



# SAFETY DATA SHEET

## D-Fense SC

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS is intended to provide important health and safety information for employers, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200). The product label provides information specifically for product use/application. Use, storage, and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage and disposal information is set forth on that label. It is a violation of federal law to use an EPA registered pesticide product in any manner inconsistent with its labeling.

### SECTION 1: IDENTIFICATION

**Product Name:** D-Fense SC  
**EPA Registration No.:** 53883-276  
**Recommended Use:** Insecticide; See product label for a complete list of uses and use sites.  
**Restrictions on Use:** See product label for any restrictions on the use of this product.  
**Chemical Family:** Pyrethroid  
**Chemical Name of Active Ingredient(s):** Deltamethrin  
**Manufactured for:** Control Solutions, Inc.  
5903 Genoa-Red Bluff  
Pasadena, TX 77507

**FOR FIRE, SPILL, AND/OR LEAK EMERGENCIES CONTACT: CHEMTREC 1-800-424-9300**

**FOR MEDICAL EMERGENCIES AND HEALTH AND SAFETY INQUIRIES CONTACT: Safety Call 1-866-897-8050**

### SECTION 2: HAZARD(S) IDENTIFICATION

**EMERGENCY OVERVIEW:** White, odorless liquid

**OSHA HCS CLASSIFICATION (29 CFR 1910.1200)**

Acute Inhalation Toxicity	Category 4
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**OSHA Signal Word:** WARNING



**Hazard Statement(s):** Harmful if inhaled

**Precautionary Statement(s):**

**Prevention:** Avoid breathing vapors/spray.  
Use only in a well-ventilated area.

**Response: IF INHALED:** Remove victim to fresh air and keep comfortable for breathing.  
Call a poison center if you feel unwell.

**Storage:** No statement required. See Section 7 for additional information.

**Disposal:** No statement required. See Section 13 for additional information.

\*Please see Section 15 for an explanation of the difference between this SDS and the product label.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Deltamethrin	52918-63-5	4.75%
Propylene glycol	57-55-6	1.0 – 5.0%
Synthetic amorphous, pyrogenic silica	112945-52-5	1.0 – 5.0%

\*Ingredients not listed or listed with a weight % range are considered a trade secret and are withheld under 29 CFR 1910.1200(i).

SECTION 4: FIRST AID MEASURES	
<b>IF IN EYES:</b>	Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eye. Call a poison control center or doctor for treatment advice.
<b>IF ON SKIN:</b>	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.
<b>IF INHALED:</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
<b>IF INGESTED:</b>	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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Most important symptoms/effects, acute and delayed:** May cause a transient, localized paresthesia, characterized by tingling, burning or numbness sensation in some individuals.

SECTION 5: FIRE-FIGHTING MEASURES	
<b>Suitable Extinguishing Media:</b>	Water spray, alcohol-resistant foam, dry chemical or carbon dioxide
<b>Unsuitable Extinguishing Media:</b>	Water jet as it may spread fire.
<b>Hazardous Combustion Products:</b>	Thermal decomposition may produce toxic carbon, nitrogen and sulfur oxides.
<b>Special Protective Equipment &amp; Precautions:</b>	Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Foam and/or dry chemical are preferred to minimize environmental contamination. If water is used, dike and collect water to prevent run-off. Wear self-contained breathing apparatus and full fire-fighting turn-out gear (Bunker gear).
<b>Unusual Fire &amp; Explosion Hazards:</b>	None known

SECTION 6: ACCIDENTAL RELEASE MEASURES	
<b>Personal Precautions:</b>	See Section 8 for personal protection equipment.
<b>Environmental Precautions:</b>	Keep spilled material and any rinsate from contaminating soil or from entering sewage and drainage systems and bodies of water.
<b>Methods for Containment:</b>	Isolate the spill area. Keep unnecessary and unprotected personnel from entering. Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for re-use. Do not discharge waste into municipal wastewater or public storm drains. Eliminate runoff as much as possible.
<b>Methods for Clean-up:</b>	Place recovered material in a separate container for re-use. After removal, flush contaminated area thoroughly with soap and water. Pick up wash liquid with additional absorbent and place in a disposable container. Do not put spilled material back in the original container.
<b>Other Information:</b>	None known

**SECTION 7: HANDLING AND STORAGE**

**Handling:** RECOMMENDATIONS ARE INTENDED FOR MANUFACTURING, PACKAGING AND COMMERCIAL BLENDING WORKERS. PESTICIDE APPLICATORS AND WORKERS must refer to the product label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Handle and open container in a manner as to prevent spillage. Do not eat, drink or smoke while handling this product. Immediately wash off accidental contact with product from skin, clothing and out of eyes.

