

SAFETY DATA SHEET

OPTIMATE CS

Effective Date: 07/01/2016

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Optimate CS
EPA Reg. No. 279-3612-53883

Product Use: Insecticide

COMPANY IDENTIFICATION:

Control Solutions, Inc.
5903 Genoa Red Bluff
Pasadena, TX 77507
Phone #: (281) 892-2500 (8:00 AM to 5:00 PM CST,
Monday to Friday)
Emergency Telephone #: 1-866-897-8050
(Medical Emergencies)
1-800-424-9300
(24 Hr. Chemtrec Number)

2. HAZARDOUS IDENTIFICATIONS:

GHS Signal Word:

Warning

Classification:

Health	Environmental	Physical
Acute toxicity – Inhalation – Cat 4 Skin irritation – Cat 2 Eye irritation – Cat 2B Sensitization – Skin – Cat 1	Aquatic Toxicity – Acute 1 Aquatic Toxicity – Chronic 1	Not applicable

GHS Pictogram:



Hazard Statements:

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

Precautionary Statements:

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 to the environment.

Response:

If inhaled: Remove victim 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:

Not applicable.

Disposal:

Dispose of contents/container in accordance with
label instructions.

3. COMPOSITION/INFORMATION ON INGREDIENTS:

COMPONENT	CAS NUMBER	W/W%
Gamma-Cyhalothrin: (R)- cyano(3-phenoxyphenyl)methyl (1R,3R)-3-3[(1Z)-2-chloro-3,3,3-	076703-62-3	5.9

SAFETY DATA SHEET

OPTIMATE CS

Effective Date: 07/01/2016

trifluoroprop-1-enyl]-2,2-dimethylcyclopropanecarboxylate		
Balance, Total, Including:		94.1
Aromatic Solvent	064742-94-5	
Contains Naphthalene	000091-20-3	
Cellulose	009004-34-6	

poisoning. Explain that the injured person has been exposed to a pyrethroid insecticide and describe condition and the extent of exposure. Remove exposed person from area where the product is available.

5. FIRE FIGHTING MEASURES:

FLASH POINT: >212°F (>100°C)

AUTO-IGNITION TEMPERATURE: <750°F (<400°C)

4. FIRST AID:

EYE: Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

SKIN: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Items which cannot be decontaminated, including leather articles such as shoes, belts, and watchbands should be disposed of properly.

INGESTION: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

INHALATION: Move person to fresh air. If not breathing give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

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.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED: See Section 11.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED: If breathing difficulties occur, seek medical attention. Contact a doctor or hospital immediately if there are signs of

FLAMMABLE LIMITS

LFL: Not determined

UFL: Not determined

EXTINGUISHING MEDIA: Dry chemical or carbon dioxide for small fires, and water spray or foam for large fires.

FIRE AND EXPLOSION HAZARDS: Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Toxic irritating gases may be formed under fire conditions.

FIRE-FIGHTING EQUIPMENT: Use positive-pressure, self-contained breathing apparatus and full protective equipment.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS: Absorb small spills with materials such as sand, sawdust, Zorbball, or dirt. Wash exposed body areas thoroughly after handling. Report large spills to Cheminova at 866-303-6950.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors and spray mist. Handle concentrate in ventilated area. Wash thoroughly with soap and water after handling and before eating, chewing gum, using tobacco, using the toilet or smoking. Keep away from food, feedstuffs, and water supplies. Store in original container with the lid tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

SAFETY DATA SHEET

OPTIMATE CS

Effective Date: 07/01/2016

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

EXPOSURE GUIDELINES:

Aromatic Petroleum Solvent: None established.

Supplier recommends a guideline of 100 ppm for the total product, which is a mixture of aromatic hydrocarbons.

Naphthalene: ACGIH TLV is 10 ppm TWA, 15 ppm STEL, Skin, A4. OSHA PEL is 10 ppm TWA.

Cellulose: ACGIH TLV is 10 mg/M³. OSHA PEL is 15 mg/M³ total dust, 5 mg/M³ respirable..

A "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION: Use gloves chemically resistant to this material.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use a NIOSH approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use a NIOSH approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

APPLICATORS AND ALL OTHER HANDLERS: Refer to the product label for personal protective clothing and equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE: Beige liquid

ODOR: Slight

ODOR THRESHOLD: Not established

pH: Not established

MELTING POINT/FREEZING POINT: Below 0° C

INITIAL BOILING POINT AND BOILING RANGE: Not applicable (decomposes)

FLASH POINT: >212° F (>100° C)

EVAPORATION RATE: Not established

FLAMMABILITY: Not applicable

UPPER/LOWER FLAMMABILITY OR EXPLOSIVE

LIMITS: Not applicable

VAPOR PRESSURE: GAMMA-CYHALOTHRIN: 7.73 x 10⁻¹⁰ mmHg @ 20° C; 2.59 x 10⁻⁹ mmHg @ 25° C

VAPOR DENSITY: Not established

LIQUID DENSITY: 8.42 lbs/gal

SPECIFIC GRAVITY: ~1.01 g/ml @ 22° C

SOLUBILITY: In water – disperses in water (aqueous suspension)

