## SAFETY DATA SHEET

## 1. Identification

**Product identifier AUTILUS** 

Other means of identification

501 SDS number

**Product registration** 

number

5481-8992

Fungicide. Recommended use

Recommended restrictions No other uses are advised.

Keep out of the Reach of Children!

EPA: 5481-8992 **EPA Registration number** 

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name **AMVAC Chemical Corporation** 

**Address** 4695 MacArthur Court

**Suite 1200** 

Newport Beach, CA 92660

**United States** 

**Telephone AMVAC Chemical Corp** 949-260-1200

> **AMVAC Chemical Corp** 949-260-6270(FAX)

**Product Use** 

888-462-6822

Website www.amvac.com CustServ@amvac.com E-mail

Medical 888-681-4261 **Emergency phone number** 

**CHEMTREC®** 800-424-9300

(USA+Canada)

CHEMTREC® (Outside +1-703-527-3887

USA)

# 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Serious eye damage/eye irritation Category 2B

> Sensitization, skin Category 1

**Environmental hazards** Hazardous to the aquatic environment, acute Category 1

Hazardous to the aquatic environment, Category 1

long-term hazard

**OSHA** defined hazards Not classified.

Label elements



Signal word Warning

Causes eye irritation. **Hazard statement** 

May cause an allergic skin reaction.

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

**Precautionary statement** 

Prevention Wear protective gloves.

Avoid breathing mist/vapors. Avoid release to the environment.

Contaminated work clothing must not be allowed out of the workplace.

Wash thoroughly after handling.

Response If on skin: Wash with plenty of water.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Collect spillage.

Storage

Store away from incompatible materials.

**Disposal** 

Hazard(s) not otherwise

Dispose of contents/container in accordance with local/regional/national/international regulations.

None known.

classified (HNOC)

**HCB** 

Supplemental information This is a pesticide product registered by the United States Environmental Protection Agency and

is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced in section 15. The pesticide label also includes other important information,

including directions for use.

# 3. Composition/information on ingredients

#### **Mixtures**

Chemical name	Common name and synonyms	CAS number	%	
Pentachloronitrobenzene		82-68-8	40	
Dispersant*		Proprietary*	3	
Impurities				
Chemical name	Common name and synonyms	CAS number	%	

<sup>\*</sup>Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Composition comments

Hexachlorobenzene

Occupational Exposure Limits for impurities are listed in Section 8.

### 4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen or artificial respiration if needed. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician for further treatment advice.

118-74-1

< 0.02

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center for treatment advice. Wash contaminated clothing before reuse. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if

Eye contact present and easy to do. Continue rinsing. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Call a physician or poison control center immediately. If there will be a delay in getting medical attention, rinse the eyes an additional 15 minutes.

Ingestion

delayed

Call a physician or poison control center immediately. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Most important symptoms/effects, acute and A person suffering from acute exposure to PCNB may exhibit vomiting, hyperirritability,

convulsions, conversion of hemoglobin to methemoglobin. Technical Grade PCNB is a slight skin and eye irritant and may lead to contact dermatitis. Toxicology testing has shown PCNB is a skin sensitizer.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information** 

In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

# 5. Fire-fighting measures

Suitable extinguishing media Unsuitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

This product may emit hazardous fumes of hydrogen chloride, carbon oxides, nitrogen oxides, and unidentified organic compounds when it is heated excessively or burned.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Firefighting

equipment/instructions

Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion ha

No unusual fire or explosion hazards noted. This is a water base non-flammable liquid that will

support fire only if the solvent is evaporated off first.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors and spray mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for reuse.

**Environmental precautions** 

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

# 7. Handling and storage

Precautions for safe handling

Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. Keep away from food, drink and animal feedstuffs. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Do not allow material to freeze.

## 8. Exposure controls/personal protection

## **Occupational exposure limits**

**US. ACGIH Threshold Limit Values** 

Components	Туре	Value	
Pentachloronitrobenzene (CAS 82-68-8)	TWA	0.5 mg/m3	
Impurities	Туре	Value	
Hexachlorobenzene (CAS 118-74-1)	TWA	0.002 mg/m3	

**Biological limit values** 

No biological exposure limits noted for the ingredient(s).

**Exposure guidelines** 

US - California OELs: Skin designation

Hexachlorobenzene (CAS 118-74-1)

Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Hexachlorobenzene (CAS 118-74-1) Skin designation applies.

