

1. Identification

Product identifier	AvestaTM CS	
Other means of identification		
SDS number	535	
Product registration number	74530-53-5481	
Recommended use	Pyrethroid type insecticide/miticide.	
Recommended restrictions	Keep out of the Reach of Children!	
EPA Registration number	EPA: 74530-53-5481	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	AMVAC Chemical Corporation	
Address	4695 MacArthur Court Suite 1200 Newport Beach, CA 92660	
Telephone	AMVAC Chemical Corp	949-260-1200
	AMVAC Chemical Corp	949-260-6270(FAX)
Website	www.amvac.com	
E-mail	CustServ@amvac.com	
Emergency phone number	Medical	888-681-4261
	CHEMTREC® (USA+Canada)	800-424-9300
	Product Use	888-462-6822
	CHEMTREC® (Outside USA)	+1-703-527-3887

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Not classified.	
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Not classified.	

Label elements



Signal word	Warning
Hazard statement	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Wear protective gloves and eye/face protection. Avoid release to the environment.
Response	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 soap and water. Collect spillage.
Storage	Store in original container.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	This is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced in section 15. The pesticide label also includes other important information, including directions for use.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Lambda-Cyhalothrin		68085-85-8	9.7
Acetophenone		98-86-2	4
Inert ingredients		7732-18-5	86.3

4. First-aid measures

Inhalation	Move 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 CENTER or doctor/physician for further treatment advice.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center for treatment advice.
Ingestion	Call a physician or poison control center immediately. Do not give any liquid to the person. Do not induce vomiting without advice from poison control center.
Most important symptoms/effects, acute and delayed	Mild eye irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	The product itself does not burn. Use extinguishing agent suitable for type of surrounding fire.
Unsuitable extinguishing media	Not applicable, non-combustible.
Specific hazards arising from the chemical	Not applicable.
Special protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	This is a water base non-flammable liquid that will support fire only if the solvent is evaporated off first.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Wear appropriate protective equipment and clothing during clean-up. Avoid contact with eyes, skin, and clothing. Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Dike the spilled material. Absorb spill with vermiculite or other inert material. Shovel, sweep or vacuum up spillage and collect in suitable container for disposal.
Environmental precautions	Collect and dispose of spillage as indicated in section 13 of the SDS. Do not discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Read label before use. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities Store in a tightly closed container. Do not store near food, feed, fertilizers, seeds, insecticides or fungicides. Do not allow material to freeze.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Lambda-Cyhalothrin (CAS 68085-85-8)	PEL	5 mg/m ³

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetophenone (CAS 98-86-2)	TWA	10 ppm
Lambda-Cyhalothrin (CAS 68085-85-8)	TWA	5 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Lambda-Cyhalothrin (CAS 68085-85-8)	TWA	5 mg/m ³

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Acetophenone (CAS 98-86-2)	TWA	50 mg/m ³
		10 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Not available.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight fitting chemical goggles are recommended.

Skin protection

Hand protection Chemical resistant gloves.

Other Long-sleeved shirt and long pants or coveralls, socks and closed toe shoes are required.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.: Chemical respirator with organic vapor cartridge.

Thermal hazards Not available.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Encapsulated suspension.

Color Off-white

Odor Pungent

Odor threshold Not available.

pH 4.17

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density 1.01

Solubility(ies)

Solubility (water) Miscible

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

10. Stability and reactivity

Reactivity Not available.

Chemical stability Stable at normal conditions and storage conditions.

Possibility of hazardous reactions None known.

Conditions to avoid None known.

Incompatible materials Not available.

Hazardous decomposition products Carbon oxides. Nitrogen oxides (NOx).

11. Toxicological information**Information on likely routes of exposure**

Inhalation Based on available data, the classification criteria are not met.

Skin contact Not a skin irritant or skin sensitizer.

Eye contact Not an eye irritant.

Ingestion None known.

Symptoms related to the physical, chemical and toxicological characteristics None known.

Information on toxicological effects**Acute toxicity**

Product	Species	Test Results
Avesta™ CS		
<u>Acute</u>		
Dermal		
<i>Liquid</i>		
LD50	Rat	> 5000 mg/kg
Inhalation		
<i>Liquid</i>		
LC50	Rat	> 2.23 mg/l, 4 h
Oral		
<i>Liquid</i>		
LD50	Rat	> 5000 mg/kg
Skin corrosion/irritation	Non irritating to skin.	
Serious eye damage/eye irritation	Non-irritating	

Respiratory or skin sensitization

Respiratory sensitization None known.

