

Sharda International Africa (Pty) Ltd

P.O. Box 82021, Southdale, 2135, South Africa.

Tel: 031 764 3011, Tel: 087 822 2397

Email: rsa.regn@shardaintl.com, Website: <http://www.shardaintl.com>

(Co. Reg. No. 2010/002268/07)

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SAFETY DATA SHEET

“FLORASULAM 5% SC”

1. IDENTIFICATION OF PRODUCT AND COMPANY

Name of Product: “FLORASULAM 5% SC”

Active Ingredient: Florasulam

Product Use: Herbicide

Registration holder: Sharda International Africa (Pty) Ltd

Address: P.O. Box 82021, Southdale, 2135

Contact Tel. No.: 031-764-3011

Poison Centres: UNITAS Hospital: 0800-111-9900
Tygerberg Hospital: 021-931-6129
Netcare 911: 082911

2. Hazard identification

Label elements

Hazard symbols: N - Dangerous for the environment

R - phrases: R50 / 53 - Very toxic to aquatic organisms, may in the aquatic environment in the long term cause adverse effects.

S - phrases: S2 - Keep out of reach of children.
S13 - Keep away from food, drink and animal feeding stuffs.
S20 / 21 - Do not eat, drink or smoke while working.
S35 - This material and its container must be disposed of in a safe manner.
S61 - Avoid release to the environment. Refer to special instructions / safety data sheets.
Follow the instructions to avoid risks to man and the environment.

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3. Composition/information on ingredients

| Chemical name | CAS number | EC Number | REACH registration number | Conc. % w/w | Classification | | | | |
|--|-------------|---------------|---------------------------|-------------|----------------|------------|--------------------|------------------------------------|------------------------------------|
| | | | | | Traditional | | CLP Classification | | |
| | | | | | Hazard symbol | R phrase | Hazard pict. | Hazard cat. | S phrase |
| Florasulam | 145701-23-1 | Not Available | - | 4.6% | N | R50 R53 | - | Very toxic to aquatic environment; | S2, S13, S20/21, S35, S61 |
| Other ingredients determined not to be hazardous | - | - | - | Upto 100 | - | - | - | - | |

4. First aid measures

Description of first aid measures

General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation:

Move person to fresh air. If the person is not breathing, a ambulance calls and Artificial respiration; if by mouth to mouth breathing use protection (e.g. mask). Call a poison control center or doctor for further advice on the treatment.

Skin contact:

Remove contaminated clothing. Immediately flush skin with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice

Eye contact:

Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses after the first 5 minutes and continue washing. Contact the to obtain advice on treatment poison control center or doctor.

Ingestion:

No emergency medical treatment necessary.

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5. Firefighting measures

Extinguishing media

This material does not burn. If exposed to fire from another source, use the appropriate measure for extinguishing fire.

Special hazards arising from the substance or mixture

Hazardous Combustion Products:

Under fire conditions some components of this product decompose. The smoke may contain unidentified toxic and / or irritating compounds. Combustion products may contain traces of the following substances: sulfur. Nitrogen oxides. Hydrogen halides.

Unusual Fire and Explosion Hazards:

When exposed to external counted fires all water has evaporated, toxic vapors may be formed

Advice for firefighters

Fire Fighting Procedures:

Keep people away. Isolate the fire and deny unnecessary entry. This product does not burn. Fight the fire from other flammable products. Avoid, if possible, run-off from firefighting. Firewater off, if not, can damage cause to the environment. Refer to the sections "Accidental Release Measures" and "Ecological Information" of this Safety Data Sheet.

Special Protective Equipment for Firefighters:

Wear self-contained compressed air (SCBA) and protective clothing, including helmet, coat, trousers, boots, and gloves. Fight fire from a safe distance as protection not available or are not used.

6. Accidental release measures

Personal Precautions, protective equipment and emergency procedures

Use proper protective equipment. For more information, refer to Section 8 "Exposure controls exposure / personal protection".

Environmental precautions

Prevent the material in the soil, ditches, sewers, waterways and / or groundwater. See Section 12 "Ecological Information".

Methods and material for cleaning up

Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Earth. Sand. Sweep up. Collect in suitable and properly labeled containers. For more information, see Section 13 "Disposal".

