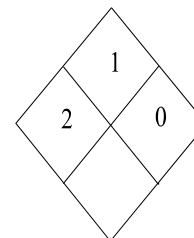


## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PCNB 75 DG  
GENERAL USE: Fungicide  
PRODUCT DESCRIPTION: Off white to light tan beads (prills)  
EPA Registration Number: 5481-441  
MSDS No.: 231\_8  
Current Revision Date: 4 April, 2006



MANUFACTURER:  
AMVAC CHEMICAL CORPORATION  
4100 E. Washington Blvd.  
Los Angeles, CA 90023-4406  
Ph: 323-264-3910  
FAX: 323-268-1028

EMERGENCY TELEPHONE NUMBERS:  
MANUFACTURER: 323-264-3910  
TRANSPORTATION (24 HOURS)  
CHEMTREC: 800-424-9300  
OTHER (24 HOURS)  
AMVAC: 323-264-3910

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	WT %	CAS No.
Pentachloronitrobenzene (PCNB)	75%	82-68-8
Related Compounds	25%	
Includes Hexachlorobenzene (HCB)	<0.04%	118-74-1

#### OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)

COMPONENT	HAZARD	OSHA PEL*	ACGIH TLV*
Pentachloronitrobenzene (PCNB)	Dermatitis, Methemoglobin, Carcinogen		0.5 mg/m <sup>3</sup>
Hexachlorobenzene (HCB)	Carcinogen		0.002 mg/m <sup>3</sup>
Respirable crystalline quartz (CAS No. 14808-60-7)	Carcinogen, irritation	0.1 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>
Emulsifier	Eye Irritation	None established	None established

\* Exposure Limits 8 hrs. TWA

3. **HAZARDS IDENTIFICATION**

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**EMERGENCY OVERVIEW:**

**CAUTION: Harmful if swallowed. Avoid inhaling dust. May cause severe eye irritation. DO NOT get in eyes! This product may cause skin irritation. Do not contaminate feed or foodstuffs.**

**KEEP OUT OF REACH OF CHILDREN.**

**Toxic to fish and aquatic organisms. Do not contaminate bodies of water.**

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**POTENTIAL HEALTH EFFECTS**

**ROUTE(S) OF ENTRY:** Ingestion, inhalation, eye contact, and skin contact.

**SIGNS OF ACUTE OVEREXPOSURE:** A person suffering from acute exposure to PCNB may exhibit vomiting, hyperirritability, convulsions, conversion of hemoglobin to methemoglobin. Technical Grade PCNB 95% is a slight skin irritant and may lead to contact dermatitis. Toxicology testing has shown PCNB is a sensitizer. The emulsifiers used in this product have been found to cause severe irritation of the eyes on contact. Symptoms include discomfort or pain, excessive blinking and tear production, marked excess redness and swelling of the conjunctiva, and chemical burns of the eye.

**SIGNS OF CHRONIC OVEREXPOSURE:** Possible dermatitis. Crystalline silica is known to cause silicosis, a noncancerous lung disease caused by excessive exposure to crystalline silica.

**OTHER POTENTIAL EFFECTS:** Laboratory studies have shown some carcinogenic effects and some developmental effects at maternally toxic dose levels in laboratory animals. There is sufficient evidence that EPA has listed PCNB as a possible carcinogen (Group C) and the IARC has listed PCNB as a carcinogen (Group 3, sufficient animal evidence). The European Union (EU) has determined that no cancer classification is warranted. Laboratory testing of PCNB has shown no evidence of mutagenicity or reproductive toxicity. Technical PCNB does contain small amounts (< 0.05%) of Hexachlorobenzene (HCB), a known carcinogen.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Dermatitis. Preexisting upper respiratory tract and lung diseases such as, but not limited to, bronchitis, emphysema, and asthma.

**CARE SHOULD BE EXERCISED IN HANDLING PCNB AND ITS FORMULATIONS.**

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#### **4. FIRST AID MEASURES**

**EYES:** Immediately flush the eyes with copious amounts of clear, cool running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Contact a physician immediately. If there will be a delay in getting medical attention, rinse the eyes for at least another 15 minutes.

**INHALATION:** Remove victim to fresh air. If breathing has ceased, clear the victim's airway and start artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Contact a physician immediately.

**INGESTION:** Induce vomiting immediately by giving two glasses of water and sticking a finger down throat. Never give anything by mouth to an unconscious person. Contact a physician immediately.

