

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PCNB 10% GRANULES; PCNB 10G; BLOCKER®10G;
TURFCIDE® 10% GRANULAR; TURFCIDE® 10G

GENERAL USE: Fungicide

CHEMICAL NAME (a.i.): Pentachloronitrobenzene

SYNONYMS (a.i.): PCNB, Quintozene

PRODUCT DESCRIPTION: Gray to Brown Granule

CAS NUMBER (a.i.): 82-68-8

MOLECULAR FORMULA (a.i.): C₆NO₂Cl₅

MOLECULAR WEIGHT (a.i.): 295.33

EPA REGISTRATION NUMBER: 5481-211; 5481-444; 5481-8988

MSDS NUMBER: 159_17

CURRENT REVISION DATE: 31 August, 2012

MANUFACTURER:

AMVAC CHEMICAL CORPORATION

4100 E. Washington Blvd.

Los Angeles, CA 90023-4406

PHONE: 323-264-3910

FAX: 323-268-1028

EMERGENCY TELEPHONE NUMBERS:

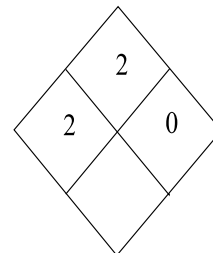
MANUFACTURER: 323-264-3910

TRANSPORTATION (24 HOURS)

CHEMTREC: 800-424-9300

OTHER (24 HOURS)

MEDICAL (PROSAR): 888-681-4261



2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)

Chemical Name	CAS #	Wt%	Hazard(s)	PEL/TLV
Pentachloronitrobenzene (PCNB)	82-68-8	10.0	Dermatitis, Methemoglobin	0.5 mg/m ³
Hexachlorobenzene (HCB)	118-74-1	< 0.05	Carcinogen	0.002 mg/m ³
Xylene	1330-20-7	< 2.0	Possible carcinogen	10 ppm PEL 15 ppm STEL
1,2,4-Trimethylbenzene	95-63-6	< 1.0	Dermatitis	None
Cumene	98-82-8	< 1.0	Possible carcinogen	50 ppm PEL
Inert Ingredients		76.9		None

* Exposure Limits 8 hrs. TWA

BLOCKER and TURFCIDE are registered trademarks of AMVAC Chemical Corporation.

3. **HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW:

CAUTION: Harmful if swallowed. Avoid inhaling dust. This product may cause skin and eye irritation. Do not contaminate feed or foodstuffs.

KEEP OUT OF REACH OF CHILDREN.

Toxic to fish and aquatic organisms.

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. PCNB 10% Granules is a mild skin irritant and may lead to contact dermatitis. Toxicology testing in animals has shown that Technical PCNB is a sensitizer.

SIGNS OF CHRONIC OVEREXPOSURE: Possible dermatitis.

CARCINOGENICITY: Laboratory studies on Technical PCNB 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. Cumene, a minor component of the solvent used for this formulation, is possibly carcinogenic to humans (Group 2B).

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

CARE SHOULD BE EXERCISED IN HANDLING PCNB AND ITS FORMULATIONS.

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.

4. FIRST AID MEASURES, cont'd

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. Contains traces of aromatic hydrocarbon solvent. Contact your local or state poison control center for further information.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

Flash Point (TCC): 142°F (62.8°C)

Autoignition Temperature: > 800°F

Flammable Limits:

Lower flammable limit: None

Upper flammable limit: None

Flammability: This is a solid product that contains approximately 10 % of a combustible liquid that will support fire if it is preheated (NFPA rating = 2)

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 full protective gear, including protective gloves, eye protection and self-contained breathing apparatus. Wash clothing before reuse.

6. ACCIDENTAL RELEASE MEASURES

GENERAL: Keep out of water sources. Use appropriate personal protective equipment (See Section 8) to prevent exposure to this product.

6. ACCIDENTAL RELEASE MEASURES, cont'd

SMALL and LARGE SPILL: Sweep up or vacuum the product into a secure container for reuse or disposal.

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.

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.

OTHER PROTECTION: An eyewash station and a safety shower should be located in the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
APPEARANCE:	Gray to brown granule
ODOR:	Aromatic solvent odor with musty overtones.
ODOR THRESHOLD:	Not established
BOILING POINT:	Not applicable
FREEZING/MELTING POINT:	Not applicable
DENSITY:	0.66 g/cm ³
BULK DENSITY:	41 lbs/ft ³

9. PHYSICAL AND CHEMICAL PROPERTIES, cont'd

VAPOR PRESSURE (mm/Hg):	Not applicable
PERCENT VOLATILE BY VOL:	Not applicable
SOLUBILITY IN WATER:	Not soluble
SOLUBILITY (Other):	The active ingredient is soluble in aromatic and ketone type solvents
PARTITION COEFFICIENT (O/W):	The active ingredient has a partition coefficient of 1.0×10^5
pH:	Not determined
EVAPORATION RATE:	Not applicable

10. STABILITY AND REACTIVITY

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

INCOMPATIBILITY: Strong oxidizing agents.

