Sharda Cropchem Ltd.

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(AN ISO 9002 COMPANY)

MATERIAL SAFETY DATA SHEET OF FLORASULAM 5% SC

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Florasulam 5% SC
Company Name	:	Sharda Cropchem Ltd.
Address	:	Domnic Holm,29th Road,Bandra (West),Mumbai 400050,India
Telephone	:	+ 91 22 6678 2800
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2. Composition / Information on Ingredients

Trade Mark	Ingredient	CAS	Function	% w/w	gr/l
Florasulam	Technical pure	145701-23-1	Technical ingredient	4.90	50.078
Atlox matasperse 500 L	Modified stirene acrylic polymer	--	Dispersing agent	2.50	25.55
Atlas G-5002L	Butyl block copolymer	--	Emulsifier/wetting agent	2.50	25.55
9030 E Antifoam	polydimethylsiloxane	9004-99-3 (emulsifier 5-10%)	Defoamer	0.10	1.022
Proxel GXL	Benzisothiazolinone	2634--33-5	Preservative	0.10	1.022
Propylene glycol USP	1,2-propyleneglycol	57-55-6	Antifreeze agent	6.00	61.32
Rhodopol 23	Xantahan gum	1138-66-2	thickening agent	0.25	2.555
Water				83.65	854.903
Density (g/cc)	**1.022**			**100.00**	**1022.00**

3. Hazards Identification

Emergency Overview
Color: White to off-white
Physical State: Liquid
Odor: Mild
Hazards of product: No significant immediate hazards for emergency response are known.
Potential Health Effects
Eye Contact: Essentially nonirritating to eyes.
Skin Contact: Brief contact is essentially nonirritating to skin.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Inhalation: Vapors are primarily water; single exposure is not likely to be hazardous. No adverse effects are anticipated from single exposure to mist. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Based on the available data, narcotic effects were not observed.
Ingestion: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.
Aspiration hazard: Based on physical properties, not likely to be an aspiration hazard.
Effects of Repeated Exposure: For the active ingredient(s): In animals, effects have been reported on the following organs: Kidney. Liver. For the minor component(s): In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

4. 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 person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

Skin Contact:	Take off contaminated clothing. Rinse skin immediately 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, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Ingestion:	No emergency medical treatment necessary.
Most important symptoms and effects, both acute and delayed	Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.
Indication of immediate medical attention and special treatment needed	No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.
5. Fire-Fighting Measures	**Suitable extinguishing media** This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.
Hazardous Combustion Products:	Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include trace amounts of: Sulfur oxides. Nitrogen oxides. Hydrogen halides.
Unusual Fire and Explosion Hazards:	If exposed to fire from another source and water is evaporated, exposure to high temperatures may cause toxic fumes.
Fire Fighting Procedures:	Keep people away. Isolate fire and deny unnecessary entry. This material does not burn. Fight fire for other material that is burning. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the “Accidental Release Measures” and the “Ecological Information” sections of this (M)SDS.

Special Protective Equipment for Firefighters:	Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.
6. Accidental Release Measures	**Personal precautions, protective equipment and emergency procedures:** Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. **Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. **Methods and materials for containment and cleaning up:** Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance.
7. Handling and Storage	**Handling** **General Handling:** Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION. **Storage** Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies. To maintain product quality, recommended storage temperature is > -5 °C
8. Exposure Controls/Personal Protection	
Ingestion:	Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.
Eye Contact:	Use safety glasses (with side shields).

Skin Contact:	Wear clean, body-covering clothing.
Inhalation:	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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. Physical and Chemical Properties

Physical State	Liquid
Color	White to off-white
Odor	Mild
pH	4.36 (@ 1 %)
Melting Point	Not applicable
Specific Gravity (H2O = 1)	1.0318 Digital Density Meter (Oscillating Coil)
Explosive properties	Not explosive

10. Stability and Reactivity

Chemical stability	Thermally stable at typical use temperatures.
Reactivity	No dangerous reaction known under conditions of normal use.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to Avoid:	Active ingredient decomposes at elevated temperatures.
Hazardous Decomposition Products:	Decomposition products depend upon temperature, air supply and the presence of other materials.
Incompatible materials:	None known.

11. Toxicological

Information

Ingestion:	LD50, rat, male and female > 5,000 mg/kg
Dermal:	LD50, rat, male and female > 2,000 mg/kg
Inhalation:	LC50, 4 h, Aerosol, rat > 5 mg/l
Eye Contact:	Essentially nonirritating to eyes.
Skin Contact:	Brief contact is essentially nonirritating to skin.
Skin Sensitization:	Did not demonstrate the potential for contact allergy in mice.

12. Ecological and Ecotoxicological Information

Summary of Effects: Practically non-toxic to fish, invertebrates and birds. Highly toxic to bees.

Eco-Acute Toxicity:

Fish Acute & Prolonged Toxicity
LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 h: > 100 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), 48 h, immobilization: > 100 mg/l
Aquatic Plant Toxicity
EC50, Lemna minor (duckweed), Growth inhibition (cell density reduction), 14 d: 0.0413 mg/l
EbC50, Pseudokirchneriella subcapitata (green algae), static test, biomass growth inhibition, 72 h: 0.0611 mg/l
Toxicity to Above Ground Organisms
oral LD50, Anas platyrhynchos (Mallard duck): > 2250 mg/kg bodyweight.
oral LD50, Apis mellifera (bees): > 70.25 ug/bee
contact LD50, Apis mellifera (bees): > 100 ug/bee
Toxicity to Soil Dwelling Organisms
LC50, Eisenia fetida (earthworms): > 1,033 mg/kg

13. Disposal Considerations	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.
14. Transport Information	**TDG Small container** NOT REGULATED **TDG Large container** NOT REGULATED **IMDG** **Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. **Technical Name:** Florasulam **Hazard Class:** 9 **ID Number:** UN3082 **Packing Group:** PG III **EMS Number:** F-A,S-F **Marine pollutant.:** Yes **ICAO/IATA** **Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. **Technical Name:** Florasulam **Hazard Class:** 9 **ID Number:** UN3082 **Packing Group:** PG III **Cargo Packing Instruction:** 964 **Passenger Packing Instruction:** 964
15. Regulatory Information	**CEPA - Domestic Substances List (DSL)** All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed. **Hazardous Products Act Information: CPR Compliance** This product has been classified in accordance with the hazard criteria of the Canadian Controlled

Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Hazardous Products Act Information: WHMIS Classification

This product is exempt under WHMIS.

Pest Control Products Act Registration number: 27029

National Fire Code of Canada Not applicable

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such.

In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.