



MATERIAL SAFETY DATA SHEET

KERNEL GUARD® SUPREME

Version: 1.5
Date of Issue: 09/27/2007
Date printed: 09/28/2007

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : KERNEL GUARD® SUPREME

Chemical name: Permethrin-Carboxin (Actives)

Use of substance/preparation: Seed Treatment Fungicide

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

Emergency telephone number: CHEMTREC (24 hours) 800-424-9300, 703-527-3887
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: 09/27/2007
(US) +1 866-430-2775
(EU) +44 (0) 1753.603.000
Email: MSDSRequest@chemtura.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION!

MAY BE HARMFUL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN.
MAY CAUSE EYE AND SKIN IRRITATION.
AVOID DISPERSION OF DUST IN AIR.

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	% BY WEIGHT
Permethrin CAS# 52645-53-1	10.42
Carboxin CAS# 5234-68-4	14
Graphite CAS# 7782-42-5	10 - 20
Talc CAS# 14807-96-6	20 - 30



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Version: 1.5
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Free Silica (Quartz) < 2
CAS# 14808-60-7

Inerts < 43.58
CAS# -

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.

Notes to physician

ROUTES OF ENTRY:

Skin

Eyes

Ingestion

Inhalation

When large toxic doses were administered to test animals, they exhibited symptoms such as diarrhea, tremors, salivation and intermittent convulsion.

5. FIRE-FIGHTING MEASURES

Flammable limits

Lower limit: Not available

Upper limit: Not available

Autoignition temperature:

Not available

Hazardous combustion products

Irritating fumes.

Oxides of carbon.

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

- water spray

Unsuitable:

- water jets



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Unusual fire and explosion hazards

Avoid dispersion of dust in air to reduce potential for dust ignition/explosions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Evacuate unnecessary personnel., Avoid all contact with material., Wear suitable protective equipment.

Environmental precautions

Prevent from entering sewer system, surface water or soil.

Methods for cleaning up

Sweep up and collect in a suitable container for disposal.

Avoid dust formation.

Observe government regulations.

7. HANDLING AND STORAGE

HANDLING

Handling precautions

Wear recommended personal protection equipment., Warn personnel about the dangers of the product., Keep container tightly closed., Avoid dispersion of dust to reduce fire and explosion potential.

Other precautions

If fine dust is formed from this product, avoid dispersion of dust in air to reduce fire and explosion hazard. Do not store near food, feed or fertilizers. Do not contaminate ponds, lakes, streams, or any source of water. 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>
Graphite	USA	TLV-TWA, ACGIH	2 mg/m3	respirable fraction, all forms except graphite fibers
Talc	USA	TWA, ACGIH	2 mg/m3	Respirable fraction Non-asbestos form; otherwise, use asbestos
Free Silica (Quartz)		ACGIH - respirable dust	0.05 mg/m3	Toxicity to reproduction/fertility: CANCER HAZARD A2
Free Silica (Quartz)		OSHA - respirable dust	0.1 mg/m3	TWA
Free Silica (Quartz)		OSHA - total dust	0.3 mg/m3	TWA

PERSONAL PROTECTION



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Respiratory protection

In the absence of engineering controls sufficient to maintain airborne concentrations below recommended occupational exposure limit values, appropriate respiratory protection should be utilized. 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.

For emergency conditions where the exposure limit may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus.

Hand protection / protective gloves

Chemical resistant protective gloves

Eye protection

Full face shield.

Skin protection

Chemical resistant protective clothing.

Industrial hygiene measures

Before eating, drinking or smoking, wash hands and face thoroughly with soap and water.

ENGINEERING CONTROLS

Ventilation

Provide local exhaust or process enclosure ventilation system.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical state	Powder
Color	Gray
Odor	Faint - musty
Odor threshold	Not available

OTHER PROPERTIES

Boiling point	Not available
Melting point	Not available
pH	Not available
Bulk density	320 - 368 kg/m ³ 20 - 30 lb/ft ³
Vapor pressure	
Solubility in water	Insoluble
Evaporation rate (Butyl Acetate=1)	Not available
Partitioning coefficient	Not available
Flash point	Not available, Non-flammable solid
Autoignition temperature	Not available
Upper explosion limits	Not available
Lower explosion limits	Not available



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Percent volatiles Not available
Explosive properties Non explosive.