**US ACGIH Threshold Limit Values: Skin designation** 

Hexachlorobenzene (CAS 118-74-1)

Danger of cutaneous absorption

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

Skin protection

**Hand protection** Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing (see label).

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA

approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure

limits.

Thermal hazards None known.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the

workplace.

Mild chemical odor.

## 9. Physical and chemical properties

**Appearance** Tan to brown opaque suspension.

Physical state Liquid.

Form Liquid suspension.
Color Tan to brown.

Oden through ald

Odor threshold Not available.

pH 4

Melting point/freezing point Not available.

Initial boiling point and boiling 215.6 °F (102 °C)

range

Odor

Flash point Not available.

**Evaporation rate** Solvent will evaporate at same rate as water.

Flammability (solid, gas) Not applicable. Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 23.8 mm Hg @ 25°C.

Vapor density Not available.

**Relative density** 1.26 @ 20 °C/4 °C(68 °F/39 °F).

Solubility(ies)

Solubility (water) Dispersible.

**Solubility (solvents)** This product is soluble in ketones and esters.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density 10.5 lb/gal
Explosive properties Not explosive.
Oxidizing properties Not oxidizing.

Percent volatile 61 % (approximately)

# 10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

**Conditions to avoid**Contact with incompatible materials.

**Incompatible materials** Strong oxidizing agents. Strong acids. Strong bases.

Hazardous decomposition

products

This product may emit hazardous fumes of hydrogen chloride, carbon oxides, and unidentified organic compounds when it is heated excessively or burned. WEAR SELF-CONTAINED

BREATHING APPARATUS when these conditions are present.

## 11. Toxicological information

Information on likely routes of exposure

**Inhalation** Prolonged inhalation may be harmful.

**Skin contact** May cause an allergic skin reaction. Slight skin irritant.

**Eye contact** Causes eye irritation.

**Ingestion** May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

A person suffering from acute exposure to PCNB may exhibit vomiting, hyperirritability, convulsions, conversion of hemoglobin to methemoglobin. Technical Grade PCNB is a slight skin and eye irritant and may lead to contact dermatitis. Toxicology testing has shown PCNB is a skin sensitizer.

Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

**Product Species Test Results** 

**AUTILUS** 

**Acute** 

Dermal

LD50 Rat > 2020 mg/kg

Inhalation

Mist

LC50 Rat > 2.25 mg/l, maximum attainable

concentration

Oral

LD50 Rat > 5050 mg/kg

Skin corrosion/irritation Causes slight skin irritation.

**Irritation Corrosion - Skin** 

Result: Slight irritant **AUTILUS** 

Species: Rabbit

Serious eye damage/eye

Eve

irritation

Causes eye irritation.

**AUTILUS** Result: Mild irritant

Species: Rabbit

Respiratory or skin sensitization

Not considered a respiratory sensitizer. Respiratory sensitization Skin sensitization May cause an allergic skin reaction.

Sensitization

**AUTILUS** Result: Sensitizer.

Species: Guinea pig

Germ cell mutagenicity No evidence of mutagenicity has been observed in animal testing.

Laboratory studies have shown some carcinogenic effects in the liver and thyroid gland in Carcinogenicity

laboratory animals. There is sufficient evidence that EPA has listed PCNB as a possible human 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.

IARC Monographs. Overall Evaluation of Carcinogenicity

Hexachlorobenzene (CAS 118-74-1) 2B Possibly carcinogenic to humans.

Pentachloronitrobenzene (CAS 82-68-8) 3 Not classifiable as to carcinogenicity to humans. Polychlorinated dibenzofurans (CAS SEQ506096) 3 Not classifiable as to carcinogenicity to humans. Polychlorinated dibenzo-p-dioxins (CAS SEQ506094) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

US. National Toxicology Program (NTP) Report on Carcinogens

Hexachlorobenzene (CAS 118-74-1) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity No evidence of reproductive toxicity has been observed in animal studies using

pentachloronitrobenzene. Minor embryo-foetal developmental effects were only seen at maternally

toxic doses, in the pregnant rat.

Specific target organ toxicity single exposure

Specific target organ toxicity -

repeated exposure

Not classified.

Not classified.

Aspiration hazard Not an aspiration hazard.

