



SAFETY DATA SHEET

NATULAR® SC

Effective Date: 01 July 2020
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SECTION 1. Identification of the Substance/Mixture and of the Company

Product Identifier

Formulation Identifier: Natular® SC
EPA Registration Number: 62719-748-8329

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses: Insecticide for control of mosquito larvae
Uses Advised Against: See product label for use restrictions

Details of the Supplier

Clarke Mosquito Control Products, Inc.
675 Sidwell Court
St. Charles, IL 60174 U.S.A.
+1 (630) 894-2000
Email: Clarke@clarke.com

Emergency Telephone Number

24 Hour Emergency Contact: 1-800-992-5994

SECTION 2. Hazards identification

Hazard Classification: This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

Other Hazards: No data available.

SECTION 3. Composition/Information on Ingredients

Components

Substance Name	Concentration % w/w	CAS #
Spinosad (mixture of Spinosyn A & D)	22.5	Spinosyn A: 131929-60-7; Spinosyn D: 131929-63-0
Propylene Glycol	12.0 -16.0	57-55-6

Ingredients not identified are non-hazardous and/or are not required to be disclosed pursuant to 29 CFR 1910.1200 (2012), and are withheld as trade secret.

SECTION 4. First Aid Measures

Description of First Aid Measures

General Advice: If potential for exposure exists, refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

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. Suitable emergency safety shower facility should be available in work area.

Eye contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.

Ingestion: No emergency medical treatment necessary.



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Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of Immediate Medical Attention and Special Treatment

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5. Fire-Fighting Measures

Extinguishing Media

Suitable Extinguishing Media: Water Fog, Carbon Dioxide (CO₂), Dry Chemical, foam

Unsuitable Extinguishing Media: No data available

Special Hazards Arising From the Substance or Mixture

Hazardous Combustion Products: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: This material will not burn until the water has evaporated. Residue can burn.

Special Protective Equipment and Precautions for Fire-Fighters

Special Procedures: Keep people away. Isolate fire and deny unnecessary entry. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Protection against fire: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

SECTION 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and Material for Containment and Cleaning Up

Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Call emergency number for clean-up assistance. See Section 13, Disposal Considerations, for additional information.



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SECTION 7. Handling and Storage

Precautions for Safe Handling

Keep out of reach of children. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Use with adequate ventilation. See Section 8, Exposure Controls and Personal Protection.

Conditions for Safe Storage, Including Any Incompatibilities

Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

SECTION 8. Exposure Controls / Personal Protection

Control Parameters

Component Name	List/Source	Type	Value
Spinosad	Dow IHG	TWA	0.3 mg/m ³
Propylene Glycol	US WEEL	TWA	10 mg/m ³

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering Controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual Protection Measures, such as Personal Protection Equipment

Special Note: Maintain and inspect Personal Protective Equipment before use. Discard and replace damaged protective equipment. Promptly remove and clean reusable PPE after use.

Eye Protection: Use safety glasses (with side shields).

Skin Protection: Wear clean suitable protective clothing including long-sleeve shirt, long pants, shoes and socks.

Hand Protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl").

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

SECTION 9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Appearance: Liquid
Color: Tan to Brown
Odor: Mild



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Odor Threshold:	No information available
pH:	8.0 - 9.5 1% pH Electrode
Melting Point:	No information available
Freezing Point:	No information available
Initial Boiling Point:	No information available
Flash Point:	> 100 °C (> 212 °F) Pensky-Martens Closed Cup ASTM D 93
Evaporation Rate:	No information available
Flammability:	No information available
Explosion limits [U/L]:	No information available
Vapor Pressure:	No information available
Vapor Density (Air =1):	No information available
Relative Density:	1.0564 g/cm ³ at 20 °C (68 °F) Digital density meter
Specific Gravity (Water = 1)	No information available
Solubility:	No information available
Partition Coefficient:	No information available
Auto-Ignition Temperature:	No information available
Viscosity:	No information available
Decomposition Temperature:	No information available
Explosive Properties:	No information available
Oxidizing Properties:	No information available
VOC Content (%):	No information available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10. Stability and Reactivity

Reactivity:	No data available
Chemical Stability:	Stable at ambient temperatures
Possibility of Hazardous Reactions:	Polymerization will not occur
Conditions to avoid:	Some components of this product can decompose at elevated temperatures.
Incompatible materials:	None known
Hazardous decomposition products:	Decomposition products depend upon temperature, air supply and the presence of other materials.

SECTION 11. Toxicological information

Acute Toxicity / Effects

Oral:	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. LD50, Rat, female, > 5,000 mg/kg No deaths occurred at this concentration.
Dermal:	Prolonged skin contact is unlikely to result in absorption of harmful amounts. LD50, Rat, male and female, > 5,000 mg/kg No deaths occurred at this concentration.
Inhalation:	Prolonged excessive exposure to mist may cause adverse effects. LC50, Rat, male and female, Aerosol, > 4.19 mg/l No deaths occurred at this concentration.
Skin Corrosion/Irritation:	Essentially nonirritating to skin.
Eye Irritation:	Essentially nonirritating to eyes. Corneal injury is unlikely.
Skin Sensitization:	Did not demonstrate the potential for contact allergy in mice.
Carcinogenicity:	Spinosad did not cause cancer in laboratory animals.