10. STABILITY AND REACTIVITY

Stability: This product is stable under normal storage and handling conditions.

Incompatible materials:

Oxidizing agents.
Strong acids.
Strong bases.

Hazardous combustion products:

Irritating fumes.
Oxides of carbon.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

SWALLOWING

Test results

Acute toxicity: LD50 Rat (Females)
Result: 3,302 mg/kg

Acute toxicity: LD50 Rat (Males)
Result: > 5,050 mg/kg

SKIN ABSORPTION

Test results

Acute toxicity: LD50 - Rabbit
Result: > 5,050 mg/kg

INHALATION

Test results

Acute toxicity: LC50
Result: > 9,28 mg/l
Exposure time: 4 h

SKIN CONTACT

Test results

Skin irritation: Result: Slight

EYE CONTACT

Test results

Eye irritation: Result: Minimal irritation

12. ECOLOGICAL INFORMATION

Very toxic to aquatic organisms.
May cause long-term adverse effects in the aquatic environment.

Component ecotoxicology	LC50 - Bluegill (<i>Lepomis macrochirus</i>)
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Permethrin <u>Acute toxicity fish:</u>	Result: 0.79 ppb Exposure time: 96 h
<u>Component ecotoxicology</u> Carboxin <u>Acute toxicity fish:</u>	LC50 - Rainbow trout (Oncorhynchus mykiss) Result: 2.3 mg/l Exposure time: 96 h
<u>Component ecotoxicology</u> Carboxin <u>Acute toxicity fish:</u>	LC50 - Bluegill (Lepomis macrochirus) Result: 3.6 mg/l Exposure time: 96 h
<u>Component ecotoxicology</u> Carboxin <u>Aquatic toxicity to plants:</u>	EC50 - Selenastrum capricornutum Result: 0.48 mg/l Exposure time: 120 h
<u>Component ecotoxicology</u> Permethrin <u>Acute toxicity to aquatic invertebrates:</u>	LC50 - Mysid shrimp (Mysis litoralis) Result: 0.019 ppb Exposure time: 96 h
<u>Component ecotoxicology</u> Carboxin <u>Acute toxicity to aquatic invertebrates:</u>	EC50 - Water flea (Daphnia magna) Result: > 57 mg/l Exposure time: 48 h

13. DISPOSAL CONSIDERATIONS

General: Dispose of in accordance with appropriate Federal, State, and local regulations., Do not discharge to sewers and natural waters.

14. TRANSPORT INFORMATION

DOT Classification

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Carboxin/Permethrin)
Class: 9
UN ID #: UN3077
Packing group: III
marine pollutant: MARINE POLLUTANT

Not regulated by ground or rail if shipped or transported in containers less than 20 lbs (9 kg).

Technical description Carboxin/Permethrin

IMDG Classification

Proper shipping name: Environmentally hazardous substance, solid, n.o.s.
Class: 9
UN ID #: UN 3077
Packing group: III
Technical description (Carboxin/Permethrin)

ICAO Classification

Proper shipping name: Environmentally hazardous substance, solid, n.o.s.
Class: 9
UN ID #: UN 3077
Packing group: III



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Technical description (Carboxin/Permethrin)

marine pollutant
 Only regulated by air Into, Out of or Within the United States in containers 20 lbs (9.1 kg) or greater.

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:

**** NONE ****

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQ's) and release reporting based on Reportable Quantities (RQ's) in 40CFR355 (used for SARA 302 and 304). Components present in this product at a level which could require reporting under the statute are:

Chemical name	CAS#	Max weight %
Permethrin	52645-53-1	10.42
Carboxin	5234-68-4	14.00

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 %
Permethrin	52645-53-1	10.42
Carboxin	5234-68-4	14.00

EPA Hazard Categories (SARA 311, 312): Immediate Health Hazard, Delayed Health Hazard

CHEMICAL INVENTORY

United States: This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from TSCA Inventory listing requirements.

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: 0	Reactivity: 0	PPI: X
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STP	Standard temperature and pressure
W/W	Weight/Weight 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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