

MATERIAL SAFETY DATA SHEET



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

Effective Date: 1/16/04
Product Code: 29819
MSDS: 004019

SNAPSHOT* 2.5 TG HERBICIDE

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Snapshot* 2.5 TG Herbicide

COMPANY IDENTIFICATION:

Dow AgroSciences
9330 Zionsville Road
Indianapolis, IN 46268-1189

2. COMPOSITION/INFORMATION ON INGREDIENTS:

Isoxaben: N-(3-(1-ethyl-1-methylpropyl)-5-isoxazolyl)-2,6-dimethoxybenzamide	CAS# 082558-50-7	0.5%
Trifluralin: alpha,alpha,alpha-trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine	CAS# 001582-09-8	2.0%
Inert Ingredients, Total, Including :		97.5%
Clay contains	CAS# 008031-18-3	
Crystalline Silica	CAS# 014808-60-7	

3. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Yellow free-flowing granule with slight aromatic odor. May cause moderate eye irritation with slight corneal injury. Prolonged or repeated exposure may cause skin irritation. The LD₅₀ for skin absorption in rabbits is >5000 mg/kg; oral LD₅₀ for rats is >2500 mg/kg; inhalation LC₅₀ for rats is >4.6 mg/L (males) and 0.5 to 4.6 mg/L (females) for 4 hours. Toxic to fish and 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 moderate eye irritation with slight corneal injury.

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

INGESTION: Low toxicity if swallowed. The oral LD₅₀ for rats is >2500 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

INHALATION: Excessive exposure may cause irritation to upper respiratory tract (nose and throat). The LC₅₀ for rats is >4.6 mg/L (males) and between 0.5 and 4.6 mg/L (females) for four hours.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:

Isoxaben, in animals, effects have been reported on the following organs: kidney and liver. Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs. Some evidence suggests that kidney effects may result from excessive exposures also.

CANCER INFORMATION: This mixture contains crystalline silica, which is listed as a carcinogen for hazard communication purposes under OSHA Standard 29 CFR 1910.1200. Crystalline silica is listed by IARC and NTP. Crystalline silica has been shown to cause cancer in laboratory animals and humans. A low incidence of urinary tract tumors were seen in only 1 of 5 chronic studies in rats with Trifluralin. Trifluralin is not anticipated to be a carcinogenic risk to man. An increase in non-malignant liver tumors was observed with isoxaben in one of two species tested.

TERATOLOGY (BIRTH DEFECTS): Trifluralin did not cause birth defects in animal; other fetal effects occurred only at doses toxic to the mother.

REPRODUCTIVE EFFECTS: Isoxaben has been shown to interfere with reproduction in animal studies.

4. FIRST AID:

EYES: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

SKIN: Wash skin with plenty of water.

MATERIAL SAFETY DATA SHEET



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

SNAPSHOT* 2.5 TG HERBICIDE

Effective Date: 1/16/04
Product Code: 29819
MSDS: 004019

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Move person to fresh air; if effects occur, consult a physician.

NOTE TO PHYSICIAN: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES:

FLASH POINT: Not applicable

METHOD USED: Not applicable

FLAMMABLE LIMITS

LFL: Not applicable

UFL: Not applicable

AUTO-IGNITION TEMPERATURE: Does not ignite up to 1000°F (537°C).

EXTINGUISHING MEDIA: Use water fog, CO₂ or dry chemicals.

FIRE AND EXPLOSION HAZARDS: Will emit toxic vapors during combustion.

FIRE-FIGHTING EQUIPMENT: Wear full protective clothing and use positive-pressure, self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS: Contain and sweep up material of small spills and dispose as waste. Report large spills to Dow AgroSciences at 800-992-5994. Prevent runoff.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

HANDLING: Keep out of reach of children. Harmful if swallowed or inhaled. Causes eye irritation. Avoid contact with eyes, skin and clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

STORAGE: Store in original container. Keep tightly closed when not in use. See product label for handling/storage precautions relative to the end use of this product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

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

EXPOSURE GUIDELINE(S):

Silica, crystalline: ACGIH TLV is 0.1 mg/M³ (respirable) for tripoli, and fused silica, 0.05 mg/M³ (respirable) for cristobalite, tridymite, and quartz. Quartz has an A2 designation. OSHA PEL is (30 mg/M³)/(%SiO₂+2) total dust, (250 mppcf)/(%SiO₂+5) or (10 mg/M³)/(%SiO₂+2) respirable for quartz, tripoli, and fused silica; the value for cristobalite and tridymite is ½ the value calculated from the respirable dust formula for quartz.

