/A **Specific Gravity (H₂O=1):** 0.9 **Vapor Pressure: (mm Hg):** N/A

Vapor Density (Air=1): N/A

Solubility In Water: Wood Fiber – Insoluble, Pentachlorophenol – 14 ppm @ 20°C

Reactivity In Water: NIL

Appearance And Odor: Tan to dark brown color. Petroleum odor.

Melting Point: N/A

4. Fire & Explosion Data

Flash Point: N/A **Method Used:** N/A **Flammable Limits in Air % by Volume** **LEL Lower:** N/A **UEL Upper:** N/A

Auto Ignition Temperature: N/A

Extinguisher Media: Water

Special Fire Fighting Procedures: Toxic gas and ash are generated on combustion. Firefighters should use self contained breathing apparatus and avoid contact.

Unusual Fire And Explosion Hazards: Generates Hydrochloric Acid on combustion.

5. Physical Hazards (Reactivity Data)

Stability:	Stable.
Conditions To Avoid:	Incompatible with extreme heat and open flames.
Incompatibility (Materials To Avoid):	Hydrogen chloride, Chlorine, Chlorinated Hydrocarbons.
Hazardous Decomposition Products:	Hydrogen chloride gas.
Hazardous Polymerization:	Will not occur.

6. Health Hazards

ACUTE TOXICITY:

- Inhalation:** Concentrations of 0.3mg/M³ pentachlorophenol can cause nose irritation. Concentrations in excess of 1 mg/M³ can cause upper respiratory irritation with sneezing and coughing. Wood dust can cause irritation of the nose and throat.
- Skin:** Pentachlorophenol is readily absorbed through the skin, causing irritation. Wood dust can also cause dermatitis.
- Eyes:** Pentachlorophenol can cause irritation of the eyes @ 1 mg/M³. Prolonged exposure can cause reversible corneal damage. Wood dust can also cause irritation of the eyes.
- Ingestion:** Symptoms of the unlikely ingestion of pentachlorophenol treated wood include rapid heart rate and respiration, elevated temperature and blood pressure, muscular weakness, excessive sweating, dizziness, and/or nausea.

CHRONIC TOXICITY:

- Wood Dust:** Epidemiologic studies of the furniture industry have shown an increased incidence of nasal tumors related to wood dust exposure. These same increases are not noted in the building industry. Prolonged overexposure to wood dust has been associated with dryness of nose, eye irritation, nasal obstruction, prolonged colds, and frequent headaches.
- Pentachlorophenol:** Pentachlorophenol has been found to have toxic effects in laboratory animals. This finding may also indicate human toxicity. Exposure to treated wood should be kept to a minimum. Overexposure to pentachlorophenol could result in injury, illness, or even possibly death. Overexposure to pentachlorophenol has caused liver and kidney toxicity in laboratory animals.

CARCINOGENICITY:

Pentachlorophenol has been evaluated for possible cancer causation in laboratory animals. Male and female mice evaluated by the National Toxicology Program were fed up to 400 ppM Technical penta, and up to 600 ppM purified penta 5 days a week for 106 weeks. A statistically significant increase in liver and endocrine tumors occurred in the male mice, while an increase in vascular tumors occurred in the female mice. The female mice also had an increase in liver tumors when fed the highest dose of purified penta. Rats ingesting 30 mg/kg/day for 2 years, along with 2 strains of mice ingesting 46.4 mg/kg/day for 2 years, did not show any increased incidence of tumor. Pentachlorophenol, 2,3,4,6- Tetrachlorophenol, and Hydroxypolychlorodibenzo ethers are not listed on the IARC, NTP, or OSHA carcinogen lists.



PENTACHLOROPHENOL TREATED WOOD

NOTE: *Pentachlorophenol contains trace amounts of Hexa, Hepta, and Octachlorodibenzo-p-dioxins, Hexa, Hepta, and Octachlorodibenzofurans, and Hexachlorobenzene. The State of California has listed Hexachlorodibenzo-p-dioxin and Hexachlorobenzene as chemicals known to the State to cause cancer.*

REPRODUCTIVE TOXICITY:

The U.S. EPA has determined that pentachlorophenol can cause defects in the offspring of laboratory animals. Exposure to pentachlorophenol during pregnancy should be avoided. Reproductive toxicity tests have been conducted to evaluate the potential adverse effects of pentachlorophenol on the reproduction of laboratory animals. Pentachlorophenol has been found to be embryo and fetotoxic to rats, but not to hamsters. Pentachlorophenol did not cause teratogenic effects (birth defects), but did cause delays in normal fetal development.

