



SAFETY DATA SHEET

NATULAR® 20EC

Effective Date: 12 October 2017

v.01

Page 1 of 7

SECTION 1. Identification of the Substance/Mixture and of the Company

1.1 Product Identifier

Formulation Identifier: Natular® 20EC

EPA Registration Number: 8329-106

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

Relevant Identified Uses: Insecticide for control of mosquito and midge larvae

Uses Advised Against: See product label for use restrictions

1.3 Details of the Supplier of the Safety Data Sheet

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

1.4 Emergency Telephone Number

24-Hour Medical Emergency: POISON CONTROL Toll-free (800) 214 – 7753

24-Hour Transportation Emergency: INFOTRAC (800) 535-5053

SECTION 2. Hazards identification

United States (US)
According to OSHA 29 CFR 1910.1200 HCS (2012)

2.2 Classification of the Substance or Mixture

Acute Toxicity (Inhalation): Category 4

Pictogram:



Signal Word: Warning

Hazard statements: Harmful if inhaled

Precautionary Statements:

PREVENTION: Avoid breathing vapors, mists or spray. Use only outdoors or in a well-ventilated area.

RESPONSE: If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center or doctor if you feel unwell.

2.3 Other Hazards Not Classifiable Under OSHA 2012 HCS

See product label for any additional hazards

SECTION 3. Composition/Information on Ingredients

3.1 Components



SAFETY DATA SHEET

NATULAR® 20EC

Effective Date: 12 October 2017

v.01

Page 2 of 7

Substance Name	CAS No.	Concentration % w/w
Spinosad:		
Spinosyn A	131929-60-7	20.6
Spinosyn D	131929-63-0	
Methyl salicylate	119-36-8	<75 *

*The exact percentage (concentration) of composition has been withheld as trade secret.

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

4.1 Description of First Aid Measures

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.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed.

An allergic skin reaction may occur in individuals with a sensitivity to Wintergreen oil.

Short term inhalation exposure may cause temporary irritation to the nose, throat, and upper respiratory tract. Prolonged exposure may result in mild salicylate intoxication which can cause symptoms including headache, dizziness, ringing in the ears, difficulty in hearing, dimness of vision, mental confusion, lassitude, sweating, thirst, hyperventilation, nausea, vomiting, and occasionally diarrhea.

4.3 Indication of Immediate Medical Attention and Special Treatment

Exposure through ingestion may result in mild to severe salicylate intoxication. Symptoms can range from those stated above to more pronounced CNS disturbances (including generalized convulsions and coma), skin eruptions, and marked alterations in acid-base balance.

Treatment: Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. For medical treatment information, contact the poison control hotline at 1-800-214-7753. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

For additional medical treatment information, contact the poison control hotline at 1-800-214-7753. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5. Fire-Fighting Measures

5.1 Extinguishing Media

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

Unsuitable Extinguishing Media: None known

5.2 Special Hazards Arising From the Substance or Mixture

Specific Hazards: Under fire conditions some components may decompose. Combustion products may include CO and NOx.

5.3 Special Protective Equipment and Precautions for Fire-Fighters

Protection Against Fire: Wear positive pressure, self-contained breathing apparatus and protective firefighting clothing (includes fire-fighting helmet, coat, pants, boots, and gloves).

Special Procedures: Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.



SAFETY DATA SHEET

NATULAR® 20EC

Effective Date: 12 October 2017

v.01

Page 3 of 7

SECTION 6. Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Use appropriate protection (see section 8)

Environmental Precautions: Prevent product from entering into drains and waterways. Collect and dispose of this material and its container in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities. See Section 12 for additional ecological information.

6.2 Methods and Material for Containment and Cleaning Up

Clean Up Methods: Absorb with sand or other non-combustible material while using appropriate personal protection equipment. Collect spilled material in appropriate container for disposal.

SECTION 7. Handling and Storage

7.1 Precautions for Safe Handling

Handling: Keep out of reach of children. Do not take internally. Avoid inhalation of vapors from product. Do not take internally.

