



MATERIAL SAFETY DATA SHEET

TURFCIDE® 400

Version: 1.0
DATE OF ISSUE: 02/14/2006
Date printed: 03/25/2006

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : TURFCIDE® 400

Chemical name: Fungicide

Use of substance/preparation: Fungicide

Supplier: Chemtura USA Corporation
Chemtura Corporation (Worldwide HQ)
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
For additional emergency telephone numbers
see section 16 of the Safety Data Sheet.

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

2. COMPOSITION / INFORMATION ON INGREDIENTS

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

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION!

MAY CAUSE EYE AND SKIN IRRITATION.

MAY CAUSE AN ALLERGIC SKIN REACTION.

TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

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.



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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.

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.

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.

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



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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

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



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Storage requirements
Store in a cool, dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

<u>Component</u> Pentachloronitrobenzene	<u>Country</u> Belgium	<u>Type</u> MAC TWA	<u>Value</u> 0.5 mg/m3	<u>Remark</u>
	Denmark	TWA	0.5 mg/m3	
	Ireland	OEL-TWA	0.5 mg/m3	
	Italy	TWA	0.5 mg/m3	
	Spain	VLA-ED	0.5 mg/m3	
	the Netherlands	TGG	0.5 mg/m3	
	USA	TWA-TLV, ACGIH	0.5 mg/m3	
				Toxicity to reproduction/fertility: A4
	Australia	TWA	0.5 mg/m3	
<u>Component</u> Mineral Oil Mist	<u>Type</u> TWA (mist), ACGIH	<u>Value</u> 5.0 mg/m3	<u>Remark</u> If used in way that generates a "mist" observe the limits for Mineral Oil Mist.	
	STEL (mist), ACGIH	10.0 mg/m3		

PERSONAL PROTECTION

Respiratory protection

Self-contained breathing apparatus in high vapor concentrations.

Hand protection / protective gloves

Chemical resistant protective gloves

Eye protection



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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	Musty
Odor threshold	Not available

OTHER PROPERTIES

Boiling point	Not available
Melting point	Not available
pH	8 - 9
Specific gravity (H ₂ O=1)	~1.26 at 25 °C
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

<u>Component data</u> Pentachloronitrobenzene Acute toxicity - Swallowing:	LD50 - Rat Result: > 5,000 mg/kg
<u>Component data</u> Pentachloronitrobenzene Acute toxicity - Skin absorption:	LD50 - Rabbit Result: > 2,000 mg/kg
<u>Component data</u> Pentachloronitrobenzene Acute toxicity - Inhalation:	LC50 - Rat Result: > 0.25 mg/l Exposure time: 4 h
<u>Component data</u> Pentachloronitrobenzene Skin irritation - Skin contact:	Species: Rabbit Exposure time: 4 h Result: Slightly irritating Classification: Not irritant
<u>Component data</u> Pentachloronitrobenzene Eye irritation - Eye contact:	Species: Rabbit Result: Mild irritation Classification: Not irritant
<u>Component data</u> Pentachloronitrobenzene Sensitization:	Species: Guinea pigs Result: Positive

MUTAGENICITY



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Component (Pentachloronitrobenzene): Ames-test: no mutagenic effect

MUTAGENICITY

Component (Pentachloronitrobenzene): This material was negative in a mouse lymphoma mutagenicity assay.

MUTAGENICITY

Component (Pentachloronitrobenzene): Sister Chromatid Exchange: Negative

MUTAGENICITY

Component (Pentachloronitrobenzene): Negative in a mouse micronucleus assay.

MUTAGENICITY

Component (Pentachloronitrobenzene): Chromosome Aberration (CHO): Positive

CARCINOGENICITY

Component (Pentachloronitrobenzene): IARC Group 3: cannot be classified as carcinogenic to humans.

12. ECOLOGICAL INFORMATION

<u>Component ecotoxicology</u> <u>Pentachloronitrobenzene</u> <u>Acute toxicity fish:</u>	Acute toxicity fish LC50 - Bluegill (<i>Lepomis macrochirus</i>) Result: 0.1 mg/l Exposure time: 96 h
<u>Component ecotoxicology</u> <u>Pentachloronitrobenzene</u> <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> <u>Pentachloronitrobenzene</u> <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.

Non-cleaned packages

Empty drums should be decontaminated and either passed to an approved drum reconditioner or destroyed., Containers that cannot be cleaned must be treated as waste.

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



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DOT Classification

Not regulated by ground or rail if shipped or transported in container less than 400kg.

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

Not regulated by ground or rail if shipped or transported in container less than 400kg.

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

ICAO Classification

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

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

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



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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	

Solvent neutral oil	64742-54-7
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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.

16. OTHER INFORMATION

RECOMMENDED USES AND RESTRICTIONSNOTE 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.

FURTHER INFORMATION

MAY BE ON THE INVENTORY LIST BUT NOT NECESSARILY REGISTERED, (Korea, China, New Zealand) CONSULT REGULATORY SPECIALIST.

Emergency Telephone Numbers

Latin America:	All	+44 (0)208 762 8322
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HMIS RATING

Health: 1	Flammability: 1	Reactivity: 0	PPI:
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STP	Standard temperature and pressure
W/W	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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