Skin sensitization Not a sensitizer.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure No specific target organ toxicity is expected after single exposure.

Specific target organ toxicity - repeated exposure No specific target organ toxicity is expected after repeated exposure.

Aspiration hazard None known.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.
Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark.

Product		Species	Test Results
Avesta™ CS			
Aquatic			
<i>Acute</i>			
Algae	LC50	Algae	28.7 mg/l, 72 h
Crustacea	LC50	Daphnia magna	24.3 µg/l, 48 h
Fish	LC50	Rainbow Trout (oncorhynchus mykiss)	0.06 mg/l, 96 h

Persistence and degradability Moderately persistent in the soil environment, with a half-life of approximately 30 days in most soils.

Bioaccumulative potential Bioaccumulation is unlikely.

Mobility in soil Active ingredient has a high affinity for soil.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site according to all applicable regulations.

Waste from residues / unused products Not available.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.
Empty containers should be taken to an approved waste handling site for recycling or disposal in accordance with all applicable regulations.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

UN number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Lambda-Cyhalothrin), MARINE POLLUTANT

Transport hazard class(es)

Class 9

Subsidiary risk -

Packing group III

Environmental hazards

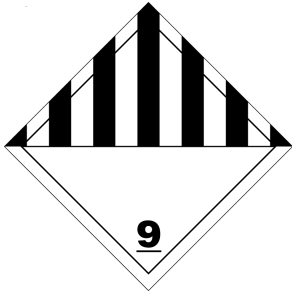
Marine pollutant Yes

EmS F-A, S-F

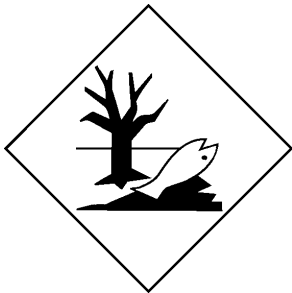
Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

IMDG



Marine pollutant



15. Regulatory information

US federal regulations

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

United States Environmental Protection Agency (EPA) Labeling Requirements: This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION!

Harmful if absorbed through skin. Avoid contact with eyes, skin, and clothing. Wash hands after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetophenone (CAS 98-86-2) Listed.

Lambda-Cyhalothrin (CAS 68085-85-8) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical No**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Acetophenone	98-86-2	4
Lambda-Cyhalothrin	68085-85-8	9.7

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Acetophenone (CAS 98-86-2)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**US state regulations****California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Acetophenone (CAS 98-86-2)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	Oct-18-2019
Revision date	Oct-18-2019
Version #	2.0
HMIS® ratings	Health: 2* Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 0 Instability: 0

Disclaimer

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Revision information

Hazard(s) identification: Hazard statement

Handling and storage: Precautions for safe handling

Toxicological information: Eye contact



SAFETY DATA SHEET
Bifen L/P

SECTION 1: IDENTIFICATION

Product Name: Bifen L/P
EPA Registration No.: 53883-124
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): Bifenthrin: 2-Methyl-3-phenylphenyl)methyl (1S,3S)—[(Z)-2-chloro-3,3,3-trifluoroprop-1-enyl]-2,2-dimethylcyclopropane-1-carboxylate
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: Tan granule with a slightly musty odor.

OSHA HCS CLASSIFICATION (29 CFR 1910.1200)

Carcinogenicity	Category 1A
Specific Target Organ Toxicity – Repeated Exposure	Category 2

Signal Word: DANGER



Hazard Statement(s): May cause cancer
 May cause damage to organs (lungs) through prolonged or repeated exposure.

Precautionary Statement(s):

- Prevention:** Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wear face protection.
 Do not breathe dust.
- Response: IF EXPOSED OR CONCERNED:** Get medical advice/attention.
- Storage:** Store locked up.
- Disposal:** Dispose of contents/container in accordance with Federal, state and local laws and regulations.

The following percentage of the mixture consists of components with unknown hazards regarding the acute toxicity:

- 1.0% Acute oral toxicity
- 1.0% Acute dermal toxicity
- 100.0% Acute Inhalation toxicity

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Bifenthrin	82657-04-3	0.2%
Sand - (contains)	None	94.0 – 100.0%
Crystalline silica	14808-60-7	<1.0%

*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

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.