Hygiene Measures: Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage: Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilizers. Keep out of reach of children.

SECTION 8. Exposure Controls / Personal Protection

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

8.1 Control Parameters

Component Name	CAS No.	List	Type	Value
Spinosyn A & Spinosyn D	131929-60-7 131929-63-0	DOW IHG	TWA	0.3 mg/m ³
Methyl salicylate	119-36-8			None established

8.2 Exposure controls

Engineering Controls: Use with adequate ventilation. Wash hands thoroughly after handling. Wash clothing before re-using.

Individual Protection Measures, such as Personal Protection Equipment:

Eye Protection: Safety Glasses, Goggles or Face Shield

Skin Protection: Wear suitable protective clothing

Hand Protection: It is good industrial hygiene practice to minimize skin contact. If required or preferred, use suitable protective chemical resistant gloves such as nitrile or neoprene.

SECTION 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Appearance: Liquid

Color: Amber/Brown



SAFETY DATA SHEET

NATULAR[®] 20EC

Effective Date: 12 October 2017

v.01

Page 4 of 7

Odor:	Minty scent
Odor Threshold:	Not Available
pH:	7.5
Melting Point:	Not Applicable
Freezing Point:	Not Determined
Initial Boiling Point:	Not Determined
Flash Point:	99°C
Evaporation Rate:	Not Determined
Flammability:	Not Determined
Explosion limits [U/L]:	Not Determined
Vapor Pressure:	Not Determined
Vapor Density:	1 mmHg at 20°C
Relative Density:	9.68 lb/gal
Solubility:	Not Determined
Partition Coefficient:	Not Determined
Auto-Ignition Temperature:	Not Determined
Viscosity:	17.32 @ 20°C, 8.59 @ 40°C
Decomposition Temperature:	Not Available
Explosive Properties:	Not Available
Oxidizing Properties:	Not Available

SECTION 10. Stability and Reactivity

10.1 Reactivity

Not Available

10.2 Chemical Stability

Stable under normal conditions

10.3 Possibility of Hazardous Reactions

Hazardous Reactions: None under normal conditions

Hazardous Polymerization: Not known to occur

10.4 Conditions to Avoid

Protect from direct sunlight and excessive heat. Avoid heat, flames, sparks and other sources of ignition.

10.5 Incompatible Materials

Avoid contact with strong oxidizing agents, strong acids, strong bases

10.6 Hazardous Decomposition Products

None known under normal conditions of storage and use

SECTION 11. Toxicological Information

11.1 Information on Likely Routes of Exposure

Routes of entry: Oral, Dermal, Inhalation

Inhalation: Short term exposure may cause temporary irritation to the nose, throat, and upper respiratory tract.

Dermal: An allergic skin reaction may occur in individuals with a sensitivity to Wintergreen oil.



SAFETY DATA SHEET

NATULAR® 20EC

Effective Date: 12 October 2017

v.01

Page 5 of 7

11.2 Information on Toxicological Effects

Acute Toxicity/Effects*

Oral, Rat LD ₅₀ :	> 2,000 mg/kg-bw
Dermal, Rat LD ₅₀ :	> 4,000 mg/kg-bw
Inhalation, Rat LC ₅₀ :	> 2.01 mg/L
Skin Corrosion/Irritation:	Natular® 20EC is not a skin irritant
Serious Eye Damage/Irritation:	Mild (transient) eye irritation may occur from direct exposure of the product and/or in the eyes.
Skin Sensitization:	Natular® 20EC is not a skin sensitizer
STOT – Single exposure	No data is available to indicate product or any components present at greater than 0.1% present a specific target organ toxicity hazard from single exposure.

