

# MATERIAL SAFETY DATA SHEET

## PENTACHLOROPHENOL TREATED WOOD

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL NAME: Wood Treated With Pentachlorophenol

PRODUCT NAME: N/A

SYNONYMS: Penta Treated Wood, Pressure Treated Wood

MANUFACTURER: Pensacola Wood Treating Co., Inc.  
1813 East Gadsden Street  
Pensacola, FL 32501  
850-433-1300

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### 1. COMPOSITION INFORMATION ON INGREDIENTS

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>%RANGE</u>	<u>OSHA PEL</u>
*Pentachlorophenol Technical Grade	87-86-5	≤1%	.5 mg/m <sup>3</sup>
*Petroleum Solvents	-	≤15%	
Natural Wood Fiber	-	≥84%	-

\*In this example, the concentrations of these components are based on the typical analyses expected from pressure treatment of southern pine in accordance with American Wood Protection Association Standard U1.

Trace impurities and additional material names not listed above may also appear in Section 15. These materials may be listed for local "Right-to-Know" compliance and for other reasons.

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### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Handling may cause splinters. Preservative treatment may cause eye and skin irritation. Observe good hygiene and safety practices when handling this product. Wood dust is classified as a human carcinogen by the International Agency for Research on Cancer (IARC). Do not use this product until the MSDS has been read and understood.

#### POTENTIAL HEALTH EFFECTS

**INHALATION:** Concentrations of 0.3 mg/m<sup>3</sup> technical grade pentachlorophenol can cause nose irritation. Concentrations above 1 mg/m<sup>3</sup> can cause irritation of upper respiratory tract with sneezing and coughing. Finely divided wood dust, treated or untreated, may cause nose, throat, or lung irritation and other respiratory effects. Preservative vapors may cause respiratory tract irritation. If exposed in a closed space, preservative vapors may product headache, drowsiness, and possible weakness and incoordination.

**SKIN:** Technical grade pentachlorophenol is readily absorbed through the skin. Pressure treated wood can cause irritation of the skin. Wood dust can cause dermatitis.

**Chloracne:** In humans, the absorption of technical grade pentachlorophenol by any route may result in the development of the skin condition, chloracne. This usually appears as blackheads, whiteheads and yellow cysts over the temples and around the ears. In severe cases, involvement may be extensive. Mild cases may be similar in appearance to other forms of acne and to skin changes commonly seen with aging.

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**EYES:** Technical grade pentachlorophenol causes irritation of the eyes at 1 mg/m<sup>3</sup>. If exposure is prolonged, slight transient corneal damage can occur. **DO NOT RUB EYES.** Get medical attention if irritation persists.

**INGESTION:** Ingestion of pressure treated wood or sawdust is unlikely. Wipe material from mouth and lips. If symptoms appear, seek medical aid. Symptoms of ingestion of technical grade pentachlorophenol can include rapid heartbeat and respiration, elevated temperature and blood pressure, muscular weakness, excessive sweating, dizziness and nausea.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

No medical conditions are expected to be aggravated from normal exposures to penta treated wood. Exposure to technical grade penta may cause acute or chronic kidney or liver disease, asthma, bronchitis, chronic acne or other skin conditions.

**CHRONIC EFFECTS:**

**PENTACHLOROPHENOL PRESERVATIVE:**

Pentachlorophenol is listed on the IARC carcinogen list but not by NTP or OSHA.

**UNTREATED WOOD DUST OR SAWDUST:**

Wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation. IARC classifies wood dust as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust. Wood dust will most likely occur during the cutting of the treated wood and should not be expected during normal handling.

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## 4. FIRST AID MEASURES

### FOR ACUTE EXPOSURE TO WOOD DUST

**INHALATION:** Remove from exposure. If persistent irritation, severe coughing, or breathing difficulties occur, get medical advice before returning to work where wood dust is present.

**SKIN:** If a rash or persistent irritation or dermatitis occur, get medical advice where applicable before returning to work where wood dust is present.

**EYES:** Gently flush any particles from the eye with large amounts of clean, cool water for at least 15 minutes. **DO NOT RUB EYES.** Get medical attention if irritation persists.