SOLUBILITY(IES): GAMMA-CYHALOTHRIN:

Acetone >500 g/l

Dichloromethane >500 g/l

Methanol >500 g/l

Diethyl ether >500 g/l

Ethyl acetate >500 g/l

Hexane >500 g/l

Toluene >500 g/l

PARTITION COEFFICIENT (N-OCTANOL/WATER):

GAMMA-CYHALOTHRIN: LOG K_{ow} = 6.8

AUTO-IGNITION TEMPERATURE: <750° F (<400° C)

DECOMPOSITION TEMPERATURE: GAMMA-CYHALOTHRIN: 275° C

VISCOSITY: Not established

10. STABILITY AND REACTIVITY:

STABILITY: (CONDITIONS TO AVOID) Stable under normal use and storage conditions.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, hydrogen chloride, hydrogen fluoride, nitrogen oxides, hydrogen cyanide, and various chlorinated and fluorinated organic compounds.

HAZARDOUS POLYMERIZATION: Not known to occur.

SAFETY DATA SHEET

OPTIMATE CS

Effective Date: 07/01/2016

11. TOXICOLOGICAL INFORMATION:

POTENTIAL HEALTH EFFECTS: This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

EYE: May cause moderate eye irritation. Corneal injury unlikely.

SKIN: Brief contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD₅₀ for skin absorption in rats for a similar material is >5000 mg/kg. Similar materials have been shown to cause allergic skin reactions when tested in guinea pigs.

INGESTION: Low toxicity if swallowed. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia. The oral LD₅₀ for rats for a similar material is between >2500 mg/kg.

INHALATION: Prolonged excessive exposure may cause serious effects. May cause central nervous system effects.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For the active ingredient, excessive exposure may cause neuralgic signs and symptoms. For the solvent, in animals, effects have been reported on the following organs: respiratory tract, gastrointestinal tract, thyroid, and urinary tract.

CANCER INFORMATION: Contains naphthalene, which has caused cancer in some laboratory animals.

TERATOLOGY (BIRTH DEFECTS): The active ingredient did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother. The solvent did not cause birth defects or any other fetal effects in laboratory animals.

REPRODUCTIVE EFFECTS: For the active ingredient, in animal studies done on a similar material, has been shown not to interfere with reproduction.

MUTAGENICITY: For the active ingredient and solvent, in-vitro and animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:

Based largely or completely on information for the active ingredient and the aromatic solvent.

Bioconcentration potential is high (BCF is >3000 or Log P_{ow} between 5 and 7).

DEGRADATION & PERSISTENCE:

Based largely or completely on information for the aromatic solvent

Biodegradation may occur under aerobic conditions (in the presence of oxygen).

ECOTOXICOLOGY:

Based largely or completely on information for a similar material.

Material is very highly toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ is <0.1 mg/L in the most sensitive species tested).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION:

U.S. DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION:

For all shipments less than 17857 pounds by all modes of transportation:

This material is not regulated for transport.

For shipments of 17857 pounds or greater by all modes of

SAFETY DATA SHEET

OPTIMATE CS

Effective Date: 07/01/2016

transportation:

ENVIRONMENTALLY HAZARDOUS SUBSTANCES,
LIQUID, N.O.S./(NAPHTHALENE)/9/UN3082/PG III/RQ
(NAPHTHALENE)

An immediate health hazard

A delayed health hazard

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

This product contains chemical(s) known to the State of California to cause cancer. During processing of our product, exposure may exceed the levels deemed to represent significant risk as defined by the emergency guidelines in 22 California Code of Regulations, Division 2, Chapter 3, Article 7. The material is Naphthalene (CAS 000091-20-3)

15. REGULATORY INFORMATION:

NOTICE: The information herein is presented in good faith and believed to be accurate as of effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

U.S. REGULATIONS

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 on safety data sheets, and for workplace labels on non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Causes moderate eye irritation.

Harmful if swallowed.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Avoid contact with eyes, skin, or clothing.

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
Naphthalene	000091-20-3	0.56%

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
NAPHTHALENE	000091-20-3	NJ2 NJ3 PA1 PA3
CELLULOSE	009004-34-6	PA1

NJ2=New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%)

NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%)

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%)

PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%)

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Health	2
Flammability	0
Reactivity	0

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or

SAFETY DATA SHEET

OPTIMATE CS

Effective Date: 07/01/2016

SUPERFUND): This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA, which may require reporting of releases:

Chemical Name	CAS #	RQ	% in Product
Naphthalene	000091-20-3	100	0.56%

RCRA CATEGORIZATION:

U.S. EPA Hazardous Waste #: Naphthalene = U165

16. OTHER INFORMATION:

SDS STATUS: Revised Sections: 1
Replaces MSDS dated: 03/01/2015