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7. Handling and storage

Protective measures

Precautions for safe handling of the substance or mixture

General Handling: Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Wash thoroughly after handling. Provide adequate ventilation during use. See Section 8: Exposure controls Exposure Controls / Personal Protection

Conditions for safe storage, including any incompatibilities

Store in a dry area. Store in original container. Keep container tightly closed when not in use. Do not store near food, drugs or drinking water

Specific end uses

Refer to the product label

8. Exposure controls/personal protection

Exposure controls

Protective measures:

Eye and face protection

Use safety glasses with side shields. The safety glasses with side shields should be consistent with EN 166 or equivalent.

Skin Protection

Wear clean body-covering clothing with long sleeves.

Hand protection:

Use this material impervious gloves, if can prevent prolonged or frequently repeated contact. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred materials which glove barrier: Butyl Polyethylene. Ethyl vinyl alcohol laminates ("EVAL"). Natural rubber (latex). Neoprene. Nitrile / butadiene rubber ("nitrile" or "NBR"). PVC ("PVC" or "vinyl"). When can prevent prolonged or frequently repeated contact are glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes recommended according to EN 374). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into into account all relevant workplace factors such as (but not limited to): other chemicals which may be handled, physical requirements (protection against cut / puncture, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions / specifications provided by the glove supplier.

Respiratory protection:

In a potential to exceed the exposure limits respiratory protection should be worn. If no MAC values exist, wear respiratory protection when adverse effects (such as respiratory irritation) occur or discomfort occurs or if this is indicated in your risk assessment process. For most conditions, no protection would must be of the respiratory system are needed. In case of discomfort, use an approved air-purifying respirator. Use the following CE approved respirators: Pattern for organic vapors with a pre-filter, type AP2.

Ingestion:

Ensure good personal hygiene. Do not consume or store food in the same workplace. Wash hands before smoking or eating.

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Technical measures

Ventilation:

Use local exhaust ventilation, or other engineering controls to concentrations to keep the atmosphere below the limit values. If no limits exist, general ventilation should be sufficient for most operations. Local exhaust may be necessary for some operations.

9. Physical and chemical properties

Information on basic physical and chemical properties of the mixture

| | |
|--|---|
| Appearance | Liquid |
| Colour | White to off-white |
| Odour | Light |
| Odour Threshold | No test data available |
| pH | 4.36(@1%) |
| Melting point | Inapplicable |
| Freezing point | No test data available |
| Boiling point (760 mmHg) | No test data available |
| Flash point (Closed cup) | Pensky-Martens Closed cup, ASTM D 93 None to boiling point |
| Evaporation rate(Butyl acetate=1) | no test data available |
| Flammable limits in air | Lower: No test data available Upper: No test data available |
| Vapour pressure | Inapplicable |
| Vapor density (air=1) | No test data available |
| Specific gravity (H2O=1) | Digital Density Meter 1.0318 (Oscillating Coil) |
| Solubility in water (By weight) | No test data available |
| Partition coefficient, n-octanol/water (log Pow) | No data available for this product. See Section 12 for individual component data. |
| Auto-ignition temperature | <i>EC method A15</i> does not below 400 ° C |
| Decomposition temperature | No test data available |
| Kinetic Viscosity | No test data available |
| Explosive properties | not explosive |
| Oxidising properties | No significant increase (>5C) in the temperature |

10. Stability and Reactivity

Reactivity:

No dangerous reaction under normal conditions observed

Chemical stability:

Thermally stable at typical use temperatures

Possibility of hazardous reactions:

Polymerization will not occur

Conditions to avoid:

The active substance decomposes at elevated temperatures

Incompatible materials:

Not known

Hazardous decomposition products:

The decomposition products depend on the temperatures, air supply, and the presence of other substances.

