

SAFETY DATA SHEET

D-FENSE DUST

1. IDENTIFICATION

Product name: **D-Fense Dust**
Product type: Insecticide
EPA Registration No.: 53883-283
Chemical name of active ingredient(s): **Deltamethrin**: [(S)-alpha-Cyano-3-phenoxybenzyl (1R)-cis-3-(2,2-dibromovinyl)-2,2-dimethylcyclopropanecarboxylate]
Manufacturer/Registrant: Control Solutions, Inc.
5903 Genoa-Red Bluff
Pasadena, TX 77507
For fire, spill, and/or leak emergencies, contact Chemtrec: Phone: 1-800-424-9300
For medical emergencies and health and safety inquiries, contact Safety Call: Phone: 1-866-897-8050
Poison Control Center Phone: 1-800-222-1222

2. HAZARDS IDENTIFICATIONS

OSHA HCS CLASSIFICATION (29 CFR 1910.1200)

Acute Toxicity:

Exposure Route	Acute oral	Acute dermal	Acute inhalation	Eye irritation	Skin irritation	Skin Sensitization
Category	NC	NC	NC	NC	2	NC

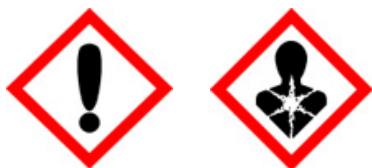
NC: Not classified

SIGNAL WORD: WARNING

HAZARD STATEMENTS:

- Cause skin irritation
- Suspected of causing cancer. (Hazard Category 2)

PICTOGRAMS:



PRECAUTIONARY STATEMENTS:

- Wash hands thoroughly after handling. Wear protective gloves. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice. Take off contaminated clothing and wash it before reuse.
- Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and clothing.

Contact Safety Call[®] International for emergency medical treatment at (866) 897-8050.

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Deltamethrin	52918-63-5	0.05	NE	NE	NA	IARC – 3*

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Crystalline Silica	14808-60-7	< 0.5	30 mg/m ³ (%SiO ₂ +2) (TWA; total dust); 10mg/m ³ (% SiO ₂ +2) (respirable)	0.025 mg/m ³ (TWA; respirable fraction)	0.05mg/m ³ (REL; respirable dust) **	IARC – 1*
Calcium carbonate	1317-65-3	< 99	15 mg/m ³ (TWA) (respirable dust) 5/mg/m ³ (TWA)	10 mg/m ³ (Total dust)	NA	NA

NE= Not established; NA= Not applicable

*IARC Group 1: The agent (mixture) is carcinogenic to humans. IARC Group 3: The agent (mixture or exposure circumstance) is unclassifiable as to carcinogenicity to humans.

** NIOSH exposure limits.

4. FIRST AID MEASURES

FIRST AID	
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continuing rinsing eye. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall® (866) 897-8050 for emergency medical treatment information.	

5. FIRE FIGHTING MEASURES

FLASH POINT: NA

FLAMMABLE LIMITS: NA

EXTINGUISHING MEDIA: Water fog, CO₂, foam, dry chemical.

UNUSUAL FIRE & EXPLOSION HAZARDS: Pesticide fires have potential to emit hazardous decomposition products.

HAZARDOUS DECOMPOSITION PRODUCTS: May release irritating and toxic gases due to thermal decomposition. Products of combustion include oxides of carbon and nitrogen.

FIRE-FIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear. Keep upwind. Isolate hazard area. Avoid inhalation of smoke and fumes. Use water or foam to reduce fumes. Do not touch spilled material. If possible, move containers from area. Extinguish only if flow can be stopped. Use flooding amounts of water as a fog. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors.

6. ACCIDENTAL RELEASE MEASURES

SPILL CLEANUP: In case of spill on floor or paved surfaces, sweep up and remove to chemical waste storage area until proper disposal can be made. Rinse contaminated material with water and absorb with clay granules or universal absorbent pads.

