

Product Name: TRACER (TM) Insect Control**Issue Date:** 2014/03/14**Print Date:** 02 May 2019

Dow AgroSciences India Pvt. Ltd. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Identification of the substance/preparation and of the company/undertaking

Product Name

TRACER™ Insect Control

COMPANY IDENTIFICATION

Dow AgroSciences India Pvt. Ltd.
A Subsidiary of The Dow Chemical Company
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Pirojshanangar, L.B.S. Marg
Vikhroli
Mumbai, MA 400 079
India

Customer Information Number:

91 22 6674 1700

SDSQuestion@dow.com**EMERGENCY TELEPHONE NUMBER****24-Hour Emergency Contact:**

91-2356-272046

Local Emergency Contact:

91 22 66741800

2. Composition/information on ingredients

Component	Amount	Classification:	CAS #	EC #
Spinosad	45.0 %	N: R50, R53	168316-95-8	434-300-1
Propylene glycol	< 5.0 %	Not classified.	57-55-6	200-338-0

See Section 16 for full text of R-phrases.

3. Hazards Identification

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.

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.

Ingestion: No emergency medical treatment necessary.

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 needed

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.

5. Fire Fighting Measures

Suitable extinguishing media

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

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: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: This material will not burn until the water has evaporated. Residue can burn. If exposed to fire from another source and water is evaporated, exposure to high temperatures may cause toxic fumes.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. 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.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, 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

Personal precautions, protective equipment and emergency procedures: 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. Spills or discharge to natural waterways is likely to kill aquatic organisms.

Methods and materials 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: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling

General Handling: Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

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.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Spinosad	Dow IHG	TWA	0.3 mg/m ³
Propylene glycol	WEEL	TWA Aerosol.	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.

Personal Protection

Eye/Face Protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin Protection: Wear clean, body-covering clothing.

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

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. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: 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.

9. Physical and Chemical Properties

Appearance

Physical State	Liquid.
Color	Off-white
Odor	Mild
Odor Threshold	No test data available
pH	7.4 (@ 1 %) <i>pH Electrode</i> (1% aqueous suspension)
Melting Point	Not applicable
Freezing Point	No test data available
Boiling Point (760 mmHg)	100 °C <i>Literature</i> (water).
Flash Point - Closed Cup	<i>Pensky-Martens Closed Cup ASTM D 93</i> flame extinguished; none to boiling
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not applicable to liquids
Flammable Limits In Air	Lower: No test data available Upper: No test data available
Vapor Pressure	Similar to water
Vapor Density (air = 1)	No test data available
Specific Gravity (H₂O = 1)	1.096 <i>Digital Density Meter (Oscillating Coil)</i>
Solubility in water (by weight)	Dispersible
Partition coefficient, n-octanol/water (log Pow)	No data available for this product.
Autoignition Temperature	773 mmHg <i>92/69/EEC A15</i> none below 400degC
Decomposition Temperature	No test data available
Dynamic Viscosity	No test data available
Kinematic Viscosity	No test data available
Explosive properties	no data available
Oxidizing properties	no data available
Liquid Density	1.09 g/cm ³ @ 20 °C <i>Digital density meter</i>

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Thermally stable at typical use 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. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity

Ingestion

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: LD50, rat, male and female > 5,000 mg/kg

No deaths occurred at this concentration.

Aspiration hazard

Based on physical properties, not likely to be an aspiration hazard.

Dermal

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: LD50, rabbit, male and female > 5,000 mg/kg

No deaths occurred at this concentration.

Inhalation

No adverse effects are anticipated from single exposure to mist. Based on the available data, respiratory irritation was not observed.

As product: LC50, 4 h, Liquid aerosol., rat, male and female > 5.0 mg/l

No deaths occurred at this concentration.

Eye damage/eye irritation

May cause pain disproportionate to the level of irritation to eye tissues. Essentially nonirritating to eyes.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin. Prolonged contact may cause slight skin irritation with local redness.

Sensitization

Skin

As product: Did not cause allergic skin reactions when tested in guinea pigs.

Respiratory

No relevant data found.

Repeated Dose Toxicity

For the active ingredient(s): 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. For the minor component(s): In animals, effects have been reported on the following organs after exposure to aerosols: Lung. As product: Repeated exposure did not produce systemic toxicity when applied to the skin of rabbits.