**Storage:** See pesticide label for full information on product storage. Do not contaminate water, food or feed by storage of this product. Store away from sources of heat, out of direct sunlight and away from incompatible materials. Pesticides should be stored in secured areas away from children and animals.

**Storage Temperature (Min/Max):** Not determined

**Product Incompatibilities:** Strong oxidizing agents

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

Users of a pesticide product must refer to the product label for personal protective equipment requirements.

**Exposure Guidelines:**

COMPONENT	OSHA PEL	ACGIH TLV	NIOSH REL
Silicon dioxide (crystalline free)	10 mg/m <sup>3</sup> (nuisance dust)	10 mg/m <sup>3</sup> (total dust)	

**Engineering Controls:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.

**THE PERSONAL PROTECTIVE EQUIPMENT BELOW IS REQUIRED FOR PRODUCT APPLICATORS, END USERS, AND HANDLERS AND COMES FROM THE FIFRA APPROVED PESTICIDE LABEL:**

No special personal protective equipment (PPE) required for applicators.

**THE PERSONAL PROTECTIVE EQUIPMENT BELOW IS INTENDED FOR MANUFACTURING, PACKAGING AND COMMERCIAL BLENDING WORKERS:**

**Respiratory Protection:** In areas of poor ventilation, use a NIOSH approved respirator with cartridges/canisters approved for pesticides.

**Eye Protection:** Chemical goggles or safety glasses and full-face shield.

**Protective Gloves:** Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile, neoprene rubber, polyvinyl chloride (PVC) or Viton.

**Other Protective Clothing:** Long-sleeved shirt, long pants and shoes plus socks.

**General Safety Measures:** Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately after handling this product. Wash outside of gloves before removing. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and

maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	White liquid	<b>Upper/Lower Flammability Limits:</b>	Not determined
<b>Odor:</b>	Odorless	<b>Vapor Pressure:</b>	Not determined
<b>Odor Threshold:</b>	Not determined	<b>Vapor Density:</b>	Not determined
<b>pH (1% dispersion):</b>	6.0	<b>Density:</b>	1.04 g/mL (typical)
<b>Melting /Freezing Point:</b>	Not determined	<b>Solubility (water):</b>	Not determined
<b>Boiling Point/Range:</b>	Not determined	<b>Partition Coefficient:</b>	Not determined
<b>Flash Point:</b>	Not applicable	<b>Auto-ignition Temperature:</b>	Not determined
<b>Evaporation Rate:</b>	Not determined	<b>Decomposition Temperature:</b>	Not determined
<b>Flammability:</b>	Not applicable	<b>Viscosity:</b>	5,000 cPs @ 6rpm 3,000 cPs @ 12 rpm

\*As an end-use mixture, many of the listed physical and chemical properties are not determined as they primarily apply to pure chemical substances.

#### SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity:</b>	No hazardous chemical reactions known.
<b>Chemical Stability:</b>	Stable under normal storage and handling conditions.
<b>Possibility of Hazardous Reactions:</b>	No potential for hazardous reactions known.
<b>Conditions to Avoid:</b>	Exposure to extreme temperatures.
<b>Incompatible Materials:</b>	Strong oxidizing agents
<b>Hazardous Decomposition Products:</b>	Thermal decomposition may produce toxic carbon, nitrogen and sulfur oxides.

