



NOTES TO MEDICAL DOCTOR: This product has moderate inhalation toxicity, and low oral and dermal toxicity. It is mildly irritating to the eyes and slightly irritating to the skin. This product contains a granular material (clay) that may cause mechanical irritation to the eyes. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

Section 5 - Fire Fighting Measures

SUITABLE EXTINGUISHING MEDIA:

Foam, CO₂ or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

Slightly combustible. This material may support combustion at elevated temperatures.

FIRE FIGHTING PROCEDURES:

Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

Section 6 - Accidental Release Measures

PERSONAL PRECAUTION, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8, "Exposure Controls/Personal Protection". Keep unprotected persons and animals out of the area.

ENVIRONMENTAL PRECAUTIONS:

Keep material out of lakes, streams, ponds and sewer drains. Large spills should be covered to prevent dispersal. For dry material, use a wet sweeping compound or water to prevent the formation of dust. If water is used, prevent runoff or dispersion of excess liquid by diking and absorbing with a non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump all waste material, including absorbent, into a drum and label contents for disposal.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

To clean and neutralize spill area, tools and equipment, wash with a suitable solution of caustic or soda ash, and an appropriate alcohol (i.e., methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13, "Disposal Considerations".

Section 7 - Handling and Storage

Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

Section 8 - Exposure Controls / PPE

CONTROL PARAMETERS

No additional information available.

ENGINEERING CONTROLS: Use local exhaust at all process locations where dust may be emitted. Ventilate all transport vehicles prior to unloading.

PERSONAL PROTECTIVE EQUIPMENT



EYES AND FACE: For dust exposure, wear chemical protective goggles or a face shield.

RESPIRATORY: For dust exposures wear, as a minimum, a properly fitted half-face or full-face air-purifying respirator that is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

PROTECTIVE CLOTHING: Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover barrier suit, such as a PVC suit. Leather items -such as shoes, belts and watchbands -that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).

GLOVES: Wear chemical protective gloves made of materials such as butyl rubber, nitrile or neoprene. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

WORK HYGIENIC PRACTICES: Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

Section 9 - Physical/Chemical Properties

ODOR:	Slightly musty
APPEARANCE:	Straw yellow to light brown, free-flowing granules
pH:	6-7
Pour Density(20° C), g/cm ³ :	Pour: 0.703
Tap Density(20° C), g/cm ³ :	Pour: 0.739
MOLECULAR WEIGHT:	387.19 (sulfentrazone)
SOLUBILITY IN WATER:	Disperses

Section 10 - Stability and Reactivity

CONDITIONS TO AVOID:	Excessive heat and fire.
STABILITY:	Stable
POLYMERIZATION:	Will not occur
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides, hydrogen chloride, hydrogen fluoride.

Section 11 - Toxicological Information

ORAL LD50: > 2000 mg/kg(rat)
DERMAL LD50: > 2000 mg/kg (rat)



INHALATION LC50: > 3.06 mg/l (4 h, rat)

EYE EFFECTS: Not an irritant (rabbit)

SKIN EFFECTS: Not an irritant (rabbit)

SKIN SENSITIZATION: Not a sensitiser (guinea pig)

CHRONIC EFFECTS FROM OVEREXPOSURE:

No data available for the formulation. Sulfentrazone was not carcinogenic in lifetime feeding studies with laboratory animals, nor was it found to be mutagenic in a battery of tests. In a reproduction study, sulfentrazone produced adverse effects on the growth and survival of the offspring, decreased male fertility and oligospermia at 25 mg/kg/day, and 35 mg/kg/day. Sulfentrazone was found to be fetotoxic in oral and dermal developmental toxicity studies; the fetal NOELS were 10 mg/kg/day and 100 mg/kg/day, respectively. At labeled use rates and practices of mixing and applying, expected exposure to farm workers is at least one hundred times lower than the doses that produced effects in laboratory animals. At labeled use rates and practices of mixing and applying, expected exposure to farm workers is at least one hundred times lower than the doses that produced effects in laboratory animals.

CARCINOGENICITY:

NTP:	Not listed
IARC:	Not listed
OSHA:	Not listed
OTHER:	(ACGIH) Not listed

Section 12 - Ecological Information

The data presented below are for the active ingredient.

Birds Acute oral LD50 for mallard ducks >2250 mg/kg. Dietary LC50 (8 d) for ducks and quail >5620 mg/kg.

Fish LC50 (96 h) for bluegill sunfish 93.8, rainbow trout >130 mg/l.

Daphnia LC50 (48 h) 60.4 mg/l.

Algae algae EC50 31.0 µg/l; blue-green algae EC50 32.9 µg/l.

Bees LD50 >25 µg/bee.

Worms NOEC 3726 mg/kg in soil.

PERSISTENCE AND DEGRADABILITY

Does not readily hydrolyze. Not readily biodegradable.

BIOACCUMULATIVE POTENTIAL

The substance does not have a potential for bioconcentration.

MOBILITY IN SOIL

Immobile. Not expected to reach groundwater.

Section 13 - Disposal Considerations

DISPOSAL METHOD: Open dumping or burning of this material or its packaging is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate agencies should be contacted prior to disposal.



EMPTY CONTAINER: Completely empty package into application equipment. Then dispose of empty package in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Section 14 - Transport Information

DOT This material is not a hazardous material as defined by U.S. Department of Transportation at 49 CFR Parts 100 through 185.

TDG Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.

UN number 3077
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SULFENTRAZONE)
Hazard Class 9
Packaging group III
Marine pollutant YES

IMDG

UN number 3077
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SULFENTRAZONE)
Hazard Class 9
Packaging group III
Marine pollutant YES

IATA

UN number 3077
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SULFENTRAZONE)
Hazard Class 9
Packaging group III
Environm. Hazardous Mark YES

Special precautions for user See sections 6 to 8 of this Safety Data Sheet.

Section 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.

Section 16 - Additional Information

MSDS Creation Date: 03/01/2023

Revision #2 Date: 03/10/2023.



The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.