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.

11. TOXICOLOGICAL INFORMATION

GENERAL: Limited data are currently available for this product. Information for PCNB Technical, the active ingredient, is included below to assist in determining potential hazards of these products.

INGESTION:	Oral LD ₅₀ (rat):	> 5050 mg/kg ¹
DERMAL:	Skin LD ₅₀ (rabbit):	> 2020 mg/kg ¹
INHALATION:	Inhalation LC ₅₀ (rat):	> 6.49 mg/l (as an aerosol) ¹
IRRITATION:	Eye irritation(rabbit):	Mild irritant (Toxic Category III) ²
	Skin irritation: (rabbit)	Slight Irritant (Toxic Category IV) ²
SENSITIZATION:	Skin sensitization (guinea pig)	Sensitizer ¹

TERATOGENICITY: In the rat some developmental effects were seen, but only at maternally toxic dose levels.¹

MUTAGENICITY: No indications of mutagenicity has been observed in laboratory testing.¹

CARCINOGENICITY: 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.¹ Cumene, a minor component of the solvent used for this formulation, is possibly carcinogenic to humans (Group 2B).

11. TOXICOLOGICAL INFORMATION, cont'd

REPRODUCTIVE TOXICITY: No evidence of reproductive toxicity has been observed.¹

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: No data available.

¹ Data for PCNB Technical

² Data for PCNB 10G

12. ECOLOGICAL INFORMATION

GENERAL: This pesticide is toxic to fish and aquatic organisms. Cover or incorporate granules. 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.

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.

14. TRANSPORTATION INFORMATION

DOT CLASS*:	9
UN NUMBER:	3077
IMDG CLASS (sea):	9
MARINE POLLUTANT:	Yes
PACKING GROUP:	III
HAZARD LABEL(s):	Class 9
ADR CLASS (road):	Not regulated
PROPER SHIPPING NAME(s):	Environmentally hazardous substance(s), solid, n.o.s. (Pentachloronitrobenzene)
REPORTABLE QUANTITY:	Yes

PACKAGING

GENERAL DESCRIPTION: 50 lb Kraft lined bags

NOTE: This product is not regulated when shipped by highway, rail or air in non-bulk packaging (net weight of 400 kg or less). When shipped in bulk (net weight of more than 400 kg) or by vessel (non-bulk or bulk) this product is regulated according to the data shown.

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.

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 82-68-8)	10.4%
Hexachlorobenzene (HCB, CAS 118-74-1)	< 0.05%
Xylene(1330-20-7)	< 2.0%
1,2,4-Trimethylbenzene (95-63-6)	< 1.0%
Cumene (98-82-8)	< 1.0%

CERCLA/EPCRA Reportable Quantities (RQ):

Pentachloronitrobenzene (PCNB)	100 lbs
Hexachlorobenzene (HCB)	10 lbs
Xylene	100 lbs
Cumene	5000 lbs
Product (calculated)	1000 lbs

STATE REGULATIONS:

CALIFORNIA (Proposition 65): This product contains trace amounts of Hexachlorobenzene (HCB) and polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans, chemicals known to the State of California to cause cancer or birth defects or other reproductive harm

16. OTHER INFORMATION

MSDS STATUS:

Date This Revision: 16 October, 2011
Date Previous Revision: 5 April, 2010
Person Responsible for Preparation: Gary A. Braden

REASONS FOR REVISION: An additional alternate name was added to section 1. The medical contact telephone number was updated in section 1.

16. OTHER INFORMATION, cont'd

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.

ABBREVIATIONS:

ACGIH	-	American Conference of Governmental Industrial Hygienists
CERCLA	-	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	-	Department of Transportation
EPA	-	Environmental Protection Agency
EPCRA	-	Emergency Planning and Community Right-to-Know Act
FIFRA	-	Federal Insecticide, Fungicide, and Rodenticide Act
IARC	-	International Agency for Research on Cancer
IATA	-	International Air Transport Association
IMDG	-	International Maritime Dangerous Goods
NTP	-	National Toxicology Program
OSHA	-	Occupational Safety and Health Agency
SARA	-	Superfund Amendments and Reauthorization Act
TSCA	-	Toxic Substances Control Act

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