An American Vanguard Company

SAFETY DATA SHEET

1. Identification

Product identifier Terraclor 400

Other means of identification

SDS number 384

Product registration

number

5481-8992

Synonyms PCNB 4F; PCNB Flowable

Recommended use Fungicide.

Recommended restrictions No other uses are advised.

Keep out of the Reach of Children!

EPA Registration number EPA: 5481-8992

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name AMVAC Chemical Corporation

Address 4695 MacArthur Court

Suite 1200

Newport Beach, CA 92660

Telephone AMVAC Chemical Corp 949-260-1200

AMVAC Chemical Corp 949-260-6270(FAX)

Website www.amvac.com

E-mail CustServ@amvac.com

Emergency phone number Medical 888-681-4261

CHEMTREC® 800-424-9300

(USA+Canada)

Product Use 888-462-6822 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

hazard

Hazardous to the aquatic environment, Category 1

long-term hazard

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Causes eye irritation.

May cause an allergic skin reaction.

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

Material name: Terraclor 400 sps us

Precautionary statement

Prevention

Wear protective gloves. Avoid breathing mist or vapor. Wash thoroughly after handling.

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

Avoid release to the environment.

Response If on skin: Wash with plenty of water.

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

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.

Wash contaminated clothing before reuse.

Collect spillage.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with all applicable

local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

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	%
Hexachlorobenzene	HCB	118-74-1	< 0.02

^{*}Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

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. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center

immediately.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Take off

contaminated clothing and wash before reuse. In case of eczema or other skin disorders: Seek

medical attention and take along these instructions.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. 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 Immediately give large quantities of water to drink. Never give anything by mouth to a victim who is

unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Call a

physician or poison control center immediately.

Most important

symptoms/effects, acute and

delayed

Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. May cause an allergic skin reaction. Dermatitis. Rash. 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. Wash contaminated clothing before reuse.

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.

Fire fighting equipment/instructions

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

Specific methods

General fire hazards

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

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. 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. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

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 re-use.

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

Keep away from food, drink and animal feedstuffs. Keep out of the reach of children. Avoid inhalation of vapors and spray mists. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

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

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	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)

Can be absorbed through the skin.

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.

9. Physical and chemical properties

Appearance Tan to brown opaque suspension

Physical state Liquid.

Form Liquid suspension.
Color Tan to brown
Odor Mild chemical odor

Odor threshold Not available.

pH 4

Melting point/freezing point Do Not Freeze.

Initial boiling point and boiling 216 °F (102 °C)

range

Flash point Not available.

Evaporation rate Solvent will evaporate at same rate as water.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower

(%)

Not available.

Flammability limit - upper (%)

Not available.

Explosive limit - lower (%)
Explosive limit - upper (%)

r (%) Not available. r (%) Not available.

Vapor pressure 2.38E+01 mm Hg @ 25°C.

Vapor density Equal to air.

Relative density Not available.

Solubility(ies)

Solubility (water) Dispersible.

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

Auto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.

Other information

Density 10.50 lb/gal

Fire point > 200.00 °F (> 93.33 °C)

Percent volatile 61 % (approximatly).

Specific gravity 1.26 @ 20°C/4°C(68°F/39°F).

Material name: Terraclor 400

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 Hazardous polymerization does not occur.

reactions

Conditions to avoid Contact with incompatible materials. Incompatible materials

Hazardous decomposition

products

Strong oxidizing agents. Strong acids. Strong bases.

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

Prolonged inhalation may be harmful. Inhalation

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

Eye contact Causes eye irritation.

May cause discomfort if swallowed. Ingestion

Symptoms related to the physical, chemical and toxicological characteristics Exposed individuals may experience eye tearing, redness, and discomfort.

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 Test Results Species Terraclor 400 Acute

Dermal

LD50 Rat > 2020 mg/kg

Inhalation

Mist

LC50 Rat > 2.25 mg/l

Oral

LD50 Rat > 5050 mg/kg

Skin corrosion/irritation Causes slight skin irritation.

Irritation Corrosion - Skin

Terraclor 400 Result: Slight irritant

Species: Rabbit

Serious eye damage/eye

irritation Eve Causes eye irritation.

