



Material Safety Date Sheet (MSDS)

Spot 24 SC

IDENTIFICATION OF THE SUPPLIER:

AGRO CHEMICALS INDUSTRIES LTD
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PRODUCT IDENTIFICATION:

Common Name: Spinosad 24% w/v

Trade Name: Spot 24 SC

Chemical Name: Amixture of (2R,3aR,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-erythopyranosyloxy)-=9-ethyl-2, 3, 3a, 5a, 5b, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16a, 16b-hexadecahydro - 14 - methyl - = 1H - 8 -oxacyclododeca[b]as-indacene-7, 15- dione and (24, 3aS, 5aR, 5bS, 9S, 13S, 14R, 16aS, 16bR) - = 2- (6 - deoxy - 2, 3, 4 - tri - O - methyl - α - L -mannopyranosyloxy) - 13 -(4dimethylamino - 2, 3, 4, 6-tetra-deoxy- β -D-erythopyranosyloxy)-9-ethyl-2, 3, 3a, 5a, 5b, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16a, 16b-hexadecahydro-4, 14- dimethyl - 1H-8 - oxacyclododeca[b] as - indacene - 7, 15-dione in the proportion 50-95% to 50-5%.

Chemical Formula: C₄₁H₆₅NO₁₀ (spinosinA); C₄₂H₆₇NO₁₀ (spinosyn D).

Molecular Weight: 732.0 (spinosyn A); 746.0 (spinosyn D).

PRODUCT COMPOSITION:

Active Ingredient:

Spinosad 24% w/v

Inert ingredient:

Dispersing, wetting, suspension agent 11% w/v

Anti bacterial, anti freeze 4 % w/v

Water up to 100%

HAZARD IDENTIFICATION:

Emergency Overview

Off-white to tan Liquid suspension with low odor.

Hazards of product:

Maybe cause slight eye irritation, toxic to marine mollusks, fish and aquatic invertebrate.

Potential Health Effects

Eye Contact: May cause pain disproportionate to the level of irritation to eye tissues. Essentially nonirritating to eyes. Corneal injury is unlikely.

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

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

Inhalation: No adverse effects are anticipated from single exposure to mist.

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

Effects of Repeated Exposure: 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.

Reproductive Effects: 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.

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 and deny unnecessary entry. Under fire condition some component of this product may decompose. To smoke may contain unidentified toxic and/or irritating compound.



Fire fighting equipment:

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.

FIRST-AID MEASURES:

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, and then continue rinsing eyes. Call a doctor for treatment advice.

Skin Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a doctor for treatment advice.

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

Ingestion: call a poison control center or doctor immediately for treatment advice. Have a person one 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 any thing by mouth to an unconscious person.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

ACCIDENTAL RELEASE MEASURE:

Action to take for spills/leaks:

Use non-reactive absorbent to absorb small spills and collect for disposal.

Steps to be taken if Material is Released or Spilled:

Contain spilled material if possible. Small spills: Absorb with materials such as: Clay, Dirt, Sand or Sweep up. Collect in suitable and properly labeled containers.

Personal Precautions:

Use appropriate safety equipment.

Environmental Precautions:

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.



STABILITY AND REACTIVITY DATA:

Stability:

Thermally stable at typical use temperatures. Some components of this product can decompose at elevated temperatures.

Incompatible Materials: None known.

Hazardous Polymerization: not known to occur.

Hazardous Decomposition product:

Decomposition products depend upon temperature, air supply and the presence of other materials.

HANDLING AND STORAGE:

Precaution to be taken in handling and storage:

Keep out of reach children. Avoid eye contact. Don't take internally. Wash thoroughly after handling and before eating, drinking, or smoking. Store product in original container. See product label for additional instruction.

PERSONAL PROTECTION:

Personal Protection

- **Eye/Face Protection:** Use safety glasses (with side shields).
- **Skin Protection:** Wear clean, body-covering clothing.
- **Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur.
- **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.
- **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.

TOXICOLOGICAL INFORMATION:

POTENTIAL HEALTH EFFECTS:

This section includes possible adverse effect, which could occur if this material is not handled in the recommended manner.

EYE:

May cause slight eye irritation. Corneal injury is unlikely. May cause pain disproportionate to level of irritation to eye tissue.

SKIN:

Prolong contact may cause slight skin irritation with local redness. The LD₅₀ for skin absorption in rabbits is >5000 mg/kg. Prolong contact is unlikely to result in absorption of harmful amounts. Did not cause allergic skin reaction when tested in guinea pigs.

INGESTION:

Very low toxicity if swallowed. The oral LD₅₀ for rat and mice is >5000 mg/kg. Harmful effects not anticipated from swallowing small amounts.

INHALATION:

No adverse effects are anticipated from single exposure to mist. The aerosol LC₅₀ for rat is >5 mg/L for 4 hr (limit test).

SYSTEMIC (OTHER TARGET ORGANS) EFFECTS:

Repeated exposure did not produce systemic toxicity when applied to the skin of rabbits.

TERATOLOGY (BIRTH DEFECTS):

spinosad did not cause birth defects in laboratory animals.

PER-PRODUCTIVE EFFECTS:

spinosad, in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animal.

MUTAGENICITY:

For spinosad, in-vitro and animal genetic toxicity studies were negative.

ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE

Movement & Partitioning

Based largely or completely on data for major component.

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3).

Based largely or completely on information for propylene glycol.

Potential for mobility in soil is very high (Koc between 0 and 500)

Based largely or completely on information for spinosad.

Potential for mobility in soil is low (Koc between 500 and 2000).

Persistence and Degradability:

Based largely or completely on information for spinosad.

Biodegradation may occur aerobic condition (in presence of oxygen).

Based largely or completely on information for propylene glycol.

Biodegradation under aerobic static laboratory condition is high (BOD20 or BOD28/THOD <40%)

ECOTOXICITY

Based largely or completely on information for spinosad.

Material is highly toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ between 0.1 and 1 mg/L in most sensitive species).

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).

Based largely or completely on information for propylene glycol.

Material is practically non-toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ >100 mg/L in most sensitive species).

DISPOSAL CONSIDERATION:

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 characteristics 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 and regulations.



TRANSPORT INFORMATION:

ADR/RID

UN number: UN3082

UN proper shipping name

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

Technical Name: Spinosad

Transport hazard class(es)

Hazard Class: 9

Packing Group

PG III

Environmental hazards

Environmentally hazardous

Special precautions for user

Special Provisions: no data available

Hazard identification No:90

ADNR / ADN

UN number

UN3082

UN proper shipping name

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

Technical Name: Spinosad

Transport hazard class(es)

Hazard Class: 9

Packing Group

PG III

Environmental hazards

Environmentally hazardous

Special precautions for user

no data available

IMDG

UN number

UN3082

UN proper shipping name

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

Technical Name: Spinosad





Transport hazard class(es)

Hazard Class: 9

Packing Group

PG III

Environmental hazards

Marine pollutant

Special precautions for user

EMS Number: F-A,S-F

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

ICAO/IATA

UN number

UN3082

UN proper shipping name

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

Technical Name: Spinosad

Transport hazard class(es)

Hazard Class: 9

Packing Group

PG III

Environmental hazards

Not applicable

Special precautions for user

no data available