

1. Identification

Product identifier Oreon™ Fungicide
Other means of identification
SDS number 493
Recommended use Fungicide.
Recommended restrictions Keep out of the Reach of Children!
EPA Registration number EPA: 5481-585

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name AMVAC Chemical Corporation
Address 4100 E Washington Blvd
 Los Angeles, CA 90023 USA
Telephone AMVAC Chemical Corp 323-264-3910
 AMVAC Chemical Corp 323-268-1028 (FAX)
Website www.Amvac-Chemical.com
E-mail CustServ@Amvac-Chemical.com
Emergency phone number Medical 888-681-4261
 CHEMTREC® (USA+Canada) 800-424-9300
 Product Use 888-462-6822
 CHEMTREC® (Outside USA) +1-703-527-3887

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Sensitization, skin Category 1
 Carcinogenicity Category 2
 Reproductive toxicity Category 2
Environmental hazards Hazardous to the aquatic environment, acute hazard Category 1
 Hazardous to the aquatic environment, long-term hazard Category 1
OSHA defined hazards Not classified.

Label elements



Signal word Warning
Hazard statement May cause an allergic skin reaction.
 Suspected of damaging the unborn child.
 Very toxic to aquatic life.
 Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Avoid breathing mist or vapor.
 Contaminated work clothing must not be allowed out of the workplace.
 Avoid release to the environment.
 Wear protective gloves/protective clothing/eye protection/face protection.

Response	If on skin: Wash with plenty of water. If exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Collect spillage.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Pentachloronitrobenzene	PCNB	82-68-8	37.82%
Tebuconazole		107534-96-3	2.50%

Additional components	Common name and synonyms	CAS number	%
Chemical name			
Inert ingredients		N/A	59.68%

Impurities	Common name and synonyms	CAS number	%
Chemical name			
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	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
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	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

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 breathing mist or vapor. 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. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

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. Prevent entry into waterways, sewer, basements or confined areas. Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. 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

Do not handle until all safety precautions have been read and understood. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. 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

Type	Value
TWA	0.5 mg/m3

Type	Value
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 (HCB) (CAS 118-74-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

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

US ACGIH Threshold Limit Values: Skin designation

Hexachlorobenzene (HCB) (CAS 118-74-1) Can be absorbed through the skin.

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection If contact is likely, safety glasses with side shields are recommended.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves are listed on the label.

Other Wear appropriate chemical resistant clothing (see label).

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Not applicable.

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

Physical state Liquid.

Form	Liquid suspension.
Color	A colorless to a slightly yellow
Odor	Not available.
Odor threshold	Not available.
pH	7.4
Melting point/freezing point	< 32 °F (< 0 °C)
Initial boiling point and boiling range	> 212 °F (> 100 °C) (water based suspension)
Flash point	> 210 °F (> 99 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	10.6 lb/gal
Density	1.27 g/cm ³
Flammability class	Combustible IIIB estimated

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	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known. 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.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity May cause an allergic skin reaction.

Product	Species	Test Results
Oreon™ Fungicide		
Acute		
Dermal		
<i>Liquid</i>		
LD50	Rat	> 5050 mg/kg
Inhalation		
<i>Mist</i>		
LC50	Rat	> 0.52 mg/l, 4 h maximum attainable concentration
Oral		
<i>Liquid</i>		
LD50	Rat	> 5000 mg/kg
Skin corrosion/irritation	Not a skin irritant.	
Irritation Corrosion - Skin		
Oreon™ Fungicide		Result: Non-irritating Species: Rabbit Organ: skin
Serious eye damage/eye irritation	Not an eye irritant	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	May cause an allergic skin reaction.	
Skin sensitization		
Oreon™ Fungicide		> 3 Local lymph node assay Result: Sensitizer Species: Mouse Organ: lymph node
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	<p>Laboratory studies with PCNB Technical have shown some carcinogenic effects in the liver and thyroid gland in 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.</p> <p>There was no indication of a carcinogenic effect in rats or mice when Tebuconazole was tested at dose levels up to and including the maximum tolerated dose (MTD) for each species. An increased incidence of heptaocellular neoplasms occurred in mice at a dose level approximately three fold greater than the MTD.</p>	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Hexachlorobenzene (HCB) (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 1910.1001-1050)		
Not listed.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Hexachlorobenzene (HCB) (CAS 118-74-1)		Reasonably Anticipated to be a Human Carcinogen.
Reproductive toxicity	Suspected of damaging the unborn child.	
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.