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11. Toxicological information

Information on toxicological effects

Acute toxicity: Harmful if swallowed
Relevant toxicological properties :

Acute toxicity:

LD₅₀ (oral) : >5000 mg/ kg

LD₅₀ (dermal): > 2000 mg/ kg

LC₅₀ (inhalation): > 5mg/L

Skin irritation: Not irritant

Eye irritation: Not irritant

Skin sensitization: Not sensitizer

Repeated/Chronic:

Mutagenicity: -

Reproductive toxicity Does not interfere with reproduction (Active ingredient)

Carcinogenicity: Does not cause cancer in laboratory animals

Developmental toxicity No toxicity to fetus even at doses which caused toxic effects in the mother (Active ingredient)

Genetic toxicology Genetic toxicity studies in animals were negative (Active ingredient)

Other information:

No data available

12. Ecological information

Toxicity

Harmful to aquatic life with long lasting effects.

Acute and Prolonged Toxicity

LC50, Oncorhynchus mykiss (rainbow trout), semi-static, 96 h:> 100 mg / l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water), 48 h, immobilization:> 100 mg / l

Aquatic Plant Toxicity

EC50, Lemna minor (duckweed), Growth inhibition (reduction of the density of the cells), 14 d: 0.0466 mg / l

EbC50, Pseudokirchneriella subcapitata (green algae), static test, growth inhibition biomass, 72 h: 0.0611 mg / l

Toxic to terrestrial animals (mammals excluded)

oral LD50, Anas platyrhynchos (Mallard Duck):> 2250 mg / k body weight.

oral LD50, Apis mellifera (Bees):> 70.25 ug / at

contact LD50, Apis mellifera (Bees):> 100 ug / bee

Toxicity to organisms residing in soil

LC50, Eisenia fetida (earthworms):> 1033 mg / kg

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Persistence and degradability

Data for Component: **florasulam**

It is expected that the material degrades very slowly (in the environment). Was not the OECD / EEC tests for ready biodegradability.

Stability in water (half-life): >30d

OECD biodegradation tests:

| Biological degradability interval per | Exposure time | Method | time |
|---------------------------------------|---------------|--------|----------------|
| days | | | 10 |
| 2% | 28 d | | OECD test 301B |
| Unsuccessful | | | |

Indirect Photo degradation with OH radicals:

| Constant speed | Atmospheric half-life | Method |
|------------------------------|-----------------------|-----------|
| 7.04E-11 Cm ³ / s | 1.82 h | Estimated |

Theoretical oxygen demand: 0.85mg/mg

Bio accumulative potential

Data for Component: **florasulam**

Bioaccumulation: Bio concentration potential is low (BCF <100 or Log Pow <3).

Partition coefficient n-octanol / water (log Pow): -1.22

Bio concentratiefaktor (BCF): 0.8; Fish; Measured

Mobility in soil

Data for Component: **florasulam**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).

Soil organic carbon / water (Koc): 4-54 Constant

Henry (H): 4.35E-07 Pa * m³ / mole .; 20 ° C

Results of PBT and vPvB assessment

Data for Component: **florasulam**

This substance is not considered to be persistent, bio accumulative and toxic (PBT). This substance is not considered to be very persistent and very bio accumulative (vPvB).

Other adverse effects

Data for Component: **florasulam**

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

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13. Disposal considerations

Waste treatment methods

If wastes and / or containers cannot be processed according to the directions on the product label, then should the processing of this material made in accordance with local regulations. The information is presented below uitsluited applies to the material as supplied. The identification based on characteristic (s) or entries may not be applicable if the material has been used or soiled in any other way. It is the responsibility of the waste producer to determine the toxicity and physical characteristics of the material. Thus must be made for any material at issue and the disposal methods are needed to the applicable legislation. If the material as supplied waste is, all applicable regional, national and local laws are complied with.

14. Transport Information

UN number: 3082

Road transport ADR/RID

Class:9

Packing group: III

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Florasulam)

Maritime transport IMDG/IMO

Environmental hazards: Marine pollutant: Yes

Class: 9

Packing group: III

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Florasulam)

15. Regulatory information

Chemical Safety

For a correct and safe use of this product, refer to the terms of use Approved are described on the product label.

Hazard statement :

H400 Very toxic to aquatic organisms.

H410 Very toxic to aquatic life with long lasting effects.

R-phrases in section:

R50 / 53 Very toxic to aquatic organisms may in the aquatic environment can cause long-term adverse effects.

16. Other information

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.