



SAFETY DATA SHEET

Optimate CS

SECTION 1: IDENTIFICATION

Product Name: Optimate CS
EPA Registration No.: 279-3612-53883
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): Gamma-cyhalothrin
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: Beige liquid with a slight odor.

OSHA HCS CLASSIFICATION (29 CFR 1910.1200)

Acute Inhalation Toxicity	Category 4
Skin Irritation	Category 2
Eye Irritation	Category 2B
Skin Sensitization	Category 1
Aquatic Toxicity - Acute	Category 1
Aquatic Toxicity – Chronic	Category 1

Signal Word:

WARNING



Hazard Statement(s):

Harmful if inhaled.
 Causes skin irritation.
 Causes eye irritation.
 May cause allergic skin reaction.
 Very toxic to aquatic life.
 Very toxic to aquatic life with long lasting effects.

Precautionary Statement(s):

Prevention: Wash hands thoroughly after handling.
 Avoid breathing mist, vapors or spray.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves.
 Avoid release into the environment.

Response: **IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Call poison control center or doctor if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water. See label for specific treatment. If skin irritation or rash occurs: Get medical advice and attention. Wash contaminated clothing before reuse.

Collect spillage.

Storage: No statement required. See Section 7 for storage information.

Disposal: Dispose of contents/container in accordance with Federal, state and local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Gamma-cyhalothrin	76703-62-3	5.9%
Solvent naphtha (petroleum) heavy aromatic	64742-94-5	*
Contains Naphthalene	91-20-3	*
Cellulose	9004-34-6	*

*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

IF IN EYES:	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.
IF ON SKIN:	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.
IF INHALED:	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.
IF INGESTED:	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: See section 11.

NOTE TO PHYSICIAN: If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. Skin contact may aggravate preexisting dermatitis. Topical application of Vitamin E oil to skin following decontamination may relieve persistent stinging. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, alcohol-resistant foam, dry chemical or carbon dioxide
Unsuitable Extinguishing Media:	Water jet as it may spread fire.
Hazardous Combustion Products:	Thermal decomposition may produce toxic carbon and nitrogen oxides.
Special Protective Equipment & Precautions:	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).
Unusual Fire & Explosion Hazards:	None known

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	See Section 8 for personal protection equipment.
Environmental Precautions:	Keep spilled material and any rinsate from contaminating soil or from entering sewage and drainage systems and bodies of water.
Methods for Containment:	Isolate the spill area. Keep unnecessary and unprotected personnel from entering. Absorb small spills with sand, vermiculite or other inert absorbent. Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify and scrape up for disposal.
Methods for Clean-up:	Place contaminated material in appropriate container for disposal. 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. Clean area carefully as product is oil based and may cause a slipping hazard.
Other Information:	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 splashes of the concentrate or spray mixture 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):	Store at room temperature and avoid extreme temperatures.
Product Incompatibilities:	Avoid contact with strong oxidizers.

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
Naphthalene	10 ppm / 50 mg/m ³	10 ppm (TWA) 15 ppm (STEL)	10 ppm (TWA) 15 ppm (STEL)
Cellulose	15 mg/m ³ (total dust) 5 mg/m ³ (resp. fraction)	10 mg/m ³ (total dust)	10 mg/m ³ (total dust) 5 mg/m ³ (resp. fraction)

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.