Note to Physician: This product is a pyrethroid. If large amounts have been ingested, milk, cream and other digestible fats and oils may increase absorption and so should be avoided.

Most important symptoms/effects, acute and delayed: Acute symptoms may include mild, mechanical irritation to eyes.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Use appropriate extinguishing media for surrounding fire.
Unsuitable Extinguishing Media:	Heavy water stream
Hazardous Combustion Products:	Thermal decomposition may produce oxides of carbon, nitrogen, calcium and magnesium.
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. Avoid inhalation of dust. Avoid actions that cause dust to become airborne.

Methods for Clean-up: Uncontaminated product may be placed in a container for use according to label directions. Do not put spilled material back in the original container. Avoid actions that cause dust to become airborne during dry clean-up such as sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Pick up wash liquid with additional absorbent and place in a disposable container.

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): Not determined

Product Incompatibilities: None known

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
Crystalline Silica (quartz)	10 mg/m ³ (TWA) %SiO ₂ + 2 (respirable dust) 30 mg/m ³ (TWA) %SiO ₂ + 2 (total dust)	0.025 mg/m ³ TWA (respirable dust)	0.05 mg/m ³ TWA (respirable 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.

Bifen L/P

Revision Date: May 30, 2017

Respiratory Protection:	In areas of poor ventilation or where exposure limits are exceeded, use a NIOSH approved respirator with cartridges/canisters approved for respirable crystalline silica.
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:	Tan granules (solid)	Upper/Lower Flammability Limits:	Not determined
Odor:	Slight musty odor	Vapor Pressure:	Not applicable
Odor Threshold:	Not determined	Vapor Density:	Not applicable
pH (1% dispersion):	Not applicable	Bulk Density:	100 lbs/ft ³
Melting /Freezing Point:	Not determined	Solubility:	Not determined
Boiling Point/Range:	Not determined	Partition Coefficient:	Not determined
Flash Point:	Not determined	Auto-ignition Temperature:	Not determined
Evaporation Rate:	Not determined	Decomposition Temperature:	Not determined
Flammability:	Not applicable	Viscosity:	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	No hazardous reactivity known.
Chemical Stability:	Stable under normal storage and handling conditions.
Possibility of Hazardous Reactions:	No potential for hazardous reactions known.
Conditions to Avoid:	None known
Incompatible Materials:	None known
Hazardous Decomposition Products:	Thermal decomposition may produce oxides of carbon and nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Eye contact, Skin contact, Inhalation, Ingestion
Symptoms of Exposure:	Mild mechanical irritation of eyes. Silicosis of the lungs or lung cancer.
Oral LD₅₀:	>4,900 mg/kg (rat)(Estimated based upon component data)
Dermal LD₅₀:	>2,000 mg/kg (rat)(Estimated based upon component data)
Inhalation LC₅₀:	Not determined
Eye Irritation/Damage:	Not anticipated to cause eye irritation based upon component data.
Skin Corrosion/Irritation:	Not anticipated to cause skin irritation based upon component data.
Skin Sensitization:	Not anticipated to cause skin sensitization based upon component data.

Chronic/Subchronic Toxicity:	Prolonged inhalation of respirable crystalline silica may be harmful. May cause damage to organs (lungs) through prolonged or repeated exposure.
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There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with autoimmune disorders and other adverse health effects involving the kidney. In particular, the incidence of scleroderma (thickening of the skin caused by swelling and the thickening of fibrous tissue) appears to be higher in silicotic individuals. To date, the evidence does not conclusively determine a causal relationship between silica exposure and these adverse health effects.

Mutagenicity: No data available
Reproductive Toxicity: No data available
Neurotoxicity: No data available
Target Organs: Lungs (respirable crystalline silica)
Aspiration Hazard: Not an aspiration hazard.
Carcinogenicity: Respirable Crystalline Silica (RCS) may cause cancer. Sand is a naturally occurring mineral complex that contains varying quantities of quartz (crystalline silica). In its natural bulk state, sand is not a known health hazard. Sand may be subjected to various natural or mechanical forces that produce small particles (dust) which may contain respirable crystalline silica (particles less than 10 micrometers in aerodynamic diameter). Repeated inhalation of respirable crystalline silica (quartz) may cause lung cancer according to IARC and NTP.

