

SAFETY DATA SHEET

D-Fense SC

1. IDENTIFICATION

Product name: **D-Fense SC**
Product type: Insecticide
EPA Registration No.: 53883-276
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	4	NC	NC	NC

NC: Not classified

SIGNAL WORD: Warning

HAZARD STATEMENT:

- Harmful in inhaled
- Toxic to aquatic organisms,

PICTOGRAM:



PRECAUTIONARY STATEMENTS:

- Avoid breathing vapors/spray. Use only in a well-ventilated area. If inhaled: Remove victim to fresh air and keep comfortable for breathing. Call a poison center if you feel unwell.

PHYSICAL CHEMICAL HAZARDS: Do not use water-based sprays of Delta 4.75% SC in conduits, motor housings, junction boxes, switch boxes, or other electrical equipment because of possible shock hazard.

Contact Chemtrec for emergency medical treatment at 1- 800-424-9300.

STORAGE AND DISPOSAL: See Section 7 and 13.

OTHER HAZARDS: See Section 11 and 12.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Deltamethrin	52918-63-5	4.75	NE	NE	NA	IARC – 3*
Silicon Dioxide (Crystalline Free)	112945-52-5	2	10mg/m ³ (nuisance dust)	10mg/m ³ (total dust)	NA	NA
Xanthan Gum	11138-66-2	0.5–0.3	15mg/m ³ (total dust) (8h TWA) 5mg/m ³ (respirable) (8h TWA)	NE	NE	NA
Propylene Glycol	57-55-6	2	NE	NE	10 mg/m ³ **	NA

NE= Not established; NA= Not applicable

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

** WEEL: Workplace Environmental Exposure Levels

4. FIRST AID MEASURES

FIRST AID	
IF INHALED:	<ul style="list-style-type: none"> • 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 treatment advice.
<p>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.</p>	

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. Dispose of with chemical waste.

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

7. HANDLING AND STORAGE

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

PRECAUTIONS TO BE TAKEN IN HANDLING: Avoid breathing vapors and spray mist. Wash hands thoroughly with soap after handling pesticides and before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use.

PRECAUTIONS TO BE TAKEN IN STORAGE: Mix as needed. Store in original container in a secured dry storage area. Avoid extremes in temperatures. Prevent cross-contamination with other pesticides and fertilizers. If the container is leaking and/or material is spilled, on floor or paved surfaces, absorbed on sawdust or other commercially available absorbing material, sweep up and remove to chemical waste area for your disposal. Concentrate is stable at normal storage temperatures.

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

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 when working in non-ventilated areas.

ADDITIONAL PROTECTIVE MEASURES:

Eyre wash facility and safety shower should be available. 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 LIMITS: Refer to Section 3.

ENGINEERING CONTROLS: Use only in adequately ventilated areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White liquid

ODOR: Odorless

ODOR THRESHOLD: Not available

pH: 6.0

FLASH POINT: Not available

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DENSITY: 1.04 g/mL@20°C

WATER SOLUBILITY: Not available

VISCOSITY: 5,000 cps @ 6 rpm; 3,000 cps @ 12 rpm

FLAMMABILITY (Solid, Gas): Not applicable

UPPER/LOWER FLAMMABILITY/EXPLOSIVE LIMITS: Not available

AUTO-IGNITION TEMPERATURE: Not available

EXPLODABILITY: Not applicable

SOLUBILITY: Not available

PARTITION COEFFICIENT (n-OCTANOL/WATER): Not available

VAPOR PRESSURE: Not available

VAPOR DENSITY: Not available

MELTING POINT/FREEZING POINT: Not applicable

BOILING POINT: Not available

EVAPORATION RATE: Not available

DECOMPOSITION TEMPERATURE: Not available

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: (Data from a similar product)

Acute Oral LD₅₀ (Rat): > 15,000 mg/kg

Acute Dermal LD₅₀ (Rabbit): > 10,000 mg/kg

Acute Inhalation LC₅₀ (Rat): > 1.02 mg/L/4-hr (in the liquid aerosol form)

Eye Irritation: Minimally irritating

Skin Irritation: Slightly irritating

Dermal Sensitization: Negative

ROUTES OF EXPOSURE: Inhalation, Ingestion, Eye and Skin contact.

POTENTIAL HEALTH EFFECTS:

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

EYE CONTACT: Non-irritating.

INHALATION: Harmful if inhaled.

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,

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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.

CARCINOGENICITY: Deltamethrin was not carcinogenic in lifetime feeding studies in rats and mice.

Propylene Glycol - In rare cases, repeated or prolonged exposure to Propylene Glycol may cause central nervous system effects.

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. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

The pesticide is highly toxic to bees exposed to direct treatment. Do not apply or allow it to drift to crops or weeds on which bees are actively foraging.

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

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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

DOT CLASSIFICATION:

Not regulated

INTERNATIONAL TRANSPORTATION:

IMO (vessel): UN3082, Environmentally Hazardous substances, liquid, n.o.s. (Deltamethrin), 9, PG III, Marine Pollutant

IATA (air): UN3082, Environmentally Hazardous substances, liquid, n.o.s. (Deltamethrin), 9, PG III

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 differ 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 Harmful if inhaled. Avoid breathing vapor or spray mist. Contact with product may result in transient tingling and reddening of the skin. Remove contaminated clothing and wash before reuse.

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable.

Section 311/312: Acute health hazard (immediate)
Chronic health hazard (delayed)

Section 313: 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.

CA PROPOSITION 65: Not applicable

STATE RIGHT-TO-KNOW: Propylene Glycol (CAS No. 57-55-6): MN

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16. OTHER INFORMATION

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

SDS DATE: 6-4-2015. Supersedes version dated 4-1-2011. 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.