**SKIN:** Remove contaminated clothing. Wash thoroughly with soap and clean water. If a rash or any of the symptoms of acute exposure appear, contact a physician immediately.

**NOTE TO PHYSICIANS:** Treat symptomatically. For further medical information, contact your local poison control center. For other questions AMVAC Chemical Corporation is available 24 hours/day to answer questions on this product. The telephone number is 1-323-264-3910.

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#### **5. FIRE FIGHTING MEASURES**

##### **FLAMMABLE PROPERTIES**

Flash Point: Not applicable

Autoignition Temperature: Not applicable

Flammable Limits:

Lower flammable limit: None

Upper flammable limit: None

Flammability: This is a combustible solid that will support fire if it is preheated (NFPA rating = 1)

##### **EXPLOSIVITY**

Mechanical Impact: Not explosive

Static Discharge: Will not occur

**HAZARDOUS COMBUSTION PRODUCTS:** This product may emit hazardous fumes of hydrogen chloride, carbon oxides, nitrogen oxides and unidentified organic compounds when it is heated excessively or burned. **WEAR SELF-CONTAINED BREATHING APPARATUS.**

**EXTINGUISHING MEDIA:** Water spray, dry chemical, foam, or carbon dioxide.

**FIRE FIGHTING INSTRUCTIONS:** Do not breathe fumes. Wear complete firefighting gear, including protective gloves, eye protection and self-contained breathing apparatus. Wash clothing before reuse.

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## 6. ACCIDENTAL RELEASE MEASURES

**GENERAL:** Keep out of water sources.

**SMALL or LARGE SPILL:** Sweep up or vacuum the product into a secure container for reuse or disposal. Wash the location with soap and water. Collect the washings in a hazardous waste container and dispose as a hazardous waste.

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## 7. HANDLING AND STORAGE

**HANDLING:** Keep this product cool and dry. Keep container closed. Store away from feed, food, and drink. Keep away from children and pets. Wash thoroughly after handling this product.

**STORAGE:** Store product in its original container in a cool, dry, locked place out of the reach of children.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Ventilation should be sufficient to keep the exposure below the TLV.

**RESPIRATORY PROTECTION:** A properly FIT-TESTED NIOSH/MSHA-approved respirator fitted with organic vapor cartridges and dust filters is required when working with this product if the ventilation is insufficient to keep exposures below the TLV.

**SKIN PROTECTION:** Applicators and other handlers must wear long-sleeved shirt and long pants; waterproof gloves; and shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining personal protection equipment (PPE). If no such instructions are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

**EYE PROTECTION:** Safety glasses with sideshields should be used whenever hazardous chemicals are being handled. If there is a possibility of eye contact goggles should also be worn.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Solid
<b>Appearance:</b>	Off white to light tan beads (prills)
<b>Odor:</b>	Musty
<b>Odor Threshold:</b>	Not established
<b>Boiling Point:</b>	Not applicable
<b>Freezing/Melting Point:</b>	Not available
<b>Bulk Density:</b>	38 - 40 lb/cu. ft.
<b>Vapor Pressure (mm/Hg):</b>	$5.98 \times 10^{-5}$ (a.i.)
<b>Percent Volatile by Vol:</b>	Not available
<b>Solubility in Water:</b>	Dispersible

9. **PHYSICAL AND CHEMICAL PROPERTIES, cont'd**

<b>Solubility (Other):</b>	PCNB is soluble in aromatic solvents, acetone, chlorinated solvents
<b>Partition Coefficient (O/W):</b>	Not available
<b>pH (5% dispersion):</b>	7.2
<b>Evaporation Rate:</b>	Not available

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10. **STABILITY AND REACTIVITY**

**CHEMICAL STABILITY (Conditions to avoid):** This product is stable under normal storage and use conditions.

**INCOMPATIBILITY:** Strong bases will very slowly cause decomposition of PCNB.

**HAZARDOUS DECOMPOSITION PRODUCTS:** This product may emit hazardous fumes of hydrogen chloride, carbon oxides, nitrogen oxides and unidentified organic compounds when it is heated excessively or burned. **WEAR SELF-CONTAINED BREATHING APPARATUS** when these conditions are present.