Chemical Name	ACGIH	IARC	NTP	OSHA
Respirable crystalline silica		Group 1	Known Human Carcinogen	

SECTION 12: ECOLOGICAL INFORMATION

Environmental Hazards Statement from FIFRA Regulated Pesticide Label:

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply when weather conditions favor drift from treated areas. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. 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. Sweeping any product that lands on a driveway, sidewalk, or street, back onto the treated area of the lawn or garden will help to prevent run off to water bodies or drainage systems

ECOTOXICITY DATA:

Data presented below is on the bifenthrin technical product.

Fish Toxicity: *S. gairdneri*: 96-hour LC₅₀ = 0.1 mg/L
Aquatic Invertebrate Toxicity: *Daphnia magna*: 96-hour EC₅₀ = 0.65 mg/L
Aquatic Plant Toxicity: *P. subcapitata*: EC₅₀ = 11.04 mg/L
Avian Toxicity: Bobwhite quail: oral LD₅₀ = 1800 mg/kg
Honeybee Toxicity: Oral LD₅₀ = 0.39 µg/bee

ENVIRONMENTAL EFFECTS:

Persistence and Degradability: No data available
Bioaccumulation: No data available
Mobility: No data available
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):** UN3077, Environmentally hazardous substance, solid, n.o.s. (Bifenthrin), 9, PGIII, Marine Pollutant
- IATA (Air):** UN3077, Environmentally hazardous substance, solid, n.o.s. (Bifenthrin), 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

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

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: None

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 %
Bifenthrin	82657-04-3	0.2%

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)
Respirable Crystalline Silica	14808-60-7	Cancer

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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Bifenthrin	X		
Crystalline silica	X	X	X

SECTION 16: OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 0	Instability 0	Special Hazards – None
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Disclaimer: Control Solutions, Inc. believes the information presented herein is accurate and correct as of the document date. The presented information is based upon available data from reliable sources. Control Solutions, Inc. makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

Revision Date: May 30, 2017
Document Superseded: September 9, 2014
Revision Note: Updated to format and most sections



SAFETY DATA SHEET

D-Fense NXT

SECTION 1: IDENTIFICATION

Product Name: D-Fense NXT
EPA Registration No.: 53883-415
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: N/A – Multiple Active Ingredients
Chemical Name of Active Ingredient(s): Deltamethrin
 Novaluron
 Pyriproxyfen
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: Aerosol with a strong alcohol odor. Inhalation of vapors may cause drowsiness or dizziness. Extremely flammable aerosol.

OSHA HCS CLASSIFICATION (29 CFR 1910.1200)

Aspiration Hazard	Category 1
Flammable Aerosols	Category 1
Specific Target Organ Toxicity – Single Exposure	Category 3

Signal Word: DANGER



Hazard Statement(s): May be fatal if swallowed and enters airways.
 Extremely flammable aerosol.
 May cause drowsiness or dizziness.

Precautionary Statement(s):

- Prevention:** Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
 Do not spray on an open flame or other ignition source.
 Pressurized container: Do not pierce or burn, even after use.
 Avoid breathing mist/vapors/spray.
 Use only outdoors or in a well-ventilated area.
- Response:** **IF SWALLOWED:** Immediately call a poison center/doctor. Do NOT induce vomiting.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
- Storage:** Store locked up. Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
- Disposal:** Dispose of contents/container in accordance with Federal, state and local laws and regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Distillates, petroleum, hydrotreated light	64742-47-8	70.0 – 85.0%
Acetone	67-64-1	10.0 – 25.0%
Novaluron	116714-46-6	0.2%
Deltamethrin	52918-63-5	0.06%
Pyriproxyfen	95737-68-1	0.02%
Carbon dioxide	124-38-9	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

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: Moderate but temporary skin irritation. Drowsiness or dizziness if inhaled. Vomiting may cause aspiration pneumonia. Long-term exposure to skin without washing may cause moderate skin effects such as redness, dryness, sloughing and shallow to deep fissuring.

Note to Physician: Aspiration of this product during induced emesis can result in lung injury. If evacuation of stomach contents is considered necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Foam, dry chemical, carbon dioxide or water fog/spray
Unsuitable Extinguishing Media:	Water jet
Hazardous Combustion Products:	Thermal decomposition may produce toxic carbon and nitrogen oxides, and halogenated hydrocarbons.
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:	Compressed gas. Containers may burst under fire conditions.