Prolonged inhalation may be harmful. **Chronic effects** 

12. Ecological information

Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected. **Ecotoxicity** 

Components **Species Test Results** 

Pentachloronitrobenzene (CAS 82-68-8)

**Aquatic** 

Crustacea LC50 Water flea (Daphnia) 0.77 mg/l, 48 hours Fish LC50 Bluegill (Lepomis macrochirus) 0.1 mg/l, 96 hours Rainbow trout, donaldson trout 0.55 mg/l, 96 hours

(Oncorhynchus mykiss)

No data is available on the degradability of this product. Persistence and degradability

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

Pentachloronitrobenzene

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation

5

potential, endocrine disruption, global warming potential) are expected from this product.

13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow

this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches

with chemical or used container. Dispose of contents/container in accordance with

local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

The waste code should be assigned in discussion between the user, the producer and the waste Hazardous waste code

disposal company.

Waste from residues / unused

products

Dispose of in accordance with all applicable regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Since emptied containers may retain product residue, follow label warnings even after container is Contaminated packaging

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

14. Transport information

DOT

UN3082 **UN** number

UN proper shipping name Transport hazard class(es) Environmentally hazardous substances, liquid, n.o.s. (Pentachloronitrobenzene RQ = 100 lbs)

9 Class Subsidiary risk \_ 9 Label(s) Ш Packing group

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

**Special provisions** 8, 146, 335, IB3, T4, TP1, TP29

Packaging exceptions 155 Packaging non bulk 203 Packaging bulk 241

**IATA** 

UN3082 **UN** number

**UN** proper shipping name Environmentally hazardous substance, liquid, n.o.s. (Pentachloronitrobenzene)

Transport hazard class(es)

Class 9 Subsidiary risk Ш Packing group **Environmental hazards** Yes 9L **ERG Code** 

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo

aircraft

Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

Read safety instructions, SDS and emergency procedures before handling.

**IMDG** 

**UN** number UN3082

**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pentachloronitrobenzene),

MARINE POLLUTANT

Transport hazard class(es)

Class 9
Subsidiary risk Packing group III
Environmental hazards

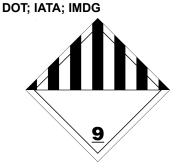
Marine pollutant Yes

EmS F-A, S-F
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and

Not established.

the IBC Code



## Marine pollutant



### **General information**

This product is not regulated when shipped by highway or rail in non-bulk packaging of less than 25 gallons. When shipped by air, vessel or in bulk packaging this product is regulated according to the data shown.

IMDG Regulated Marine Pollutant.

# 15. Regulatory information

# **US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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.

This is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

#### HAZARD TO HUMANS AND DOMESTIC ANIMALS.

CAUTION! Causes moderate eye irritation. Harmful if inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid inhalation of vapors and spray mists.

#### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic organisms. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

#### **Toxic Substances Control Act (TSCA)**

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### **CERCLA Hazardous Substance List (40 CFR 302.4)**

Hexachlorobenzene (CAS 118-74-1)

Pentachloronitrobenzene (CAS 82-68-8)

Polychlorinated dibenzo-p-dioxins (CAS SEQ506094)

Listed.

Listed.

## SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Yes

chemical

Classified hazard Serious eye damage or eye irritation categories Respiratory or skin sensitization

## SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Pentachloronitrobenzene	82-68-8	40

#### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Hexachlorobenzene (CAS 118-74-1) Pentachloronitrobenzene (CAS 82-68-8)

Polychlorinated dibenzo-p-dioxins (CAS SEQ506094)

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

## **US** state regulations

# California Proposition 65



WARNING: This pr

This product can expose you to chemicals including Hexachlorobenzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

### California Proposition 65 - CRT: Listed date/Carcinogenic substance

Hexachlorobenzene (CAS 118-74-1)

Polychlorinated dibenzofurans (CAS SEQ506096)

Polychlorinated dibenzo-p-dioxins

Listed: October 1, 1992

Listed: October 1, 1992

(CAS SEQ506094)

## California Proposition 65 - CRT: Listed date/Developmental toxin

Hexachlorobenzene (CAS 118-74-1) Listed: January 1, 1989

# **International Inventories**

Country(s) or regionInventory nameOn inventory (yes/no)\*CanadaDomestic Substances List (DSL)NoCanadaNon-Domestic Substances List (NDSL)NoUnited States & Puerto RicoToxic Substances Control Act (TSCA) InventoryNo

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

# 16. Other information, including date of preparation or last revision

 Issue date
 Apr-16-2015

 Revision date
 Oct-07-2022

Version # 6.0

HMIS® ratings Health: 2
Flammability: 1

Flammability: 1 Physical hazard: 0

NFPA ratings

Health: 2 Flammability: 1 Instability: 0

Disclaimer

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.