CONTAINMENT: Do not discharge waste into municipal wastewater or public storm drains. Eliminate runoff as much as possible.

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WASTE DISPOSAL: Sweep contaminated absorbent material into suitable container. Seal container and dispose of all contaminated waste material in municipal land-fill or through licensed TSDF. Open dumping is prohibited.

7. HANDLING AND STORAGE

Do not contaminate water, food, or feed by storage or disposal.

PRECAUTIONS TO BE TAKEN IN HANDLING: Exercise caution to prevent damage to or leakage from the container. Workers should follow good hygiene practices to avoid cross contamination and accidental ingestion. Always wash hands thoroughly after handling pesticides and before eating, drinking, or smoking.

PRECAUTIONS TO BE TAKEN IN STORAGE: Mix only as needed. Do not store diluted material. Do not store near food or feed.

STORAGE TEMPERATURE (MIN/MAX): Normal ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

EYE PROTECTION: Protective eyewear or chemical safety glasses with side shields or chemical goggles when working in non-ventilated spaces.

SKIN PROTECTION: Long-sleeve shirt, long pants, shoes plus socks.

HAND PROTECTION: Chemical-resistant gloves.

RESPIRATOR REQUIREMENTS: None required. Use NIOSH approved air purifying respirator or filtering face piece with N or P class filter.

WORK HYGIENIC PRACTICES:

Clean water should be available to rinse eyes and skin in case of chemical exposure. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

ADDITIONAL PROTECTIVE MEASURES:

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

Users Should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

EXPOSURE GUIDELINES: Refer to Section 3.

ENGINEERING CONTROLS: Use only in adequately ventilated areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Opaque off-white solid powder

ODOR: Weak characteristic

pH: NA

FLASH POINT: NA

BULK DENSITY: 55 lbs/cu. ft.

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WATER SOLUBILITY: Slightly soluble.

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Avoid exposure to extreme temperatures.

HAZARDOUS DECOMPOSITION PRODUCTS: May release irritating and toxic gases due to thermal decomposition. Products of combustion include oxides of carbon and nitrogen.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES:

Acute Oral LD₅₀ (Rat): > 5,050 mg/kg

Acute Dermal LD₅₀ (Rabbit): >5,050 mg/kg

Acute Inhalation LC₅₀ (Rat): >26.1 mg/L/4-hr; > 100 mg/L/1-hr

Eye Irritation: Non-irritating

Skin Irritation: Slightly irritating

Dermal Sensitization: Negative

ROUTES OF EXPOSURE: Eye and skin contact.

POTENTIAL HEALTH EFFECTS:

SKIN CONTACT: May be harmful if absorbed through skin. May cause a transient, localized parasthesia, characterized by tingling, burning or numbness sensation in some individuals.

EYE CONTACT: Non-irritating.

OTHER TOXICOLOGICAL INFORMATION: (Based on Deltamethrin Technical)

CHRONIC TOXICITY/CARCINOGENICITY: General neurological symptoms were exhibited in studies with rats, mice and dogs. These symptoms included unsteadiness, abnormal gait, tremors and liquid feces. No histopathologic findings were observed except some signs of slight hepatotoxicity in mice. No Observable Effect Levels hepatotoxicity in mice. No Observable Effect Levels (NOEL's) were 1 mg/kg/day in the 2 year rat and dog studies. The NOEL for the 2-year mouse study was approximately 12 mg/kg/day. Deltamethrin was not carcinogenic in rats or mice.

NEUROTOXICITY: Deltamethrin does not inhibit acetylcholinesterase. Neurobehavioral effects including unsteadiness, excessive salivation, vomiting, liquid feces, uncoordinated movement, tremors, spasmodic convulsions which are typically related to Central Nervous System (CNS) stimulation, were observed in some studies. The NOEL for these studies was 1 mg/kg/day or higher.