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Teratogenicity:	Spinosad did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.
Reproductive Effects:	In spinosad laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
Germ Cell Mutagenicity:	Spinosad In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.
STOT – Single exposure:	No product specific data available. Evaluation of available data for propylene glycol suggests that propylene glycol is not an STOT single exposure toxicant.
STOT – Repeated exposure:	In animals, spinosad has been shown to cause vacuolization of cells in various tissues. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.
Aspiration Hazard:	Based on physical properties, not likely to be an aspiration hazard.

SECTION 12. Ecological Information

Information is provided on the active ingredient, Spinosad

Ecotoxicity

Acute Toxicity to Fish:	Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested). LC50, <i>Lepomis macrochirus</i> (Bluegill sunfish), 96 Hour, 5.9 mg/l
Chronic Toxicity to Fish:	NOEC, <i>Oncorhynchus mykiss</i> (rainbow trout), flow-through test, mortality, 0.5 mg/l
Acute Toxicity to Aquatic Invertebrates:	EC50, <i>Daphnia magna</i> (Water flea), 48 Hour, 1.5 mg/l, OECD Test Guideline 202 or Equivalent EC50, eastern oyster (<i>Crassostrea virginica</i>), 0.295 mg/l
Chronic Toxicity to Aquatic Invertebrates:	NOEC, <i>Daphnia magna</i> (Water flea), 0.0012 mg/l
Acute Toxicity to Algae/Aquatic Plants:	EbC50, diatom <i>Navicula</i> sp., 5 d, Biomass, 0.107 mg/l EbC50, <i>Pseudokirchneriella subcapitata</i> (green algae), 7 d, 39 mg/l EC50, <i>Lemna gibba</i> , 14 d, 10.6 mg/l
Toxicity to Bacteria:	>100 mg/L
Toxicity to Birds:	Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg). Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm). oral LD50, <i>Colinus virginianus</i> (Bobwhite quail), > 2000mg/kg bodyweight. dietary LC50, <i>Colinus virginianus</i> (Bobwhite quail), 5 d, > 5253mg/kg diet.
Toxicity to Honeybees:	Oral LD50, <i>Apis mellifera</i> (bees), 48 Hour, 0.06micrograms/bee, contact LD50, <i>Apis mellifera</i> (bees), 48 Hour, 0.05 micrograms/bee
Toxicity to Soil-Dwelling Organisms:	LC50, <i>Eisenia fetida</i> (earthworms), 14 d, > 970 mg/kg

Persistence and Degradability

Biodegradability:	Biodegradation under aerobic static laboratory conditions is high (BOD20 or OD28/ThOD > 40%). Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. 10-day Window: Fail
Biodegradation:	< 1 %, 28 day exposure, OECD test guideline 301B or Equivalent



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Biological oxygen demand (BOD):

Incubation Time	BOD
5 d	66.000%
10 d	68.000%
20 d	76.000%
28 d	77.000%

Stability in Water (1/2-life):

pH 7, Half-life Temperature 25 °C, Stable
half-life, 200 - 259 d, pH 9, Half-life Temperature 25 °C
half-life, 0.84 - 0.96 d, pH 7
pH 5, Half-life Temperature 25 °C, Stable

SECTION 13. Disposal Considerations

Waste Treatment and Disposal methods

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.

SECTION 14. Transport Information

DOT (US):

Not Regulated

IMDG (Vessel):

UN Number: 3082
Hazard Class: 9
Packing Group: III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES LIQUID, N.O.S. (Spinosad)
Marine Pollutant: Yes

ICAO/IATA (Air):

UN Number: 3082
Hazard Class: 9
Packing Group: III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES LIQUID, N.O.S. (Spinosad)
Marine Pollutant: Yes

SECTION 15. Regulatory Information

FIFRA Information: This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Keep Out of Reach of Children



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Precautionary Statements

Environmental Hazards

This product is toxic to aquatic invertebrates. Non-target aquatic invertebrates may be killed in water where this pesticide is used. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Do not apply when weather conditions favor drift from treated areas. Drift from treated areas may be hazardous to aquatic organisms in neighboring areas.

This product is highly toxic to bees and other pollinating insects exposed to direct treatment, or to residues in/on blooming crops or weeds. Protect pollinating insects by following label directions intended to minimize drift and to reduce risk to these organisms.

Other Federal Regulations

SARA TITLE III CLASSIFICATION

Section 311/312: No SARA Hazards

Section 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.

US State Regulations

U.S. California Proposition 65: This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

U.S. Pennsylvania Right to Know Act: Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

Propylene Glycol (CAS No. 57-55-6)

SECTION 16. Other Information

DISCLAIMER OF LIABILITY: The information in this SDS was obtained from sources we believe to be reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared as is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

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