Chronic Toxicity and Carcinogenicity

For the active ingredient(s): Did not cause cancer in laboratory animals.

Developmental Toxicity

For the active ingredient(s): Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive Toxicity

For the active ingredient(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Genetic Toxicology

As product: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

12. Ecological Information

Toxicity

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

Fish Acute & Prolonged Toxicity

LC50, Cyprinus carpio (Carp), 96 h: > 100 mg/l

LC50, Danio rerio (zebra fish), 96 h: > 120 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), semi-static test, 48 h: 16.9 mg/l

Aquatic Plant Toxicity

EbC50, Pseudokirchneriella subcapitata (green algae), 72 h: > 100 mg/l

EC50, diatom Navicula sp., biomass growth inhibition, 120 h: 0.667 mg/l

Toxicity to Above Ground Organisms

oral LD50, Apis mellifera (bees): 0.049 micrograms/bee

contact LD50, Apis mellifera (bees): 0.05 micrograms/bee

Toxicity to Soil Dwelling Organisms

LC50, Eisenia fetida (earthworms), 14 d: > 458 mg/kg

Persistence and Degradability

Data for Component: **Spinosad**

Surface photodegradation is expected with exposure to sunlight. Material is not readily biodegradable according to OECD/EEC guidelines.

Stability in Water (1/2-life):

; 25 °C; pH 7; Stable

200 - 259 d; 25 °C; pH 9

0.84 - 0.96 d; pH 7

; 25 °C; pH 5; Stable

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
< 1 %	28 d	OECD 301B Test	fail

Data for Component: **Propylene glycol**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
81 %	28 d	OECD 301F Test	pass
96 %	64 d	OECD 306 Test	Not applicable

Bioaccumulative potential

Data for Component: **Spinosad**

Bioaccumulation: For similar active ingredient(s): Spinosyn A.

Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient, n-octanol/water (log Pow): 4.01

Bioconcentration Factor (BCF): For similar active ingredient(s): Spinosyn A. 114; Oncorhynchus mykiss (rainbow trout)

Data for Component: **Propylene glycol**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): -1.07 Measured

Bioconcentration Factor (BCF): 0.09; Estimated.

Mobility in soil

Data for Component: **Spinosad**

Mobility in soil: For similar material(s); Spinosyn A., Expected to be relatively immobile in soil (Koc > 5000).

Partition coefficient, soil organic carbon/water (Koc): 35,024 **Henry's Law Constant (H):**

For similar active ingredient(s): 1.89E-07

Data for Component: **Propylene glycol**

Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): < 1 Estimated.

Henry's Law Constant (H): 1.2E-08 atm*m3/mole Measured

13. Disposal Considerations

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.

14. Transport Information

ROAD & RAIL

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Technical Name: Spinosad

Hazard Class: 9 **ID Number:** 3082 **Packing Group:** PG III

Classification: M6

Hazard identification No: 90

Environmental Hazard: Yes

OCEAN

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Technical Name: Spinosad

Hazard Class: 9 **ID Number:** 3082 **Packing Group:** PG III

EMS Number: F-A,S-F

Marine pollutant: Yes

AIR

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Technical Name: Spinosad

Hazard Class: 9 **ID Number:** 3082 **Packing Group:** PG III

Cargo Packing Instruction: 964

Passenger Packing Instruction: 964

Environmental Hazard: Yes

INLAND WATERWAYS

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Technical Name: Spinosad

Hazard Class: 9 **ID Number:** 3082 **Packing Group:** PG III

Classification: M6

Hazard identification No: 90

Environmental Hazard: Yes

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

European Inventory of Existing Commercial Chemical Substances (EINECS)

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

Classification and User Label Information

Hazard Symbol:

N - Dangerous for the environment.

Risk Phrases :

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases :

S2 - Keep out of the reach of children.

S35 - This material and its container must be disposed of in a safe way.

S57 - Use appropriate containment to avoid environmental contamination.

16. Other Information

Risk-phrases in the Composition section

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Revision

Identification Number: 55822 / 4068 / Issue Date 2014/03/14 / Version: 3.0

DAS Code: NAF-85

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation

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