**INGESTION:** Wipe material from mouth and lips. If symptoms appear, seek medical aid.

**ADVICE TO PHYSICIAN:**

There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition. (See Section 3 for Health Hazards and Effects.)

### FOR ACUTE EXPOSURE TO TECHNICAL GRADE PENTACHLOROPHENOL

**INHALATION:** Move victim to fresh air. If breathing has stopped, administer artificial respiration. Call a physician.

**SKIN:** Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water for at least 15 minutes. Wash contaminated clothing before reuse.

**EYES:** Flush eyes immediately with water for at least 15 minutes. Contact a physician.

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INGESTION: Call a physician or Poison Control Center immediately. If possible, vomiting should be induced under medical supervision. Drink one or two glasses of water and induce vomiting by touching the back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

ADVICE TO PHYSICIAN:

Technical grade 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, phenothiazine, or atropine since they may enhance toxicity.

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### 5. FIRE FIGHTING MEASURES

FLASH POINT ..... Not Applicable  
AUTOIGNITION TEMPERATURE..... Wood Dust: 400 - 500°F (Typical)  
FLAMMABLE LIMITS IN AIR (% BY VOLUME) ..... Wood Dust: 40 g/m<sup>3</sup> (LEL)

EXTINGUISHING MEDIA: Water

UNUSUAL FIRE AND EXPLOSION HAZARD:

Wood dust is a strong to severe explosion hazard if a dust "cloud" contacts an ignition source.

FIRE FIGHTING INSTRUCTIONS:

Use water to wet down wood dust to reduce the likelihood of ignition or dispersion of dust into the air. Toxic gases and ash are formed by fire or thermal decomposition. Firefighters should wear self-contained breathing apparatus, and avoid skin contact.

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### 6. ACCIDENTAL RELEASE MEASURES

Pressure treated wood is unlikely to be involved in release or spill as intended by this section. If pressure treated wood is spilled, recover and reuse.

Sweep or vacuum spills of wood dust for recovery or disposal; avoid creating dust conditions. Provide good ventilation where dust conditions may occur. Place recovered wood dust in a container for proper disposal.

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### 7. HANDLING AND STORAGE

HANDLING: Avoid contact with skin and breathing dust. Do not eat, drink, or smoke in work area. Wash hands prior to eating, drinking or using restroom. Change into uncontaminated clothing before leaving work premises. Thoroughly wash potentially contaminated clothing before reuse. Do not launder clothes with other non-contaminated clothing and/or household laundry. Follow protective controls set forth in Section 8 when handling this product.

See additional handling and use site precautions in the *Consumer Information Sheet* (Section 16).

STORAGE: Store treated wood in open, well ventilated area.

Label treated wood with warning label and *Consumer Information Sheet*. Thoroughly read and follow the use site precautions which are specified by the *Consumer Information Sheet*.

### 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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### ENGINEERING CONTROLS

Avoid breathing vapors or sawdust, ventilate work area, wear respirator, goggles, or face shield. Ventilation necessary only if material handling generates dust. Provide sufficient general/local exhaust ventilation in pattern/volume to control inhalation exposures below current exposure limits and areas below explosive dust concentrations

### PERSONAL PROTECTIVE EQUIPMENT

#### EYE AND FACE PROTECTION:

Wear safety glasses and/or goggles or face shield when sawing, sanding, drilling or performing other work on treated lumber which may cause release of wood dust or chips.

#### SKIN PROTECTION:

Avoid frequent or prolonged skin contact with pentachlorophenol treated wood. When handling the treated wood, wear PVC, neoprene or nitrile gloves and tightly woven clothing including long sleeve shirt and pants.

#### RESPIRATORY PROTECTION:

Where concentrations exceed or are likely to exceed the recommended exposure levels, an approved respirator must be worn. When sanding, sawing, drilling or performing other work on treated wood which may cause the release of wood dust, an approved respirator is recommended.

**GENERAL:** Protective equipment and clothing should be selected, used, and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer.

