SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: VITAVAX®-PCNB FLOWABLE FUNGICIDE  
MSDS Number: 102000012845  
EPA Registration No.: 264-940

Bayer CropScience  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)  
For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Average % by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carboxin</td>
<td>5234-68-4</td>
<td>17.00</td>
</tr>
<tr>
<td>Pentachloronitrobenzene</td>
<td>82-68-8</td>
<td>17.00</td>
</tr>
<tr>
<td>Attapulgite clay</td>
<td>12174-11-7</td>
<td>0.756</td>
</tr>
</tbody>
</table>

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview: Caution! Harmful if swallowed, inhaled or absorbed through the skin. May cause irritation of respiratory tract. May cause eye irritation. May cause skin irritation. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapour or mist.

Physical State: liquid

Odor: pungent

Appearance: tan

Routes of Exposure: Ingestion, Inhalation, Eye contact, Skin Absorption

Immediate Effects:

Eye: May cause eye irritation. Avoid contact with eyes.

Skin: May cause irritation. May cause sensitisation by skin contact. Harmful if absorbed through skin. Avoid contact with skin and clothing.

Ingestion: Harmful if swallowed. Do not take internally.

Inhalation: May cause nose, throat, and lung irritation. Avoid inhalation of vapour or mist. Harmful if inhaled.
SECTION 4. FIRST AID MEASURES

General
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Skin
Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Inhalation
Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Notes to Physician

Signs and Symptoms
Ingestion may provoke the following symptoms:
diarrhoea
lethargy
vomiting

Hazards
May pose an aspiration pneumonia hazard.

Treatment
There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point
> 93.4 °C / 200.1 °F

Fire and Explosion Hazards
Under fire conditions, toxic, corrosive fumes are emitted. Keep away from open flames, hot surfaces and sources of ignition.

Suitable Extinguishing Media
foam, carbon dioxide (CO2), dry chemical, water spray
Fire Fighting Instructions
Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated.

Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods for Cleaning Up
Take up with absorbent material (e.g. sand, diatomaceous earth or a proprietary absorbent material). Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional Advice
Use personal protective equipment. Do not allow product to enter streams, sewers or other waterways.

SECTION 7. HANDLING AND STORAGE

Handling Procedures
Handle and open container in a manner as to prevent spillage.

Storing Procedures
Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic Procedures
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Take off contaminated clothing and shoes immediately. Then wash thoroughly and put on clean clothing.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. As soon as practical, wash thoroughly and change into clean clothing.

Min/Max Storage Temperatures
Do not transport or store below -4 °C / 25 °F
Do not transport or store above 49 °C / 120 °F

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection
Follow all label instructions. Train employees in safe use of the product.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash
PPE separately from other laundry.

**Engineering Controls**
Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

**Eye/Face Protection**
tightly fitting safety goggles

**Hand Protection**
Chemical resistant nitrile rubber gloves

**Body Protection**
Wear long-sleeved shirt and long pants and shoes plus socks.

**Respiratory Protection**
When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or Industry recommendations.

### Exposure Limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TWA</th>
<th>ACGIH Ceiling</th>
<th>OSHA Z1A Ceiling</th>
<th>US CA OEL Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentachloronitrobenzene</td>
<td>82-68-8</td>
<td>0.5 mg/m³</td>
<td>100 mg/m³</td>
<td>125 mg/m³</td>
</tr>
<tr>
<td>Ethanediol</td>
<td>107-21-1</td>
<td>100 mg/m³</td>
<td>50 ppm</td>
<td>100 mg/m³</td>
</tr>
</tbody>
</table>

**Form of Exposure**
- Aerosol
- Vapor

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
tan

**Physical State**
liquid

**Odor**
pungent

**pH**
6.5 - 8.5 (undiluted)

**Specific Gravity**
1.19 at 20 °C

**Bulk Density**
9.6 - 10.2 lb./gal.

**Melting / Freezing Point**
-18 - -15 °C / -0 - 5 °F

**Water Solubility**
miscible

**Viscosity**
70 - 120 mPa.s

### SECTION 10. STABILITY AND REACTIVITY

**Chemical Stability**
Stable under recommended storage conditions.
Conditions to Avoid
Extremes of temperature and direct sunlight.

