

MATERIAL SAFETY DATA SHEET

TERRACLOR® 400

Version: 1.5
Date of Issue: 06/26/2007
Date printed: 01/23/2008

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : TERRACLOR® 400

Chemical name: Pentachloronitrobenzene (PCNB)

Use of substance/preparation: Fungicide

Supplier: Chemtura Corporation
199 Benson Road
Middlebury, CT 06749 USA

Emergency telephone number: CHEMTREC (24 hours) 800-424-9300
Chemtura Corporation Emergency Response (24 hours) 800-292-5898

Environmental, Health and Safety Department: 866-430-2775

Prepared by Product Safety Department Date of Issue: 06/26/2007
(US) +1 866-430-2775
(EU) +44 (0) 1753.603.000
Email: MSDSRequest@chemtura.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION!

MAY CAUSE EYE AND SKIN IRRITATION.
HARMFUL IF INHALED OR ABSORBED THROUGH SKIN.
MAY CAUSE ALLERGIC SKIN REACTION.
TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	% BY WEIGHT
Pentachloronitrobenzene CAS# 82-68-8	40

Ingredients not precisely identified are non-hazardous and/or proprietary.

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4. FIRST AID MEASURES

Swallowing

Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Inhalation

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Skin contact

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact

Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lens, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

5. FIRE-FIGHTING MEASURES

Flash point: > 203 °F > 95 °C
Flammable limits:
Lower limit: Not available
Upper limit: Not available
Autoignition temperature: 453 °C (848 °F)

NFPA CLASSIFICATION

Health: 1	Flammability: 1	Reactivity: 0	Special provisions:
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Hazardous combustion products

Burning can produce the following combustion products:

Oxides of carbon.
 Oxides of hydrogen.
 Soot
 Oxides of chlorine

Special fire fighting procedures

Do not discharge extinguishing waters into streams, rivers and lakes.

Special protective equipment for firefighters

Body covering protective clothing, full "turn-out" gear.
 Self-contained breathing apparatus.

Extinguishing media

Suitable: **Large fires:**
 - alcohol-type foam or universal-type foams
Small fires:
 - CO2
 - dry chemical

Unsuitable: - water jets

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear suitable protective equipment., Avoid contact with eyes and skin.

Environmental precautions

Prevent from entering sewer system, surface water or soil.

Methods for cleaning up

Observe government regulations.

Small spills: Absorb on inert material such as sand, earth, vermiculite.
Collect for disposal.

Large spills Dike to contain spill.
Pump excess material into suitable container (metal drums, metal tank, or such).

7. HANDLING AND STORAGE

HANDLING

Handling precautions

Do not get in eyes., Avoid prolonged or repeated contact with skin., Avoid breathing vapor., Use with adequate ventilation., Wash thoroughly after handling.

Other precautions

NOTE TO END-USERS: The employee protection recommendations on this MSDS may differ from those on the product label. For normal use of this product, always refer to the personal protective equipment requirements on the product label.

STORAGE

Storage requirements

Store in a cool, dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

<u>Component</u>	<u>Country</u>	<u>Type</u>	<u>Value</u>	<u>Remark</u>
Pentachloronitrobenzene	USA	TWA-TLV, ACGIH	0.5 mg/m ³	
		ACGIH		Toxicity to reproduction/fertility: A4
<u>Component</u>	<u>Type</u>	<u>Value</u>		<u>Remark</u>
Mineral Oil Mist	TWA (mist), ACGIH	5.0 mg/m ³		If used in way that generates a "mist" observe the limits for Mineral Oil Mist.
	STEL (mist), ACGIH	10.0 mg/m ³		

PERSONAL PROTECTION

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment., The determination of appropriate respiratory protection is best performed, on a case by case basis, taking into consideration the exposure conditions of the particular operation., The respirator manufacturer should be consulted to ensure that the air-purifying cartridges utilized will provide adequate protection for the exposure conditions and period of wear concerned.

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Hand protection / protective gloves

Chemical resistant protective gloves

Eye protection

Safety glasses with side shields.

Skin protection

Wear protective clothing, such as long sleeves to minimize skin contact.

Other protective equipment

Eye bath, Safety shower

ENGINEERING CONTROLS

Ventilation

General (mechanical) room ventilation is expected to be satisfactory. Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical state	Liquid
Color	White to gray
Odor	Mild sweet Alcohol
Odor threshold	Not available

OTHER PROPERTIES

Boiling point	Not available
Melting point	Not available
pH	8 - 9
Specific gravity (H2O=1)	~1.26 at 25 °C
Vapor pressure	
Solubility in water	Low
Solubility in organic solvents	Soluble
Evaporation rate (Butyl Acetate=1)	Not available
Partitioning coefficient	Not available
Flash point	> 203 °F > 95 °C Method: Pensky Martens closed cup
Autoignition temperature	453 °C (848 °F)
Upper explosion limits	Not available
Lower explosion limits	Not available

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10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Incompatible materials:

Strong alkalis.