### EXPOSURE GUIDELINES

Technical Grade Pentachlorophenol:	ACGIH		0.5 mg/m <sup>3</sup>
	OSHA		0.5 mg/m <sup>3</sup>
Wood Dust:	(ACGIH)	Hardwood	1 mg/m <sup>3</sup>
		Softwood	5 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>
	(OSHA)	Total Dust	15 mg/m <sup>3</sup>
		Respirable Fraction	5 mg/m <sup>3</sup>

Hard woods include beech, oak, mahogany, maple, walnut and others. Soft woods include fir and pine. If wood dust is maintained below acceptable levels, pentachlorophenol levels will not approach the 0.5 mg/m<sup>3</sup> limit.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

CHEMICAL FORMULA	Not Applicable	
MOLECULAR WEIGHT	Not Applicable	
APPEARANCE AND ODOR	Tan to dark brown solid with petroleum odor	
SPECIFIC GRAVITY	Variable (dependant on wood species and moisture content)	
VAPOR PRESSURE	Not Applicable	
BOILING POINT	Not Applicable	
DECOMPOSITION TEMPERATURE	Not Applicable	
VAPOR DENSITY	Not Applicable	
SOLUBILITY IN WATER	Wood: Insoluble	Penta: 14 ppm @ 20°C
VOLATILES, PERCENT BY VOLUME	Not Applicable	

## 10. STABILITY AND REACTIVITY

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CHEMICAL STABILITY: Stable

CONDITIONS TO AVOID: Do not contact wood with extreme heat or open flame and do not burn. Product will ignite at temperatures above 400°F.

INCOMPATIBILITY WITH OTHER MATERIALS: Wood Dust: Avoid contact with oxidizing agents and drying oils.

HAZARDOUS DECOMPOSITION PRODUCTS:

Toxic gas and ash generated on combustion includes the following: Hydrogen chloride, chlorine, chlorinated hydrocarbons, carbon monoxide, aldehydes, organic acids, plus normal hazard of wood smoke.

HAZARDOUS POLYMERIZATION: Will not occur

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## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY

ANIMAL TOXICOLOGY:

When absorbed in sufficient quantity into the tissues of dogs, rabbits, rats and guinea pigs, pentachlorophenol produces an acute toxic state characterized by accelerated respiration, moderately elevated blood pressure, hyperpyrexia (elevated fever), and hyperperistalsis (excessive vomiting).

### CHRONIC TOXICITY

WOOD DUST:

In epidemiologic studies of the furniture industry an increased incidence of nasal tumors has been identified related to wood dust exposure. These same increases are not noted in the building industry, including carpenters.

Prolonged overexposure to wood dust has been associated with dryness of nose, eye irritation, nasal obstruction, prolonged colds and frequent headaches. Depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation.

CARCINOGENICITY: IARC classifies wood dust as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust.

PENTACHLOROPHENOL:

Technical grade 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: Technical grade pentachlorophenol (penta) has been evaluated for possible cancer causing effects in laboratory animals. An increase in vascular tumors were observed in female mice. The International Agency for Research on Cancer (IARC) has concluded that, with respect to pentachlorophenol, there is sufficient evidence of carcinogenicity to experimental animals, and inadequate evidence of carcinogenicity to humans, resulting in a classification as a 2B animal carcinogen.

Pentachlorophenol is listed on the IARC carcinogen list but not by NTP or OSHA. For additional information, consult MSDS for pentachlorophenol.

REPRODUCTIVE TOXICITY: Reproductive toxicity tests have been conducted to evaluate the potential adverse effects technical grade and purified pentachlorophenol may have on reproduction and offspring of laboratory

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animals. Both technical and purified pentachlorophenol have been found to be embryo and fetotoxic to rats, but not to hamsters. Neither technical grade nor purified pentachlorophenol caused teratogenic effects (birth defects), but did cause delays in normal fetal development. The EPA has expressed the opinion that pentachlorophenol can produce defects in the offspring of laboratory animals. Exposure to pentachlorophenol during pregnancy should be avoided.

NOTE: This product may contain trace quantities of hexa, hepta and octachlorodibenzo-p-dioxins, hexa, hepta and octachlorodibenzofurans and hexachlorobenzene. The State of California has listed pentachlorophenol, hexachlorodibenzo dioxin and hexachlorobenzene under Proposition 65 as chemicals known to the State to cause cancer and hexachlorobenzene as a chemical known to the State to cause birth defects or other reproductive harm.