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 water. Pick up wash liquid with additional absorbent and place in a disposable container. Do not put spilled material back in the original container.

Other Information: This product contains an ingredient regulated by CERCLA ('Superfund'). See Section 15 for additional information.

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. Avoid all sources of ignition.

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. Containers may explode at or above listed maximum storage temperature.

Storage Temperature (Min/Max): Do not store at temperatures exceeding 122°F (50°C).

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
Acetone	TWA: 1000 ppm or 2420 mg/m ³	TWA: 500 ppm or 1210 mg/m ³ STEL: 750 ppm or 1815 mg/m ³	
Petroleum distillates	500 ppm (TWA)		350 mg/m ³ (TWA) 1,800 mg/m ³ (CEIL)(15 min)

Carbon dioxide	TWA: 5000 ppm or 9000 mg/m ³	TWA: 5000 ppm STEL: 30000 ppm	IDLH: 40000 ppm TWA: 5000 ppm or 9000 mg/m ³ STEL: 30000 ppm or 54000 mg/m ³
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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 personal protective equipment is required for applicators, end users, and handlers of D-Fense NXT.

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 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:	Aerosol	Upper/Lower Flammability Limits:	Not determined
Odor:	Strong alcohol	Vapor Pressure:	Not determined
Odor Threshold:	Not determined	Vapor Density:	Not determined
pH (1% dispersion):	5.0 – 5.5	Relative Density (@24°C):	0.811 (typical)
Melting /Freezing Point:	Not determined	Solubility in Water:	Not determined
Boiling Point/Range:	Not determined	Partition Coefficient:	Not determined
Flash Point:	<75°F (concentrate)	Auto-ignition Temperature:	Not determined
Evaporation Rate:	Not determined	Decomposition Temperature:	Not determined
Flammability:	Not applicable	Viscosity:	1.34 cP at 25°C 1.10 cP at 39°C

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	No hazardous chemical reactions known if stored and handled as indicated.
Chemical Stability:	Stable under normal storage and handling conditions.
Possibility of Hazardous Reactions:	No potential for hazardous reactions known if stored and handled as indicated.
Conditions to Avoid:	Exposure to temperatures above 122°F (50°C). Avoid all sources of ignition: heat, sparks, open flames. Avoid prolonged storage.
Incompatible Materials:	Strong oxidizers
Hazardous Decomposition Products:	Thermal decomposition may produce toxic carbon and nitrogen oxides, and halogenated hydrocarbons.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Eye contact, Skin contact, Inhalation, Ingestion
Symptoms of Exposure:	Moderate but temporary skin irritation. Drowsiness and/or dizziness.
Oral LD₅₀:	>5,000 mg/kg (rat)
Dermal LD₅₀:	>5,050 mg/kg (rat)
Inhalation LC₅₀:	>2.17 mg/L (rats)(no mortality at this concentration)
Eye Irritation/Damage:	Non-irritant (rabbit)
Skin Corrosion/Irritation:	Mild irritation with all effects clearing in 72 hours (rabbit)
Skin Sensitization:	Non-sensitizer (guinea pig)
Chronic/Subchronic Toxicity:	No data available on the mixture
Mutagenicity:	No data available on the mixture
Reproductive Toxicity:	No data available on the mixture
Neurotoxicity:	No data available on the mixture
Target Organs:	No data available on the mixture
Aspiration Hazard:	Contains petroleum distillates so concentrate prior to adding propellant may be an aspiration hazard.

Carcinogenicity:

Chemical Name	ACGIH	IARC	NTP	OSHA
Deltamethrin		Group 3		

SECTION 12: ECOLOGICAL INFORMATION**Environmental Hazards Statement from FIFRA Regulated Pesticide Label:**

This product is toxic to fish and aquatic organisms. Do not apply directly to any body of water. 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.

ECOTOXICITY DATA:

Fish Toxicity:	No data available on the mixture
Aquatic Invertebrate Toxicity:	No data available on the mixture
Aquatic Plant Toxicity:	No data available on the mixture

D-Fense NXT

Revision Date: September 23, 2021

Avian Toxicity: No data available on the mixture
Honeybee Toxicity: No data available on the mixture

ENVIRONMENTAL EFFECTS:

Persistence and Degradability: No data available on the mixture
Bioaccumulation: No data available on the mixture
Mobility: No data available on the mixture
Other Adverse Effects: No data available on the mixture

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. Empty aerosol cans may meet the definition of RCRA D003. Consult local and/or regional EPA for further guidance.