REPRODUCTIVE/DEVELOPMENTAL: No developmental effects were observed in studies with rats or rabbits in the absence of maternal toxicity. The developmental NOEL for the rat study was 3.3 mg/kg/day while the developmental NOEL for rabbits was 25 mg/kg/day. Reproduction studies with rats produced clinical signs, reduced body weight gain and mortality in parents and offspring at very high dosages. The NOEL for the parents and offspring was 80 ppm or approximately 4 to 12 mg/kg/day for adults and 18 to 44 mg/kg/day for offspring.

MUTAGENICITY: No evidence of genotoxicity was observed in a battery of in vitro and in vivo studies.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: This pesticide is extremely toxic to fish and aquatic invertebrates. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters.

Applying this product in calm weather when rain is not predicted for the next 2 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area.

The active ingredient Deltamethrin is highly toxic to fish and other aquatic species, however, the toxicity to avian species is relatively low.

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ECOTOXICITY INFORMATION: (Based on Deltamethrin Technical)

AVIAN TOXICITY:

Bobwhite Quail (LD50): > 2250 mg/kg
Bobwhite Quail (dietary LC50): > 5620 ppm
Mallard Duck (dietary LC50): > 8039 ppm

AQUATIC TOXICITY:

Rainbow Trout (96-Hour LC50): 0.26 ppb
Bluegill Sunfish (96-Hour LC50) 0.17 ppb
Sheepshead Minnow (96-Hour LC50): 0.48ppb
Chronic Toxicity-Fathead Minnow: MATC = 24 ppt
Chronic Daphnia Toxicity: MATC =6.0 ppt

ENVIRONMENTAL FATE: The major routes of dissipation are soil binding and soil microbial degradation. Although soil binding is strong, it is not immediate. It appears that spray drift is the only significant route of exposure to aquatic organism. However, deltamethrin's strong binding capacity to slime, plants, sediment, etc., might rapidly prevent the availability of deltamethrin for bioconcentration in aquatic systems. Additionally, its insolubility in water will be a factor in limiting its bioconcentration as well. Deltamethrin hydrolyzes under alkaline conditions. Leaching studies indicate that Deltamethrin is immobile.

Water Solubility: <0.20 mg/l @ 25°C

Hydrolytic Half-Life: 2.28-2.70 days @ pH 9.0

Photolytic Half-Life: 64-86 days (water); 9 days (soil)

Soil Half-Life: 14-40 days (cropped plots); 37-69 days (bare ground) in field dissipation studies

Bioconcentration Factor (BCF in bluegill sunfish): 189-3630x

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Do not contaminate water, food, or feed by storage or disposal. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Dispose of excess or waste pesticide by use according to label directions, or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

14. TRANSPORT INFORMATION

CLASSIFICATION:

DOT (ground): Not regulated

IMO (vessel): Not regulated

IATA (air): Not regulated

15. REGULATORY INFORMATION

FIFRA INFORMATION:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements different from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION Cause moderately eye irritation. Avoid contact with eyes, skin or clothing, Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

SARA TITLE III CLASSIFICATION:

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Section 302: Not applicable.
Section 311/312: Acute health hazard (immediate)
Chronic health hazard (delayed)
Section 313: Not applicable

CA PROPOSITION 65: Not applicable

CERCLA RQ: Not applicable

RCRA CLASSIFICATION: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

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

16. OTHER INFORMATION

HAZARD RATINGS	NFPA	HMIS
HEALTH:	1	1 0 MINIMAL
FLAMMABILITY:	0	0 1 SLIGHT
REACTIVITY:	0	0 2 MODERATE
		3 HIGH
		4 SEVERE

MSDS DATE: 11-26-2012. Supersedes version dated 7-14-2011. Changes made to all sections.

The information and recommendations contained herein are based upon data believed to be correct. However, no warranty of any kind, expressed or implied, is made with respect to the information contained herein.