

MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994
Dow AgroSciences LLC
Indianapolis, IN 46268

TRACER* NATURALYTE* INSECT CONTROL

Effective Date: 7/26/01
Product Code: 49171
MSDS: 005499

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Tracer* Naturalyte* Insect Control

COMPANY IDENTIFICATION:

Dow AgroSciences
9330 Zionsville Road
Indianapolis, IN 46268-1189

2. COMPOSITION/INFORMATION ON INGREDIENTS:

Spinosad: Spinosyn A	CAS# 131929-60-7	44.2%
Spinosyn D	CAS# 131929-63-0	
Inert Ingredients, total, including:		55.8%
Propylene glycol (1,2-Propanediol)	CAS# 000057-55-6	

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

3. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Off-white to tan liquid suspension with low odor. May cause slight eye irritation. The LD₅₀ for skin absorption in rabbits is >5000 mg/kg. The oral LD₅₀ for rats and mice is >5000 mg/kg. Material is slightly toxic to aquatic organisms.

EMERGENCY PHONE NUMBER: 800-992-5994

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

EYE: May cause slight eye irritation.

SKIN: The LD₅₀ for skin absorption in rabbits is >5000 mg/kg. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Prolonged exposure is not likely to cause significant skin irritation. Did not cause allergic skin irritation or reactions when tested in guinea pigs.

INGESTION: Single dose oral toxicity is extremely low. The oral LD₅₀ for rats and mice is >5000 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause injury.

INHALATION: Single exposure to concentrate mist is not likely to cause adverse effects.

SYSTEMIC (OTHER TARGET ORGANS) EFFECTS: In animals, has been shown to cause vacuolation of cells in various tissues and changes in blood and serum biochemistry. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

CANCER INFORMATION: For spinosad, studies were negative.

TERATOLOGY (BIRTH DEFECTS): Spinosad, did not cause birth defects in laboratory animals.

REPRODUCTIVE EFFECTS: Spinosad, in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

4. FIRST AID:

EYE: 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.

SKIN: 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.

INGESTION: 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 the poison control center or doctor. Never give anything by mouth to an unconscious person.

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INHALATION: Move person to fresh air. If person is not breathing, call 911 or ambulance, and then give artificial respiration, preferably by mouth to mouth. Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES:

FLASH POINT: Not determined (aqueous suspension)
METHOD USED: Not applicable

FLAMMABLE LIMITS:

LFL: Not determined (water-based product)
UFL: Not determined (water-based product)

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. Report large spills to Dow AgroSciences at 800-992-5994.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach 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.

EXPOSURE GUIDELINES:

Propylene glycol: AIHA WEEL is 50 ppm total, 10 mg/M³ aerosol only.
Spinosad: Dow AgroSciences Industrial Hygiene Guide is 0.3 mg/M³, TWA.

ENGINEERING CONTROLS: Good general ventilation should be sufficient for most conditions.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

EYE/FACE PROTECTION: Use of safety glasses is recommended.

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

RESPIRATORY PROTECTION: No respiratory protection should be needed.

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

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9. PHYSICAL AND CHEMICAL PROPERTIES:

BOILING POINT: 100°C (212°F) water
PHYSICAL STATE: Liquid suspension
ODOR: Low odor
DENSITY: 1.09 g/ml
SOLUBILITY IN WATER: Dispersible
VAPOR PRESSURE: Similar to water
APPEARANCE: Off-white to light tan

10. STABILITY AND REACTIVITY:

STABILITY (CONDITIONS TO AVOID): Thermally stable at typical use temperatures. Some components of this product can decompose at elevated temperatures.

INCOMPATIBILITY (SPECIFIC MATERIALS TO AVOID):
None known

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

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

MUTAGENICITY: For spinosad, in-vitro and animal mutagenicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:

Based largely or completely on information for active ingredient(s).
Bioconcentration potential is low (BCF <100 or Log Pow <3).
Based on information for spinosyn A.
Bioconcentration factor (BCF) in fish is 19.
Based on information of spinosyn D.
Bioconcentration factor (BCF) in fish is 33.

DEGRADATION AND PERSISTENCE:

Based largely or completely on information for active ingredient(s).
Based on information for spinosyn A.
The photolysis half-life in soil is 8.68 days.
The photolysis half-life in pH 7 buffer is 0.96 days.
Under aerobic soil conditions the half-life is 9.4 and 17.3 days.
Based on information for spinosyn D.
The photolysis half-life in soil is 9.44 days.
The photolysis half-life in pH 7 buffer is 0.84 days.

ECOTOXICOLOGY:

Material is slightly toxic to aquatic organisms on an acute basis (LC₅₀/EC₅₀ between 10 and 100 mg/L in most sensitive species).
Acute immobilization EC₅₀ in water flea (*Daphnia magna*) is 16.9 mg/L.
Acute LC₅₀ in water flea (*Daphnia magna*) is >90.9 mg/L.
Acute LC₅₀ in zebra fish (*Brachydanio rerio*) is >120 mg/L.
Acute LC₅₀ in common carp (*Cyprinus carpio*) is >100 mg/L.
The LC₅₀ in earthworm (*Eisenia foetida*) is >2000 mg/kg.
Growth inhibition EC₅₀ in diatom (*Navicula sp.*) is 0.667 mg/L.
Growth inhibition EC₅₀ in green alga (*Selenastrum capricornutum*) is >100 mg/L.
Acute contact LC₅₀ in honeybee (*Apis mellifera*) is 0.12 µg/bee.
Acute oral LD₅₀ in honeybee (*Apis mellifera*) is 0.11 µg/bee.

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: Improper disposal of excess product, spray mixture, or rinsate is a violation of the federal law. If these wastes cannot be disposed 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.

14. TRANSPORT INFORMATION:

This product is not regulated by DOT when shipped domestically by land.

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15. REGULATORY INFORMATION:

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

U.S. REGULATIONS

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

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

An immediate health hazard

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

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

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>LIST</u>
1,2-PROPANEDIOL	000057-55-6	PA1

PA1=Pennsylvania Hazardous Substance (present at > or = to 1.0%).

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

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.

16. OTHER INFORMATION:

MSDS STATUS: Revised Section: 4
Reference: DR-0341-0784
Replaces MSDS Dated: 3/23/00
Document Code: D03-066-003
Replaces Document Code: D03-066-002

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult Dow AgroSciences for Further Information.