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### 12. ECOLOGICAL INFORMATION

Treated wood is unlikely to be released in a manner to cause environmental impact as intended by this section. However, small quantities of penta potentially could be released from penta treated wood while in service.

If released to the soil, penta adsorbs to the organic portion of the soil and does not readily disperse. Penta in soil has been found to biodegrade with a half-life ranging from days to a few weeks. If released in water, penta will adsorb to sediment, photodegrade and biodegrade. Penta released to clear water undergoes photolysis with a reported half-life of 0.86 hours.

Penta-treated wood does not represent a significant threat to aquatic environments due to penta's non-persistence at low concentrations, rapid photodegradation in clear water, biodegradation in clouded water, and low bioaccumulation in aquatic organisms.

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### 13. DISPOSAL CONSIDERATIONS

#### SPILL RESIDUES:

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.

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### 14. TRANSPORT INFORMATION

Pentachlorophenol Treated Wood is not regulated as a DOT hazardous material.

DOT SHIPPING DESCRIPTION (49 CFR 172.101): Not Applicable

PLACARD REQUIRED: Not Applicable

Provide a copy of *Consumer Information Sheet, Pentachlorophenol Pressure-Treated Wood*.

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### 15. REGULATORY INFORMATION

#### SARA TITLE III/CERCLA

“Reportable Quantities” (RQs) and /or “Threshold Planning Quantities (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA/CERCLA RQ (lb)</u>	<u>SARA EHS TPQ (lb)</u>
Pentachlorophenol	10	Not Applicable
Hexachlorobenzene	1	Not Applicable
Dibenzofuran	1	Not Applicable

**Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.**

SECTION 311 HAZARD CLASS: Immediate, delayed, fire

SARA 313 TOXIC CHEMICALS: The following ingredients are SARA 313 “Toxic Chemicals”:

<u>INGREDIENT NAME</u>	<u>CAS #</u>	<u>COMMENT</u>
Pentachlorophenol	87-86-5	de minimus concentration is 0.1%
*Hexachlorobenzene	118-74-1	de minimus concentration does not apply to this chemical
*Dibenzodioxins	-	de minimus concentration does not apply to this chemical
*Dibenzofurans	-	de minimus concentration does not apply to this chemical

\*Technical grade pentachlorophenol contains impurities that are listed as SARA 313 chemicals. Their concentrations in treated wood are well below 0.001%. Contact treated wood or preservative supplier for more information.

ADDITIONAL REGULATORY INFORMATION: None

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### 16. OTHER INFORMATION

PREVIOUS ISSUE DATE: November 15, 1995

NFPA RATINGS: The NFPA has not established a rating for this product.

As part of the industry/EPA Consumer Awareness program, wood treaters should ensure that a *Consumer Information Sheet* (CIS), containing the following language approved by the US Environmental Protection Agency, is provided to buyers of penta treated wood (51 FR 1348, 1/10/86).

#### **EPA Consumer Information Sheet Pentachlorophenol Pressure-Treated Wood**

##### **Consumer Information**

This wood has been preserved by pressure-treatment with an EPA-registered pesticide containing pentachlorophenol to protect it from insect attack and decay. Wood treated with pentachlorophenol should be used only where such protection is important. Pentachlorophenol penetrates deeply into and remains in the pressure-treated wood for a long time. Exposure to pentachlorophenol may represent certain hazards. Therefore, the following precautions should be taken both when handling the treated wood and in determining where to use and dispose of the treated wood.

##### **Use Site Precautions**

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- 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 interiors of farm buildings where there may be direct contact with domestic animals or livestock which may crib (bite) or lick the wood.
- In interiors of farm buildings where domestic animals or livestock are unlikely to 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 or 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 portions 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.

### 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 eyes 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.

NOTE: Where appropriate, based on the actual method of treatment, the term "Pressure-treated" may be replaced by "Thermal-process" or equivalent terms.

NOTICE: The information contained on this material safety data sheet is believed to be accurate. The suggested procedures are based on information available as of the date of publication. The information contained herein should not be construed as a recommendation to violate any federal, state or municipal law, rule or regulation.

**NO WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS  
FOR A PARTICULAR PURPOSE OR OTHERWISE.**