

MATERIAL SAFETY DATA SHEET



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

Effective Date: 05-Sep-08
Product Code: 107218

SONIC* HERBICIDE

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Sonic* Herbicide

COMPANY IDENTIFICATION:

Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268-1189

2. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Tan granules with a musty odor. May cause eye and skin irritation. Toxic to aquatic organisms.

EMERGENCY PHONE NUMBER: 800-992-5994

3. COMPOSITION/INFORMATION ON INGREDIENTS:

COMPONENT	CAS NUMBER	W/W%
Sulfentrazone	122836-35-5	62.4
Cloransulam-methyl	147150-35-4	7.9
Toluene	108-88-3	4.1
Crystalline Silica	14808-60-7	0.6
Balance		25.0

4. FIRST AID:

EYES: Flush eyes with plenty of water; remove contact lenses after the first 1-2 minutes then continue flushing for several minutes. Only mechanical effects expected. If effects occur, consult a physician, preferably an ophthalmologist.

SKIN: Wash skin with plenty of water.

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 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). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

NOTE TO PHYSICIAN: Maintain adequate ventilation and oxygenation of the patient. Alcohol consumed before or after exposure may increase adverse effects. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. 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 (granules)

FLAMMABLE LIMITS:

LFL: Not applicable

UFL: Not applicable

EXTINGUISHING MEDIA: Dry chemical, foam, CO₂. Soft stream water fog only if necessary. Contain all runoff.

FIRE AND EXPLOSION HAZARDS: Slightly combustible. May support combustion at elevated temperatures. Finely dispersed particles can form explosive mixtures in air.

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

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS/LEAKS: For small spills - sweep up product and place into suitable container for disposal. Report large spills to Dow AgroSciences at 800-992-5994.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Handling: Keep out of reach of children and pets. Avoid skin and eye contact. Wash thoroughly after handling.

Storage: Store in original container in a cool dry, well-ventilated area.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

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

EXPOSURE GUIDELINE:

Cloransulam-methyl: Dow AgroSciences Industrial Hygiene Guide is 3 mg/M³.

Toluene: ACGIH TLV is 50 ppm TWA, skin. OSHA PEL is 200 ppm and OSHA STEL is 300 ppm.

Crystalline silica: ACGIH TLV is 0.05 mg/M³ TWA, respirable fraction. OSHA PEL is 0.1 mg/M³, respirable dust.

A 'skin' notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

A BEI notation following the exposure guideline refers to a guidance value for assessing biological monitoring results as an indicator of the uptake of a substance from all routes of exposures.

ENGINEERING CONTROLS: Use engineering controls to maintain airborne level below exposure limit requirements and guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS:

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION: Where clean, body-covering clothing.

HAND PROTECTION: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Neoprene, Polyvinyl chloride (PVC or vinyl), Nitrile/butadiene rubber (Nitrile or NBR). **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, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. The following should be effective types of air-purifying respirators: organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES:

MOLECULAR WEIGHT: 387.19 (Sulfentrazone); 430 (Cloransulam-methyl)

SOLUBILITY IN WATER: Disperses

DENSITY: (bulk) 30 – 36 lbs/cu. ft.

APPEARANCE: Tan granule

ODOR: Musty

pH: 6 – 8 (5% suspension)

10. STABILITY AND REACTIVITY:

STABILITY: (CONDITIONS TO AVOID) Stable under normal storage conditions. Avoid excessive heat and fire. Decomposes at 216°C.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Avoid contact with oxidizing agents.

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HAZARDOUS DECOMPOSITION PRODUCTS: If product is involved in fire, oxides of nitrogen, hydrogen chloride, hydrogen fluoride, and oxides of sulfur may be formed along with carbon monoxide and carbon dioxide.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

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. Corneal injury is unlikely. Solid or dust may cause irritation or corneal injury due to mechanical action.

SKIN: Prolonged contact may cause slight skin irritation. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD₅₀ for a similar material for skin absorption in rabbits is >5,000 mg/kg. Based largely or completely on information for a similar material: did not cause allergic skin reactions when tested in guinea pigs.

INGESTION: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. The oral LD₅₀ for a similar material for rats is 2,504 mg/kg.

INHALATION: Prolonged excessive exposure to dust may cause adverse effects. Dust may cause irritation to upper respiratory tract (nose and throat). Vapors are unlikely due to physical properties. If material is heated or sprayed to generate aerosols or mists, concentrations may be attained that are sufficient to cause respiratory irritation and other effects. Such operations include those in which the material is heated, sprayed or otherwise mechanically dispersed such as drumming, venting or pumping. May cause respiratory irritation and central nervous system depression. Symptoms may include: headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Alcohol consumption and exertion may increase the adverse effects of toluene. The inhalation LC₅₀ for a similar material for rats is >4.9 mg/L for 4 hours.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For the active ingredient(s) in animals, effects have been reported on the following organs: liver, kidney, blood, testes and thyroid gland. For the minor component, toluene has caused hearing loss in laboratory animals upon exposure to high concentrations. Excessive exposure may cause neurological signs and symptoms. 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.

CANCER INFORMATION: The active ingredient(s) did not cause cancer in laboratory animals. Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.

TERATOLOGY (BIRTH DEFECTS): The active ingredient(s) have been toxic to the fetus in laboratory animal tests. In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation.

REPRODUCTIVE EFFECTS: For the active ingredient(s), in animal studies, it has been shown to cause effects on sperm which may interfere with fertility in males. In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of offspring. A minor component, in animal studies, did not interfere with reproduction.

MUTAGENICITY: For the active ingredient(s), in-vitro and animal genetic toxicity studies were negative. For the minor component(s), the majority and most reliable of the many genetic toxicity studies on toluene, both in-vitro and in animals, indicated that it is not genetically toxic.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING:

Based largely or completely on Cloransulam- methyl.
Measured log octanol/water partition coefficient (Log Pow) is 1.12.
Bioconcentration potential is low (BCF <100 or Log Pow <3).

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EXOTOXICOLOGY:

Based largely or completely on cloransulam- methyl and sulfentrazone.

Material is slightly toxic to aquatic organisms on an acute basis. (LC₅₀ or EC₅₀ is between 10 and 100 mg/L in most sensitive species).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: 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 and regulations.

14. TRANSPORT INFORMATION:

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

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

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
Toluene	108-88-3	4.1%

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

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

WARNING: This product contains chemicals known to the State of California to cause cancer. The chemical is crystalline silica (CAS # 14808-60-7).

WARNING: This product contains chemicals known to the State of California to be a developmental toxic. The chemical is toluene (CAS # 108-88-3).

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

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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
Toluene	108-88-3	PA3
Crystalline silica	14808-60-7	PA1

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal 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	1
Flammability	1
Reactivity	1

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
Toluene	108-88-3	1,000 lbs.	4.1%

16. OTHER INFORMATION:

MSDS STATUS: Revised Sections: 15
Reference: TIME*21594
Replaces MSDS Dated: 08-Dec-06
Document Code: D03-342-003
Replaces Document Code: D03-342-002

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

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