Chronic Toxicity/Effects

Germ Cell Mutagenicity	This product has not been tested. No data is available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Spinosad is not mutagenic.
Carcinogenicity:	This product does not contain any carcinogens as listed by OSHA, IARC, or NTP. Spinosad is not carcinogenic.
Reproductive Effects:	No data is available to indicate product or any components present at greater than 0.1% cause reproductive or teratogenic toxicity. For Spinosad: in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
STOT – Repeated Exposure:	In animals, spinosad has been shown to cause vacuolation of cells in various tissues. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.
Additional Information:	<p>Prolonged exposure may result in mild salicylate intoxication which can cause symptoms including headache, dizziness, ringing in the ears, difficulty in hearing, dimness of vision, mental confusion, lassitude, sweating, thirst, hyperventilation, nausea, vomiting, and occasionally diarrhea.</p> <p>Severe salicylate intoxication is characterized by more pronounced CNS disturbances (including generalized convulsions and coma), skin eruptions, and marked alterations in acid-base balance.</p>

SECTION 12. Ecological Information

12.1 Ecotoxicity

Product specific data is not available. Data referenced is in relation to the active ingredient, Spinosad. Spinosad is moderately toxic to aquatic organisms on an acute basis (LC₅₀/EC₅₀ between 1 and 10 mg/L in the most sensitive species tested).

Toxicity to Fish:	96-hr Acute LC ₅₀ 5.0 mg/L, Common Carp (<i>Cyprinus carpio</i>) 96-hr Acute LC ₅₀ 5.9 mg/L, Bluegill Sunfish (<i>Lepomis macrochirus</i>) 96-hr Acute LC ₅₀ 30 mg/L, Rainbow Trout (<i>Oncorhynchus mykiss</i>)
Toxicity to Aquatic Invertebrates:	48-hr Acute EC ₅₀ 1.5-14.0 mg/L, Water Flea (<i>Daphnia magna</i>) 48-hr LC ₅₀ > 7.9 mg/L, Mysid Shrimp (<i>Americamysis bahia</i>)
Toxicity to Aquatic Plants:	5-d EC ₅₀ 8.1 mg/L, Blue Green Algae (<i>Anabaena flos-aquae</i>)



SAFETY DATA SHEET

NATULAR[®] 20EC

Effective Date: 12 October 2017

v.01

Page 6 of 7

12.1 Persistence and Degradability

Product specific data not available. Data referenced is in relation to the active ingredient, Spinosad.

Log K _{ow} :	Spinosyn A: 3.91; Spinosyn D: 4.38 (distilled water)
Bioaccumulation:	Bioconcentration potential is low (BCF < 100)
Bioconcentration Factor:	Spinosyn A: 19; Spinosyn D: 33 mL/g (fish)
Mobility in Soil:	Potential for mobility in soil is low (K _{oc} between 500 and 2000)
Partition Coefficient, K _{oc} :	701

SECTION 13. Disposal Considerations

13.1 Waste Treatment and Disposal methods

Consult product label for disposal instructions. Avoid release to the environment. Improper disposal of excess product or rinsate is a violation of the Federal law. If these wastes cannot be disposed of by use 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.

SECTION 14. Transport Information

14.1 DOT (US)

Not regulated (Bulk and Non-Bulk Quantities)

14.2 IMDG (Vessel)

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

14.3 ICAO/IATA (Air transport)

UN Number:	3082
Hazard Class:	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S.
Technical Name:	Spinosad
Environmental Hazard:	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:

Signal Word: CAUTION
KEEP OUT OF REACH OF CHILDREN

FIRST AID

If swallowed: 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 to an unconscious person.



SAFETY DATA SHEET

NATULAR® 20EC

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v.01

Page 7 of 7

If in eyes: Hold eye open and rinse slowly and gently with warm water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

Have the product container of label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-214-7753 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear protective eyewear. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Other Federal Regulations

SARA TITLE III CLASSIFICATION

Section 302: None

Section 311/312: Immediate (acute) hazard

Section 313: This product contains the following toxic chemicals 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

None

CERCLA RQ: None

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

U.S. California Proposition 65: Not listed

STATE RIGHT-TO-KNOW : National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

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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