

Spinosad -MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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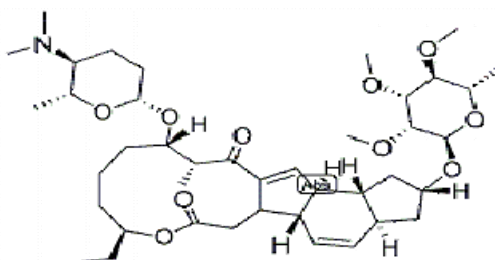
1. Chemical Product Identification

Product Name: Spinosad

Molecular Formula: C₄₁H₆₅NO₁₀ (spinosyn A) + C₄₂H₆₇NO₁₀ (spinosyn D)

Molecular Weight: 739.0

Structural Formula:



Chemical Name: mixture of (2R, 3aS, 5aR, 5bS, 9S, 13S, 14R, 16aS, 16bR)-2-(6-deoxy-2,3,4-tri-O-methyl- α -L-mannopyranosyloxy)-13-(4-dimethylamino-2,3,4,6-tetra-deoxy- β -D-erythropranosyloxy)-9-ethyl-2,3,3a,5a,5b,6,7,9,10,11,12,13,14,15,16a,16b-hexadecahydro-14-methyl-1H-as-indaceno[3,2-d]oxacyclododecine-7,15-dione And

(2S,3aR,5aS,5bS,9S,13S,14R,16aS,16bS)-2-(6-deoxy-2,3,4-tri-O-methyl- α -L-mannopyranosyloxy)-13-(4-dimethylamino-2,3,4,6-tetra-deoxy- β -D-erythropranosyloxy)-9-ethyl-2,3,3a,5a,5b,6,7,9,10,11,12,13,14,15,16a,16b-hexadecahydro-4,14-dimethyl-1H-as-indaceno[3,2-d]oxacyclododecine-7,15-dione

Form: Crystals

Color: White-grey

Odor: Odorless

CAS No.: 168316-95-8

2. Composition / Information on Ingredients

Composition	CAS No.	Content
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Spinosad	168316-95-8	45%
Other ingredients		55%

3. Hazards Identification

May cause slight eye irritation. Material is toxic to aquatic invertebrates and fish.

4. First Aid Measures

Eye Contact: Check for and remove contact lenses. Flush eyes with running water for at least 15 minutes separating eyelids. Seek medical attention immediately.

Skin Contact: Wash with soap and water for 15 minutes. Remove contaminated clothing and shoes. Seek medical attention immediately.

Inhalation: Remove from exposure. If breathing is difficult, administer oxygen. If breathing stops, administer artificial respiration. Seek medical attention immediately.

Ingestion: Remove dentures and clear mouth. If person is conscious, rinse mouth with water. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person. Call physician or poison control immediately.

5. Fire-Fighting Measures

Extinguishing media: To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.

Fire and explosion hazards: Keep people away. Isolate fire area and deny unnecessary entry. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and or irritating compounds.

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

6. Accidental Release Measures

Action to take for spills/leaks: Use non-reactive absorbent to absorb small spills and collect for disposal.

7. Handling and Storage

Precautions to be taken in handling and storage: Keep out touch of children. Avoid eye contact. Do not take internally. Wash thoroughly after handling and before eating, drinking,

or smoking. Store product in original container. See product label for additional instructions.

8. Exposure Controls/Personal Protection

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

Engineering controls: Provide general and or local exhaust ventilation to control airborne levels below the exposure guidelines.

Recommendations for manufacturing, commercial blending, and packaging workers

Eye/face protection: Use of safe glasses is recommended.

Skin protection: No precautions other than clean body-covering clothing should be needed. See product label for additional instructions.

Respiratory protection: atmospheric levels should be maintained below the exposure guideline.

Applicators and all other handlers: Refer to the product label for personal protective clothing and equipment.

9. Physical and Chemical Properties

Appearance: Off-white to white liquid

Odor: Odorless

pH: 4 – 9

10. Stability and Reactivity

Stability (conditions to avoid): thermally stable at typical use temperature. Some components of this product can decompose at elevated temperature.

Incompatibility (specific, materials to avoid): None know

Hazardous decomposition products: Hazardous decomposition products depend upon temperature, air supply, and the presence of other materials.

Hazardous polymerization: Not know to occur.

11. Toxicological Information

Acute toxicity

Oral LD₅₀ for male rats: >3738mg/kg, for female rats: >5000mg/kg

Dermal LD₅₀ for rats: >5000mg.ai/kg

Inhalation LD₅₀ (48h) for rats: 5.18 mg/l air

Skin irritation: Non irritation

Eye irritation: Slight irritation

12. Ecological and Ecotoxicological Information

Effects on Birds: Acute LD₅₀ for bobwhite quail: >2000mg/kg, for mallard duck: >2000mg/kg

Effects on fish: Acute LC₅₀ (96h) for rainbow trout: >30 mg/l, for common carp: >5.0 mg/l, for sheepshead minnow: >7.9 mg/l,

Effects on honey bees: contact LD₅₀ (48h): 0.003-0.045µg/bee, oral LD₅₀ (48h): 0.06µg/bee

Effects on soil organisms: LC50 (14d) for earthworm: >970 mg/kg

13. Disposal Considerations

Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of waste effluents or equipment washwaters. Dispose of waste effluents in accordance with state and local waste disposal regulations. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal.

14. Transport Information

Not applicable.

15. Regulatory Information

Not applicable.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.