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

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

Appearance:	Beige liquid	Upper/Lower Flammability Limits:	Not determined
Odor:	Slight	Vapor Pressure:	Not determined
Odor Threshold:	Not determined	Vapor Density:	Not determined
pH:	Not determined	Relative Density (@22°C):	≈1.01 (typical)
Melting /Freezing Point:	Below 0°C	Solubility (water):	Disperses
Boiling Point/Range:	Not determined	Partition Coefficient:	Not determined
Flash Point:	>212°F (>100°C)	Auto-ignition Temperature:	Not determined
Evaporation Rate:	Not determined	Decomposition Temperature:	Not determined
Flammability:	Not applicable	Viscosity:	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	No hazardous chemical reactions known.
Chemical Stability:	Stable under normal storage and handling conditions.
Possibility of Hazardous Reactions:	No potential for hazardous reactions known.
Conditions to Avoid:	Extreme temperatures
Incompatible Materials:	Strong oxidizers
Hazardous Decomposition Products:	Carbon monoxide, hydrogen chloride, hydrogen fluoride, nitrogen oxides, hydrogen cyanide, and various chlorinated and fluorinated organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Eye contact, Skin contact, Inhalation, Ingestion
Symptoms of Exposure:	Eye irritation, skin irritation, allergic skin reaction, dizziness and/or respiratory irritation.
Oral LD₅₀:	>2,500 mg/kg (rat) (Based upon similar material.)
Dermal LD₅₀:	>5,000 mg/kg (rat)
Inhalation LC₅₀:	Not determined
Eye Irritation/Damage:	May cause moderate eye irritation. Corneal injury unlikely.
Skin Corrosion/Irritation:	Brief contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin.
Skin Sensitization:	Similar materials have been shown to cause allergic skin reactions when tested in guinea pigs.
Chronic/Subchronic Toxicity:	For the active ingredient, excessive exposure may cause neuralgic signs and symptoms.
Mutagenicity:	For the active ingredient and solvent, in-vitro and animal genetic toxicity studies were negative.
Reproductive Toxicity:	For the active ingredient, in animal studies done on a similar material, has been shown not to interfere with reproduction.
Neurotoxicity:	No data available
Target Organs:	For the solvent, in animals, effects have been reported on the following organs: respiratory tract, gastrointestinal tract, thyroid, and urinary tract
Aspiration Hazard:	Not anticipated to be an aspiration hazard.

Carcinogenicity:

Chemical Name	ACGIH	IARC	NTP	OSHA
Naphthalene		Group 2B	Suspected human carcinogen	

SECTION 12: ECOLOGICAL INFORMATION

This pesticide is extremely toxic to fish and aquatic organisms and toxic to wildlife. 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 to avoid run off to water bodies or drainage systems. Do not allow applications to contact water inhabited by fish, such as aquariums and ornamental fish ponds that are located

in and around structures being treated. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

ECOTOXICITY DATA:

Fish Toxicity:	No data available
Aquatic Invertebrate Toxicity:	No data available
Aquatic Plant Toxicity:	No data available
Avian Toxicity:	No data available
Honeybee Toxicity:	No data available

ENVIRONMENTAL EFFECTS:

Persistence and Degradability:	Based largely or completely on information for the aromatic solvent; biodegradation may occur under aerobic conditions (in the presence of oxygen).
Bioaccumulation:	No data available
Mobility:	Based largely or completely on information for the active ingredient and the aromatic solvent; bioconcentration potential is high (BCF is >3000 or Log Pow between 5 and 7).
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):	For all shipments less than 17857 pounds: This material is not regulated for transport. For shipments of 17857 pounds or greater: UN3082, Environmentally hazardous substance, liquid, n.o.s. (Naphthalene), 9, PGIII, RQ
IMDG (Sea):	For all shipments less than 17857 pounds: This material is not regulated for transport. For shipments of 17857 pounds or greater: UN3082, Environmentally hazardous substance, liquid, n.o.s. (Naphthalene), 9, PGIII
IATA (Air):	For all shipments less than 17857 pounds: This material is not regulated for transport. For shipments of 17857 pounds or greater: UN3082, Environmentally hazardous substance, liquid, n.o.s. (Naphthalene), 9, PGIII

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

Causes moderate eye irritation. Harmful if swallowed. 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. Remove contaminated clothing and wash clothing before reuse. Wear safety glasses or goggles, long sleeve shirt, long pants, shoes and socks, and chemical resistant gloves. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

Skin exposure may also result in a sensation described as tingling, itching, burning or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2 to 30 hours, without damage. Wash exposed areas thoroughly with soap and water. Relief from skin sensation may be obtained by applying an oil-based cream.

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 %
Naphthalene	91-20-3	0.56%

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
Naphthalene	91-20-3	100 lbs	17857 lbs

SECTION 16: OTHER INFORMATION

NFPA	Health Hazards 2	Flammability 0	Instability 0	Special Hazards – None
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