Result: Mild irritant Terraclor 400 Species: Rabbit

Respiratory or skin sensitization

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

Sensitization

Terraclor 400 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)

Polychlorinated dibenzofurans (CAS SEQ506096)

Polychlorinated dibenzo-p-dioxins (CAS SEQ506094)

3 Not classifiable as to carcinogenicity to humans.

3 Not classifiable as to carcinogenicity to humans.

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

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

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

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

Test Results Components **Species** 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)

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

Bioaccumulative potentialNo data available for this product.

Partition coefficient n-octanol / water (log Kow)

Pentachloronitrobenzene 5

Mobility in soil No data available.

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

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 according to all

applicable regulations. 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 all applicable local/regional/national/international

regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code

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

disposal company.

Waste from residues / unused

products

Dispose of container and residues 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 methods/information).

Contaminated packaging

Triple rinse (or equivalent). Empty containers should be taken to an approved waste handling site

for recycling as disposal in accordance with all applicable regulations. Since applied containers

for recycling or disposal in accordance with all applicable regulations. Since emptied containers

may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number UN3082

UN proper shipping name Transport hazard class(es)

ame Environmentally hazardous substances, liquid, n.o.s. (Pentachloronitrobenzene RQ = 100 lbs)

Class 9

Subsidiary risk Label(s) 9 Packing group Ш

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

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

Packaging exceptions 155 203 Packaging non bulk Packaging bulk 241

IATA

UN number UN3082

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

Transport hazard class(es)

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

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

Other information

Passenger and cargo Allowed with restrictions.

aircraft

Allowed with restrictions. Cargo aircraft only

Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN3082 **UN** number

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

MARINE POLLUTANT

Not established.

Transport hazard class(es)

Class 9 Subsidiary risk Ш Packing group

Environmental hazards

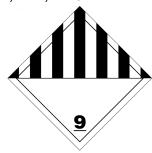
Marine pollutant Yes **EmS** F-A, S-F

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

the IBC Code

DOT; IATA; IMDG



Marine pollutant



IMDG Regulated Marine Pollutant.

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

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 eyes, skin, and clothing. Avoid inhalation of vapors and spray mists.

ENVIRONMENTAL HAZARDS

Do not contaminate water supplies. 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.

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

(SDWA)

Not regulated.

Material name: Terraclor 400 SDS US

947 Version #: 3.0 Revision date: Jun-25-2020 Issue date: May-02-2017

US state regulations

California Proposition 65



WARNING: This product can expose you to 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
(CAS SEQ506094)

Listed: October 1, 1992

Listed: October 1, 1992

California Proposition 65 - CRT: Listed date/Developmental toxin

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

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Polychlorinated dibenzo-p-dioxins (CAS SEQ506094)

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

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

Issue date May-02-2017
Revision date Jun-25-2020

References 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 Agency

SARA: Superfund Amendments and Reauthorization Act

TSCA: Toxic Substances Control Act DOT: Department of Transportation

IMDG: International Maritime Dangerous Goods IATA: International Air Transport Association

Version # 3.0

HMIS® ratings Health: 2

Flammability: 1 Physical hazard: 0

NFPA ratings Health: 2

Flammability: 1
Instability: 0

Material name: Terraclor 400 sps us

947 Version #: 3.0 Revision date: Jun-25-2020 Issue date: May-02-2017

^{*}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).

Disclaimer

Revision information

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.

AMVAC Chemical Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

©2020 AMVAC Chemical Corporation. All Rights Reserved. AMVAC and the AMVAC Logo are trademarks owned by AMVAC Chemical Corporation.

Terraclor is a trademark owned by AMVAC Chemical Corporation.

Blocker and Turfcide are trademarks owned by AMVAC Chemical Corporation.

ACGIH is a trademark of the American Conference of Governmental Industrial Hygienists.

CHEMTREC is a trademark of the American Chemistry Council, Inc.

HMIS is a trademark of the American Coatings Association.

NFPA is a trademark of the National Fire Protection Association, Inc.

Hazard(s) identification: Hazard statement

Hazard(s) identification: Prevention Hazard(s) identification: Response

Composition / Information on Ingredients: Disclosure Overrides Composition/information on ingredients: Component information

Toxicological information: Acute toxicity Toxicological information: Eye contact Toxicological information: Inhalation

Transport Information: Material Transportation Information

Regulatory Information: United States

Regulatory information: California Proposition 65

Other information, including date of preparation or last revision: Disclaimer

GHS: Classification