SECTION 14: TRANSPORTATION INFORMATION

DOT UN1950, Aerosols, flammable, 2.1
(Ground): This product may be classified as Limited Quantity.
IMDG
(Sea): UN1950, Aerosols, flammable, 2.1, Marine Pollutant
IATA
(Air): UN1950, Aerosols, flammable, 2.1

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

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

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: Acute (Immediate); Fire; Sudden release of pressure

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
Acetone	67-64-1	5000 lbs	3,693 gallons of concentrate

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
Acetone	X	X	X
Carbon dioxide	X	X	X
Distillates, petroleum, hydrotreated light	X	X	X

SECTION 16: OTHER INFORMATION

NFPA	Health Hazards 2	Flammability 3	Instability 0	Special Hazards – None
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Disclaimer: Control Solutions, Inc. believes the information presented herein is accurate and correct as of the document date. The presented information is based upon available data from reliable sources. Control Solutions, Inc. makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

Revision Date: September 23, 2021

Document Superseded: March 13, 2017

Revision Note: Added clarification sections in Section 8.

1. PRODUCT IDENTIFICATION

1.1. Product Identifiers

Product name : InTice™ 10 Perimeter Bait

1.2. Other Means of Identification

Product synonyms : none

1.3. Recommended Uses/Restrictions to Use

Uses : 10% boric acid granule for control of various pest species per label

Restrictions : See product label for details

1.4. Supplier Details

Company : Rockwell Labs Ltd
1257 Bedford Avenue
North Kansas City, MO 64116-4308
USA

Telephone : 1 816-283-3167

1.5. Emergency Contact

Outside normal business hours

Emergency Phone # : 1 800-424-9300 (USA & Canada)
1 703-527-3887 (Outside USA & Canada)

2. HAZARDS IDENTIFICATION

2.1. Classification of Substance or Mixture

none

2.2. GHS label elements, including precautionary statements

Pictogram(s) : none

Signal word : none

Hazard statement(s) : none

Precautionary statement(s) : none

2.3. Other hazards which do not result in classification

In animal feeding tests, boric acid has been shown to impair fertility at very high doses. However, decades of occupational exposure in humans have shown no adverse effects associated with this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixtures

Hazardous Component(s) or components of note:

Chemical Identity	Contains (% w/w)	CAS-No.	Hazard Classification
Orthoboric Acid (Boric Acid)	10.0	10043-35-3	none

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice

Consult a physician or poison control center. Provide this safety data sheet to medical personnel. Move out of hazardous areas.

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.

In case of skin contact

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.

In case of eye contact

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If swallowed

Call a poison control center or doctor 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.

4.2. Most important symptoms and effects, both acute and delayed

Boric acid may cause gastrointestinal discomfort with ingestion of more than an incidental amount.

4.3. Indication of any immediate medical attention and special treatment needed, if necessary

None known

5. FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Specific hazards arising from the chemical

Oxides of carbon, sulfur, and nitrogen

5.3. Special protective equipment and precautions for fire fighters

Wear self contained breathing apparatus for firefighting if deemed necessary.

Additional information: none

5.4. Further information

No data available

6. ACCIDENTAL RELEASE MEASURES
6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with spilled product and contaminated surfaces. Evacuate personnel to safe areas during emergencies. For safe handling instructions see section 7. For proper PPE see section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow release directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark.

6.3. Methods and materials for containment and cleaning up

Sweep up any spilled material and dispose of according to instructions in section 13. Wash contaminated surfaces with soap and water.

7. HANDLING AND STORAGE
7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene practices. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. In the State of California: Personal Protective Equipment (PPE) Applicators and handlers must wear: shoes plus socks. For additional precautions see section 2.2

7.2. Conditions for safe storage, including any incompatibilities

Store in a dry place. Store in original container. Do not store where children or animals may gain access.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1. Control parameters

Components with workplace parameters

Component	CAS-No.	Value	Control parameters	Basis
none	-----	-----	-----	-----

8.2. Appropriate engineering controls

Ensure relevant engineering controls are employed to prevent exceeding threshold values for the listed control parameters in section 8.1.

8.3. Individual protection measures, such as personal protective equipment

In normal use and handling conditions refer to the product label for required PPE. In all other cases the following recommendations would apply.