#### SECTION 11: TOXICOLOGICAL INFORMATION

<b>Likely Routes of Exposure:</b>	Skin Contact, Eye Contact, Inhalation, Ingestion
<b>Symptoms of Exposure:</b>	May cause a transient, localized paresthesia, characterized by tingling, burning or numbness sensation in some individuals.
<b>Oral LD<sub>50</sub>:</b>	>15,000 mg/kg (rat)(Based on similar formulation)
<b>Dermal LD<sub>50</sub>:</b>	>10,000 mg/kg (rat)(Based on similar formulation)
<b>Inhalation LC<sub>50</sub>:</b>	>1.02 mg/L (4-hr)(rat)(Based on similar formulation) Highest attainable concentration; no deaths
<b>Eye Irritation/Damage:</b>	Minimally irritating (rabbit)(Based on similar formulation)
<b>Skin Corrosion/Irritation:</b>	Slight irritation (rabbit)(Based on similar formulation)
<b>Skin Sensitization:</b>	Non-sensitizing (guinea pig)(Based on similar formulation)
<b>Chronic/Subchronic Toxicity:</b>	General neurological symptoms from deltamethrin 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.

**Mutagenicity:** No evidence of genotoxicity was observed in a battery of in vitro and in vivo studies with deltamethrin.

**Reproductive Toxicity:** No developmental effects from deltamethrin 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.

**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.

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

**Aspiration Hazard:** Not anticipated to cause aspiration hazard

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

Chemical Name	ACGIH	IARC	NTP	OSHA
No components listed				

**SECTION 12: ECOLOGICAL INFORMATION**

**Environmental Hazards Statement from FIFRA Regulated Pesticide Label:**

This product is extremely toxic to fresh water and estuarine fish and 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 24 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.

This 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 foraging the treatment area. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash-waters or rinsate.

**ECOTOXICITY DATA:** The information presented below is on deltamethrin technical.

**Fish Toxicity:** Rainbow Trout 96-hour LC<sub>50</sub> = 0.26 ppb  
Bluegill Sunfish 96-hour LC<sub>50</sub> = 0.17 ppb

**Aquatic Invertebrate Toxicity:** Sheepshead Minnow 96-hour LC<sub>50</sub> = 0.48 ppb  
Daphnia magna 48-hr EC<sub>50</sub> = 0.0131 µg/L

**Aquatic Plant Toxicity:** No data available

**Avian Toxicity:** Bobwhite quail LD<sub>50</sub> >2,250 mg/kg  
Bobwhite quail dietary LC<sub>50</sub> >5,620 ppm  
Mallard duck dietary LC<sub>50</sub> > 8,039 ppm

**Honeybee Toxicity:** No data available

**ENVIRONMENTAL EFFECTS:**

**Persistence and Degradability:** No data available  
**Bioaccumulation:** No data available  
**Mobility:** Deltamethrin is immobile in soil  
**Other Adverse Effects:** No data available

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal:** Refer to the pesticide label for full information on disposal. Pesticide wastes are toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

**Container Disposal:** Refer to the pesticide label for full information on disposal. When possible, triple rinse the container and offer for recycling if available.

**RCRA Characteristics:** It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

**SECTION 14: TRANSPORTATION INFORMATION**

**DOT (Ground):** Not regulated

**IMDG (Sea):** 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

**SECTION 15: REGULATORY INFORMATION**

**Labeling Requirements Under FIFRA:** 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 required for safety data sheets 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.

**Difference between SDS and Pesticide Label**

	<b>EPA LABEL</b>	<b>OSHA SDS</b>
Signal Word	CAUTION	WARNING
Acute Inhalation Toxicity	Harmful if inhaled	Harmful if inhaled

**TSCA Inventory:** This product is exempt from TSCA inventory listing requirements as it is solely for FIFRA regulated use.

**SARA Title III Information:**

**Section 302 – Extremely hazardous substances:** None

**Section 311/312 – Hazard Categories:** Immediate (Acute); Delayed (Chronic)

**Section 313** – This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS Number	Weight %
None listed		

**CERCLA** – This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Chemical Name	CAS Number	RQ	Quantity of Finished Product
None listed			

**CALIFORNIA PROPOSITION 65:**

Chemical Name	CAS Number	Prop 65 Category(ies)
None listed		

**U.S. STATE RIGHT-TO-KNOW REGULATIONS:**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Propylene glycol	X		X
Silica		X	X

**SECTION 16: OTHER INFORMATION**

<b>NFPA</b>	<b>Health Hazards</b> 2	<b>Flammability</b> 1	<b>Instability</b> 0	<b>Special Hazards</b> – None
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