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:

RESPIRATORY PROTECTION: If respiratory irritation is experienced, use a NIOSH approved air-purifying respirator.

SKIN PROTECTION: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur.

EYE/FACE PROTECTION: Use chemical goggles.

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

MATERIAL SAFETY DATA SHEET



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

SNAPSHOT* 2.5 TG HERBICIDE

Effective Date: 1/16/04
Product Code: 29819
MSDS: 004019

9. PHYSICAL AND CHEMICAL PROPERTIES:

BOILING POINT: Not applicable
VAPOR PRESSURE: Not applicable
VAPOR DENSITY: Not applicable
SOLUBILITY IN WATER: Not applicable
SPECIFIC GRAVITY: Not applicable
BULK DENSITY: 39-42 lbs/cu.ft.
APPEARANCE: Yellow free flowing granule
ODOR: Mild aromatic odor
pH: (aqueous 50/50) 7.0 to 8.0

10. STABILITY AND REACTIVITY:

STABILITY: (CONDITIONS TO AVOID) Stable under normal conditions.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID)
None known

HAZARDOUS DECOMPOSITION PRODUCTS: Nitrogen oxides and other toxic vapors may be formed if product is involved in fire.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

MUTAGENICITY: Animal genetic toxicity studies were negative for isoxaben and trifluralin. For crystalline silica, in-vitro genetic toxicity studies were negative in some cases and positive in other cases.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL DATA:

MOVEMENT & PARTITIONING:

Based largely or completely on information for trifluralin.
Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Based largely or completely on information for isoxaben.
Bioconcentration potential is low (BCF <100 or Log Pow <3).

DEGRADATION & PERSISTENCE:

Based largely or completely on information for trifluralin.
Based on the stringent test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Based largely or completely on information for isoxaben.
The photolysis half-life in water is 6 days.
The photolysis half-life in soil is 248 days.
Under aerobic soil conditions the half-life is 4.3-10.6 months.

ECOTOXICOLOGY:

Based largely or completely on information for trifluralin.
Material is very highly toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ <0.1 mg/L in most sensitive species).

Based largely or completely on information for isoxaben.
Not expected to be acutely toxic.
EC₅₀ is above the water solubility.

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: Improper disposal of excess pesticide is a violation of 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:

U.S. DEPARTMENT OF TRANSPORTION (DOT) INFORMATION:

For all package sizes and modes of transportation:
This material is not regulated for transport.

MATERIAL SAFETY DATA SHEET



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

Effective Date: 1/16/04
Product Code: 29819
MSDS: 004019

SNAPSHOT* 2.5 TG HERBICIDE

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: This product contains the following substances 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:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
Trifluralin	001582-09-8	2%

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
A delayed 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.

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

This product contains a chemical(s) known to the State of California to cause cancer. The chemical is crystalline silica.

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.

CHEMICAL NAME	CAS NUMBER	LIST
Trifluralin	001582-09-8	NJ2 NJ3 PA1 PA3
Crystalline Silica	014808-60-7	NJ3 PA1

NJ2=New Jersey Environmental Hazardous Substance (present at > or = to 1.0%).

NJ3=New Jersey Workplace Hazardous Substance (present at > or = to 1.0%).

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

PA3=Pennsylvania Environmental 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.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

CATEGORY	RATING
Health	2
Flammability	1
Reactivity	0

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:

Chemical Name	CAS Number	RQ	% in Product
Trifluralin	001582-09-8	10	2%

16. OTHER INFORMATION:

MSDS STATUS: Revised sections: 3, 4, 8, 11, 14 & 14
Reference: DR-0353-4314.
Replaces MSDS dated: 4/27/99
Document Code: D03-082-002
Replaces Document Code: D03-082-001

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