Eye/face protection

Safety glasses or other similar eye protection conforming to ANSI Z87.1 standards recommended when handling product.

Skin protection

Chemical resistant nitrile rubber or similarly compatible gloves recommended when handling product. Dispose of contaminated gloves after use in accordance with applicable local and state regulations. Wash exposed skin with soap and water immediately. Wash all contaminated clothing prior to reuse.

Respiratory protection

Not required under normal use conditions. Particulate respirator recommended when risk assessment shows need for air-purifying respirators.

Thermal hazards

None known

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance;	Yellow/brown granule
Odor;	Slight, food
Odor threshold;	No data available
pH;	6.1 @ 1.0% in water (22 °C)
Melting point/freezing point;	No data available
Initial boiling point and boiling range;	No data available
Flash point;	No data available
Evaporation rate;	No data available
Flammability (solid, gas);	No data available
Upper/lower flammability or explosive limits;	No data available
Vapor pressure;	No data available
Vapor density;	No data available
Relative density;	0.51 g/mL
Solubility;	Water, partial
Partition coefficient: n-octanol/water;	No data available
Auto-ignition temperature;	No data available
Decomposition temperature;	No data available

Viscosity;

No data available

9.2. Additional Information

No data available

10. STABILITY AND REACTIVITY

10.1. Reactivity

No data available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Avoid excessive moisture.

10.5. Incompatible materials

Strong oxidizing agents. Strong reducing agents.

10.6. Hazardous decomposition products

Other decomposition products – no data available

In the event of a fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute Toxicity

LD50 Oral – Rat – limit test - > 5000 mg/kg

LD50 Dermal – Rat – limit test - > 5000 mg/kg

LD50 Inhalation – no data available

Skin corrosion/irritation

Skin – Rabbit

Results: slight skin irritation

(OECD Test Guideline 404)

Serious eye damage/irritation

Eye – Rabbit

Results: mild eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization

Not a known sensitizer

Germ cell mutagenicity

Not a known mutagen

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive toxicity

In animal feeding tests, boric acid has been shown to impair fertility at very high doses. However, decades of occupational exposure in humans have shown no adverse effects associated with this material.

Specific target organ toxicity – single exposure

No data available

Specific target organ toxicity – repeated exposure

No data available

Aspiration hazard

No data available

11.2. Other information

No data available

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Toxicity to fish no data available

Toxicity to daphnia no data available

and other aquatic

invertebrates

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1. Disposal Methods.

The best disposal method is to use the entire quantity per label directions. If it is necessary to dispose of unused material then follow the label instructions and relevant local, state and federal waste disposal guidelines.

Product Disposal:

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

Packaging Disposal:

If empty: Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency or 1-800-CLEANUP which is managed as a public-private partnership.

See section 8 for proper PPE and precautionary handling measures.

14. TRANSPORT INFORMATION

DOT

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

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

KEEP OUT OF THE REACH OF CHILDREN

CAUTION

Causes moderate eye irritation

Avoid contact with skin, eye or clothing

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet

In the State of California: Personal Protective Equipment (PPE) Applicators and handlers must wear: shoes plus socks.

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

None

California Proposition 65 Components

This product does not contain any chemicals known to the state of California to cause cancer, birth defects, or reproductive harm.

TSCA

All components of this product are listed, exempted, or excluded from listing on the U.S. Toxic Substances Control Act chemical substance inventory.

16. OTHER INFORMATION

Acronyms and abbreviations used

LD50	Lethal Dose, 50%
OECD	Organization for Economic Cooperation and Development
IARC	International Agency for Research on Cancer
ACGIH	American Conference of Industrial Hygienists
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
DOT	Department of Transportation
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
SARA	Superfund Amendments and Reauthorization Act
TSCA	Toxic Substances Control Act
CAS-No.	Chemical Abstract Services - Number
PPE	Personal Protective Equipment
HMIS	Hazardous Materials Identification System
NFPA	National Fire Protection Association
PPM	Parts Per Million

Hazard Rating System Crossover

HMIS Rating

Health Hazard:	0
Flammability:	0
Reactivity:	0

NFPA Rating

Health Hazard:	0
Flammability:	0
Reactivity:	0

Preparation information

Prepared by:	Rockwell Labs Ltd
Version:	1.1
Revision Date:	September 18, 2020
Reason for revision:	Minor reformatting changes

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