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 (Oncorhynchus mykiss)	0.55 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

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

Bioaccumulative potential

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 component.

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.

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

US RCRA Hazardous Waste U List: Reference

Hexachlorobenzene (HCB) (CAS 118-74-1) U127

Waste from residues / unused products 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). Dispose of in accordance with all applicable regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN3082
UN proper shipping name	Environmentally hazardous substances, liquid, n.o.s. (Pentachloronitrobenzene RQ = 100 lb, Tebuconazole)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Environmental hazards	
Marine pollutant	Yes (IMDG 2.9.3.3)
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

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Pentachloronitrobenzene, Tebuconazole)
Transport hazard class(es)	
Class	9

Subsidiary risk	-
Packing group	III
Environmental hazards	Yes (when transported over bodies of water)
ERG Code	9L
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.

IMDG

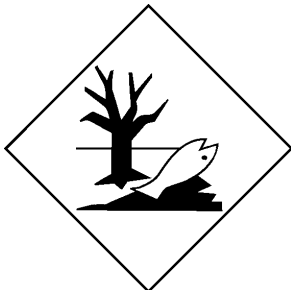
UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pentachloronitrobenzene, Tebuconazole), MARINE POLLUTANT
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

DOT; IATA; IMDG



Marine pollutant



General information

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 currently 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 chemical 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 swallowed, absorbed through skin or inhaled. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Remove and wash contaminated clothing before reuse. Wear long-sleeved shirt, long pants, socks, shoes and gloves.

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 cleaning equipment or disposing of equipment washwaters.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Hexachlorobenzene (HCB) (CAS 118-74-1)	Listed.
Pentachloronitrobenzene (CAS 82-68-8)	Listed.
Polychlorinated dibenzo-p-dioxins (CAS SEQ506094)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes
	Delayed Hazard - Yes
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Pentachloronitrobenzene	82-68-8	37.82%

Other federal regulations

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

Hexachlorobenzene (HCB) (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.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

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

Polychlorinated dibenzo-p-dioxins (CAS SEQ506094)

US. Massachusetts RTK - Substance List

Hexachlorobenzene (HCB) (CAS 118-74-1)

Pentachloronitrobenzene (CAS 82-68-8)

US. New Jersey Worker and Community Right-to-Know Act

Hexachlorobenzene (HCB) (CAS 118-74-1)

Pentachloronitrobenzene (CAS 82-68-8)

US. Pennsylvania Worker and Community Right-to-Know Law

Hexachlorobenzene (HCB) (CAS 118-74-1)

Pentachloronitrobenzene (CAS 82-68-8)

US. Rhode Island RTK

Hexachlorobenzene (HCB) (CAS 118-74-1)

Pentachloronitrobenzene (CAS 82-68-8)

Polychlorinated dibenzo-p-dioxins (CAS SEQ506094)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

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

Hexachlorobenzene (HCB) (CAS 118-74-1) Listed: October 1, 1987

Polychlorinated dibenzofurans (CAS SEQ506096) Listed: October 1, 1992

Polychlorinated dibenzo-p-dioxins (CAS SEQ506094) Listed: October 1, 1992

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

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

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*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 10-02-2015

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 # 01

Further information Not available.

HMIS® ratings Health: 2*
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 2
Flammability: 0
Instability: 0

Disclaimer

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. 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.

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