ROUTES of ENTRY

1. INHALATION: Poor hygiene while smoking, inhalation of sawdust
2. EYES: Flying sawdust, transfer from hands to eyes
3. SKIN: Absorbed readily through unprotected skin
4. INGESTION: Eating or drinking without proper hygiene

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Kidney or liver disease, bronchitis, asthma, rashes, acne, some venereal diseases.

LISTED KNOWN OR POTENTIAL CARCINOGEN:

Hexachlorodibenzo-p-dioxin, Pentachlorophenol.

NATIONAL TOXICOLOGY PROGRAM:

N.E.

OSHA:

N.E.

I.A.R.C. MONOGRAPHS: N.E.

EMERGENCY AND FIRST AID PROCEDURES:

Eye Contact: Flush with water and seek medical attention immediately.

Skin Contact: Wash affected areas with soap and water. Change contaminated clothes.

Inhalation: Move victim to fresh air. Administer rescue breathing if necessary.

Ingestion: Call a physician or poison control center. Vomiting should be induced by a physician if possible; if not give victim one or two glasses of water and induce vomiting by touching back of throat.

NOTE TO PHYSICIAN:

Pentachlorophenol is a metabolic stimulant. Treatment is supportive. Forced diuresis may be effective to reduce total body burden. Treat hyperthermia with physical measures. Do not administer aspirin, phenothiazines, or atropine since they may enhance toxicity.



PENTACHLOROPHENOL TREATED WOOD

7. Handling Precautions

Dispose of treated wood by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators, or boilers rated at 20 million BTU/hour or greater heat input or its equivalent in accordance with State and Federal regulations. Avoid frequent or prolonged inhalation of sawdust from treated wood. When sawing and machining treated wood, wear a dust mask. Whenever possible, these operations should be performed outdoors to avoid indoor accumulations of airborne sawdust from treated wood. Avoid frequent or prolonged skin contact with pentachlorophenol-treated wood; when handling the treated wood, wear long-sleeved shirts and long pants, and use gloves impervious to the chemicals (for example, gloves that are vinyl coated). When power sawing and machining, wear goggles to protect from flying particles. After working with wood, and before eating, drinking and use of tobacco products, wash exposed areas thoroughly. If oily preservatives or sawdust accumulate on clothes, launder before reuse. Wash work clothes separately from other household clothing. Urethane, shellac, latex epoxy enamel and varnish are acceptable sealers for pentachlorophenol-treated wood.

8. Use Site Precautions

Logs treated with pentachlorophenol should not be used for log homes. Wood treated with pentachlorophenol should not be used where it will be in frequent or prolonged contact with bare skin (for example, chairs and other outdoor furniture), unless an effective sealer has been applied. Pentachlorophenol-treated wood should not be used in residential, industrial, or commercial interiors, except for laminated beams or for building components which are in ground contact and are subject to decay or insect infestation and where two coats of an appropriate sealer are applied. Sealers may be applied at the installation site. Wood treated with pentachlorophenol should not be used in the interior of farm buildings where there may be direct contact with domestic animals or livestock which may crib (bite) or lick the wood. Pentachlorophenol-treated wood may be used for building components which are in ground contact and are subject to decay or insect infestation and where two coats of an appropriate sealer are applied. Sealers may be applied at the installation site. Do not use pentachlorophenol-treated wood for farrowing or brooding facilities. Do not use treated wood under circumstances where the preservative may become a component of food or animal feed. Examples of such sites would be structures of containers for storing silage or food. Do not use treated wood for cutting-boards or countertops. Only treated wood that is visibly clean and free of surface residue should be used for patios, decks and walkways. Do not use treated wood for construction of those portion of beehives which may come into contact with the honey. Pentachlorophenol-treated wood should not be used where it may come into direct or indirect contact with public drinking water, except for uses involving incidental contact such as docks and bridges. Do not use pentachlorophenol-treated wood where it may come into direct or indirect contact with drinking water for domestic animals or livestock, except for uses involving incidental contact such as docks and bridges.

**** SOME DATA HAS SHOWN PENTACHLOROPHENOL TO CAUSE ANOMALIES IN CERTAIN SPECIES. PREGNANT WOMEN SHOULD AVOID CONTACT AT ALL TIMES.** This material safety data sheet is provided for customer's information only.

NOTICE: While the information and recommendations set forth herein are believed to be accurate as of the date hereof this company makes no guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of this information.