Hazardous combustion products:

Burning can produce the following combustion products:

Oxides of carbon.
 Oxides of hydrogen.
 Soot
 Oxides of chlorine

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

SWALLOWING

Test results

Acute toxicity: LD50 Rat
 Result: > 5,000 mg/kg

SKIN ABSORPTION

Test results

Acute toxicity: LD50 - Rat
 Result: > 2,000 mg/kg

INHALATION

Test results

Acute toxicity: LD50 - Rat
 Result: > 0.73 mg/l
 Exposure time: 4 h

SKIN CONTACT

Test results

Skin irritation: Species: Rabbit
 Result: Not irritating

EYE CONTACT

Test results

Eye irritation: Species: Rabbit
 Result: Mild irritation

SENSITIZATION

Test results:

Species: - Guinea pigs
 Result: Negative

12. ECOLOGICAL INFORMATION

<p><u>Component ecotoxicology</u> Pentachloronitrobenzene <u>Acute toxicity fish:</u></p>	<p>Acute toxicity fish LC50 - Bluegill (<i>Lepomis macrochirus</i>) Result: 0.1 mg/l Exposure time: 96 h</p>
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<u>Component ecotoxicology</u> Pentachloronitrobenzene <u>Acute toxicity fish:</u>	Acute toxicity fish LC50 - Rainbow trout (<i>Oncorhynchus mykiss</i>) Result: 0.55 mg/l Exposure time: 96 h
<u>Component ecotoxicology</u> Pentachloronitrobenzene <u>Acute toxicity to aquatic invertebrates:</u>	Acute daphnia toxicity LC50 - Water flea (<i>Daphnia magna</i>) Result: 0.77 mg/l Exposure time: 48 h

13. DISPOSAL CONSIDERATIONS

General: Dispose of in accordance with appropriate Federal, State, and local regulations., Avoid discharge to sewers and natural waters.

US waste

In accordance with EPA/RCRA 40 CFR261.33 (f) U158. In accordance with EPA/RCRA 40 CFR261.33 (f) U158.

14. TRANSPORT INFORMATION

DOT Classification

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pentachloronitrobenzene)
Class: 9
UN ID #: UN3082
Packing group: III
marine pollutant: MARINE POLLUTANT

Not regulated by ground or rail if shipped or transported in containers less than 250 lbs (113.4 kg).

IMDG Classification

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
Class: 9
Subsidiary risk: marine pollutant
UN ID #: UN 3082
Packing group: III
Marpol: marine pollutant
Technical description (Pentachloronitrobenzene)

ICAO Classification

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class: 9
UN ID #: UN 3082
Packing group: III
Technical description (Pentachloronitrobenzene)

Only regulated by air Into, Out of or Within the United States in containers 250 lbs (113.4 kg) or greater.

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15. REGULATORY INFORMATION

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of hazardous substances equal to or greater than the reportable quantities (RQ's) in 40CFR302.4.

Components present in this product at a level which could require reporting under the statute are:

Chemical name	RQ 100 lbs for	CAS#	Max weight %
Pentachloronitrobenzene	PCNB	82-68-8	40.00

Reportable Quantity:
100 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40CFR372 (for SARA 313). This information must be included in MSDS's that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

Chemical name	CAS#	Max weight %
Pentachloronitrobenzene	82-68-8	40.00

Massachusetts Right-To-Know Substance List (MSL)--Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

Chemical name	CAS#	Max weight %
Pentachloronitrobenzene	82-68-8	40.00

Pennsylvania Right-To-Know Hazardous Substance List--Hazardous Substances and Special Hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

Chemical name	CAS#	Max weight %
Pentachloronitrobenzene	82-68-8	40.00

New Jersey Worker and Community Right-To-Know Act (Labeling Requirements)

Chemical name	CAS#	New Jersey TS Number
Pentachloronitrobenzene	82-68-8	
Distillates (petroleum), hydrotreated heavy parafinic	64742-54-7	

CHEMICAL INVENTORY

Canada: This product is exempt from the New Substances Notification Regulations under CEPA when used as a component in a registered pesticide formulation., PCP# 27691

Europe: The ingredients of this product are on the EINECS inventory.

United States: The ingredients of this product are listed on the TSCA inventory or are exempt.

Australia: The ingredients of this product are on the AICS inventory.

China: This product is listed with the State Environmental Protection Administration (SEPA).

Japan: The ingredients of this product are on the ENCS inventory.

Philippines: The ingredients of this product are on the PICCS.

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16. OTHER INFORMATION

RECOMMENDED USES AND RESTRICTIONS: NOTE TO END-USERS: This MSDS is being provided to all interested persons in accordance with federal and state right-to-know laws. Precautionary Statements, First Aid Statements and Directions for Use of this product by end-users are contained on the product label and must be followed at all times.

HMIS RATING

Health: 1	Flammability: 1	Reactivity: 0	PPI:
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STP	Standard temperature and pressure
W/W	Weight/Weight
0 (HMIS)	0 (HMIS)
1 (HMIS)	Slight hazard
2 (HMIS)	Moderate hazard
3 (HMIS)	Serious hazard
4 (HMIS)	Severe hazard
X (HMIS)	Personal protection rating to be supplied by user depending on use conditions

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