Incompatibility
oxidizing agents

Hazardous Decomposition Products
Thermal decomposition
phosgene
hydrogen chloride (HCl)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity
rat: LD50: > 2,000 mg/kg

Acute Dermal Toxicity
rabbit: LD50: > 2,000 mg/kg

Acute Inhalation Toxicity
rat: LC50: > 18.9 mg/l
Exposure time: 1 h

Skin Irritation
Moderate skin irritation.

Eye Irritation
Moderate eye irritation.

Chronic Toxicity
PENTACHLORONITROBENZENE (PCNB or Quintozene): A 78-week feeding study with PCNB at 8,187 and 14,635 ppm did not produce an increase in tumor incidence. A 104-week feeding study conducted in rats at levels of 20, 3,000 and 6,000 ppm PCNB resulted in an elevated incidence of thyroid follicular adenoma and carcinoma. The no-observed-effect level (NOEL) for chronic toxicity and oncogenicity is determined to be 20 ppm.

CARBOXIN: Carboxin has shown possible kidney effects in animal studies.

Assessment Carcinogenicity

ACGIH
Pentachloronitrobenzene 82-68-8 Group A4

NTP
None.

IARC
Pentachloronitrobenzene 82-68-8 Overall evaluation: 3
Attapulgite clay 12174-11-7 Overall evaluation: 2B
Attapulgite clay 12174-11-7 Overall evaluation: 3

OSHA
None.

SECTION 12. ECOLOGICAL INFORMATION
Environmental Precautions

Toxic to fish and aquatic organisms. 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 contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product only as specified on the label.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Open dumping is prohibited.

Container Disposal

Do not re-use empty containers. Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

RCRA Classification:

The RCRA Classifications may be on the individual component(s) and not necessarily on the product as a whole.

<table>
<thead>
<tr>
<th>Identifiers</th>
<th>Description</th>
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<tbody>
<tr>
<td>82-68-8</td>
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SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:
Not regulated for packages size less than 55 gallons*

* When packages size is greater than 55 gallons the RQ of PCNB is met at 100 Lbs. product is regulated as follows:

RQ, Environmentally Hazardous Substances, Liquid, N.O.S. (Pentachloronitrobenzene, Carboxin) // 9 // UN3082 // PG III

FREIGHT CLASSIFICATION:
Insecticides or Fungicides, N.O.I.; other than poison

SECTION 15. REGULATORY INFORMATION
US Federal Regulations

TSCA list
Pentachloronitrobenzene  82-68-8

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.

SARA Title III - Section 302 - Notification and Information
None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting
Carboxin  5234-68-4  1.0%
Pentachloronitrobenzene  82-68-8  1.0%

US States Regulatory Reporting

CA Prop65
This product contains a chemical known to the State of California to cause cancer.
Attapulgite clay  12174-11-7

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients
Carboxin  5234-68-4  NJ
Pentachloronitrobenzene  82-68-8  CA, CT, MA, MN, NJ, PA
Attapulgite clay  12174-11-7  CA

Canadian Regulations

Canadian Domestic Substance List
None.

Environmental

CERCLA
Pentachloronitrobenzene  82-68-8  100 lbs

Clean Water Section 307 Priority Pollutants
None.

Safe Drinking Water Act Maximum Contaminant Levels
None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)
Carboxin  5234-68-4
Pentachloronitrobenzene  82-68-8

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):
Health - 2  Flammability - 1  Reactivity - 0  Others - none
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard
Reason to Revise: Update format to new system.

Revision Date: 05/10/2006

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