**HAZARDOUS POLYMERIZATION:** This product will not polymerize.

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11. **TOXICOLOGICAL INFORMATION**

The toxicological properties of this product have not been determined. The following information is available for the active ingredient, PCNB Technical:

<b>INGESTION:</b>	Oral LD <sub>50</sub> (rat):	> 5050 mg/kg
<b>DERMAL:</b>	Skin LD <sub>50</sub> (rabbit):	> 2020 mg/kg
<b>INHALATION:</b>	Inhalation LC <sub>50</sub> (rat):	> 6.49 mg/l (as an aerosol)
<b>IRRITATION:</b>	Eye irritation(rabbit):	Mild irritant (Toxic Category III)
	Skin irritation: (rabbit)	Slight Irritant (Toxic Category IV)
<b>SENSITIZATION:</b>	Skin sensitization: (guinea pig)	A sensitizer

**TERATOGENICITY:** PCNB has shown some developmental effects in the rat, but only at maternally toxic dose levels.

**MUTAGENICITY:** PCNB is not considered to be genotoxic.

**CARCINOGENICITY:** Laboratory studies have shown some carcinogenic effects in laboratory animals. There is sufficient evidence that EPA has listed PCNB as a possible carcinogen (Group C) and the IARC has listed PCNB as a carcinogen (Group 3, sufficient animal evidence). The European Union (EU) has determined that no cancer classification is warranted. Technical PCNB does contain small amounts (<0.05%) of HCB, a known carcinogen.

**REPRODUCTIVE TOXICITY:** PCNB has not been found to be a reproductive toxicant.

**TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** No information is available.

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12. **ECOLOGICAL INFORMATION**

**GENERAL:** This pesticide is toxic to fish and aquatic organisms. Do not contaminate water when disposing of equipment washwaters. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply directly adjacent to potable water supplies.

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13. **DISPOSAL CONSIDERATIONS**

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed on site (by use according to the label) or at an approved waste disposal facility. Further information can be obtained from the EPA or the equivalent state and local agencies.

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. Check with EPA, State, and local authorities for the current regulations applicable to your area.

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14. **TRANSPORTATION INFORMATION**

The HAZMAT information given below is applicable to this product only when it is packaged in packages that contain more than 133 lbs (60 kg) per package.

<b>DOT Class:</b>	9
<b>UN Number:</b>	3077
<b>IMDG Class (Sea):</b>	9
<b>IATA Class (Air):</b>	9
<b>Marine Pollutant:</b>	No
<b>Packing Group:</b>	III
<b>Hazard Label(s):</b>	Class 9
<b>ADR Class (road):</b>	9
<b>Proper Shipping Name(s):</b>	Environmentally hazardous substances, solid, n.o.s. (Pentachloronitrobenzene)
<b>Reportable Quantity:</b>	Yes

**PACKAGING**

**General Description:** 25 kg bag

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15. **REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS:** This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

**15. REGULATORY INFORMATION, cont'd**

**SARA TITLE III DATA**

**Section 311 & 312 Hazard Categories:**

Immediate Health Hazard: Yes  
Delayed Health Hazard: Yes  
Fire Hazard: No  
Reactive Hazard: No  
Sudden Pressure Release Hazard: No

**Section 302 Extremely Hazardous Substances:** None

**Section 313 Toxic Chemicals:**

Pentachloronitrobenzene (PCNB, CAS No. 82-68-8) - 75%  
Hexachlorobenzene (HCB, CAS No. 118-74-1) < 0.04%

**CERCLA Reportable Quantity (RQ):**

Pentachloronitrobenzene (PCNB) - 100 lbs  
Hexachlorobenzene (HCB) - 10 lbs  
Product (calculated) - 133 lbs

**STATE REGULATIONS:**

**CALIFORNIA (Proposition 65):** This product contains respirable crystalline silica and Hexachlorobenzene (HCB), chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

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**16. OTHER INFORMATION**

**MSDS Status:**

**Date This Revision: 4 April, 2006**

**Date Previous Revision: 16 September 2003**

**Person Responsible for Preparation: Gary A. Braden**

**Reasons for Revision:** Annual Review.

**DISCLAIMER:** This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

**16. OTHER INFORMATION, cont'd**

**ABBREVIATIONS:**

a.i.	-	Active ingredient
ACGIH	-	American Conference of Governmental Industrial Hygienists
CERCLA	-	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	-	Environmental Protection Agency
FIFRA	-	Federal Insecticide, Fungicide, and Rodenticide Act
IARC	-	International Agency for Research on Cancer
NTP	-	National Toxicology Program
OSHA	-	Occupational Safety and Health Administration
SARA	-	Superfund Amendments and Reauthorization Act
TSCA	-	Toxic Substances Control Act

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This is the last page of this MSDS. There should be 8 pages.