

MATERIAL SAFETY DATA SHEET

MSDS No.: FLNH0135

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1. PRODUCT AND COMPANY IDENTIFICATION

Commercial product name : Nicosulfuron 4%SC
Formula: C₁₅H₁₈N₆O₆S
CAS NO.: 111991-09-4
Emergency telephone number and fax (of the supplier): 86-551-65360940

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS No.	Content (%)
Nicosulfuron	111991-09-4	4
Inert ingredients	(non hazardous)	96

3. HAZARD IDENTIFICATION

Emergency overview: Off-white liquid. Pungent odor. Warning!! Causes eye, skin and respiratory irritation. May cause gastrointestinal irritation. May cause central nervous system depression. May cause liver and kidney damage. May cause long-term adverse effects in the environment. Harmful to plants.

Potential health effects:

Target organs: Eyes, skin, respiratory system, central nervous system, liver and kidneys.

Routes of exposure: Inhalation; Skin & Eyes; Ingestion.

Inhalation: Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. May cause irritation of respiratory tract.

Skin: May cause moderate skin irritation. Symptoms may include redness, itching and swelling. Prolonged contact, such as when trapped against the skin under clothing or jewellery, may be more irritating.

Eyes: May cause mild eye irritation. Inert particles may cause mechanical irritation of the eyes, including scratches.

Ingestion: Harmful if swallowed. May cause irritation of mouth, throat, and stomach.

Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

Effects of long-term exposure: Prolonged overexposure may cause liver and kidney effects.

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Conditions aggravated by overexposure: Pre-existing skin, eye, respiratory and central nervous system disorders.

Carcinogenic status: See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects: Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment. See ECOLOGICAL INFORMATION, Section 12.

4. FIRST-AID MEASURES

Inhalation: Immediately remove person to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Seek immediate medical attention/advice.

Skin contact: Take off all contaminated clothing immediately. Wash skin with gently flowing, running water for at least 20 minutes. If irritation persists, seek prompt medical attention. Wash contaminated cloths before re-use.

Eye contact: Clean eyes thoroughly with running water for at least 20 minutes, holding eyelids open to ensure complete washing. Seek immediate medical attention/advice.

Ingestion: Do NOT induce vomiting. Rinse victim's mouth with water, and then give him/her one to two glasses of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice.

Notes for Physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Fire hazards/conditions of flammability: Not flammable under normal conditions of use. However, may ignite if exposed to extreme heat and flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Fine dust dispersed in air may ignite.

Flammability: Non-flammable.

Flash point: N/A

Suitable extinguishing media: Dry chemical, foam, carbon dioxide and water fog. Do not use water jet, as this may spread burning material.

Special fire-fighting procedures/equipment: Fire-fighters should wear proper protective equipment and self contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Avoid spreading burning solid with water spray used for cooling purposes.

Hazardous combustion products: Carbon oxides; Sulphur oxides; nitrogen oxides (NO_x); calcium oxide; irritating fumes and smoke.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Restrict access to area until completion of clean-up. Ensure clean-up

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is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions: Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Spill response/cleanup: Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Contain and absorb spilled material with inert, non-combustible absorbent material, such as sand. Sweep up and shovel into suitable containers for disposal. For a water spill, confine the spill immediately with booms. Notify the appropriate authorities as required.

7. HANDLING AND STORAGE

Handling: This material is a harmful solid. Wear chemically resistant protective equipment during handling. Use only in a well-ventilated area. Avoid contact with skin, eyes and clothing. Do not breathe vapors/dust. Keep away from heat and flame. Avoid contact with incompatible materials. Use caution when opening cap. Keep containers tightly closed when not in use. Wash thoroughly after handling.

Storage requirements: Store in a cool, dry, well-ventilated area. Keep away from incompatible materials, children and unauthorized persons. Inspect periodically for damage or leaks. Smoking cigarettes, lighting flames in the area are strictly prohibited.

Incompatible materials: Strong oxidizing agents; Acids.

Special packaging materials: Always keep in same container specified for packing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation and engineering measures: Provide sufficient ventilation to keep vapor concentration below the given TLV and/or PEL.

Respiratory protection: Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved respirators are recommended. Seek advice from respiratory protection specialists.

Skin protection: Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.

Eye / face protection: Safety glasses with side-shields or chemical splash goggles.

Other protective equipment: Wear resistant clothing and boots. An eyewash station and safety shower should be made available in the immediate working area.

General hygiene considerations: Avoid breathing vapors, fumes or dust. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of

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toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Do not take contaminated clothing home.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Appearance:	Off white liquid
Relative density:	0.95±0.01 g/cm ³ (20°C)
Solubility:	Good in water; Miscible with most of organic.

10. STABILITY AND REACTIVITY

Stability and reactivity: Stable under the recommended storage and handling conditions prescribed.

Hazardous polymerization: Will not occur.

Conditions to avoid: Keep this product away from heat, sparks, flame, and other sources of ignition (e.g. pilot lights, electric motors, static electricity). Materials to Avoid and

Incompatibility: Incompatible materials (see Section 7).

Hazardous decomposition products: Not known, refer to hazardous combustion products in Section 5.

11. TOXICOLOGICAL INFORMATION

LD50 Oral:	>4640 mg/kg(rat) (Male & Female)
LD50 Dermal:	>2150 mg/kg(rat) (Male & Female)
Skin Irritation:	No irritation to the skin of Rabbit
Eye Irritation:	No irritation to the eyes of Rabbit
Skin Sensitizer:	Not a sensitizer

12. ECOLOGICAL INFORMATION

Environmental effects: The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. The active ingredient is considered to be toxic to many plants, and non-toxic to fish, aquatic invertebrates, soil micro- and macro organisms, birds, mammals and insects. Under normal conditions, the active ingredient is mobile in the environment. Due to it's solubility in water, the active ingredient does not bio accumulate.

Ecotoxicological: The toxicity of the active ingredient is measured as: Birds – LD 50 for bobwhite quail > 4640 mg/kg. Fish - 96-hr LC50, Rainbow Trout > 80 mg/l Invertebrates - 48-hr EC50, Daphnids (*Daphnia magna*) = > 1000 mg/l Algae = 100 mg/l Bees - 48-hr LC50, oral, Bees (*Apis mellifera*) >100 µg/bee

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13. DISPOSAL CONSIDERATIONS

Handling for Disposal: Handle waste according to recommendations in Section 7.

Methods of Disposal: Do not contaminate water, foodstuffs, feed or seed by storage or disposal. For disposable containers, triple rinse (or equivalent) containers and add rinse material to disposal tank. Follow any additional local, state or federal requirements for cleaning containers prior to disposal. Make the empty, rinsed container unsuitable for further use by puncturing. Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

14. TRANSPORT INFORMATION(CODES AND CLASSIFICATIONS)

UN Number:	3082
Risk Class:	9
WHO Toxicity Class:	III

15. REGULATORY INFORMATION

OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200). WHO Classification. (a.i.) III

16. OTHER INFORMATION

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

