

Issue Date 01-Aug-2016

Revision Date 01-Aug-2016

Version 1

1. IDENTIFICATION

Product identifier

Product Name Shafen Star

Other means of identification

Product Code 83529-25

Synonyms None

Registration Number(s) 83529-25

Recommended use of the chemical and restrictions on use

Recommended Use Herbicide

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

Sharda USA LLC
P.O. Box 640
Hockessin, DE 19707
Website: www.shardausa.com

Emergency telephone number

Company Phone Number 610-350-6930 (US)
+91 22 5678 2800 (India)
Emergency Telephone CHEMTREC: 800-424-9300
CHEMTREC: 703-527-3887
POISON CONTROL CENTER: 800-222-1222

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance aqueous solution

Physical state liquid

Odor Slight

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

May be harmful in contact with skin. May be harmful if swallowed. Repeated or prolonged contact may cause allergic reactions in very susceptible persons. Causes mild skin irritation. Mild eye irritation. Harmful to aquatic life with long lasting effects.

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Not applicable

Mixture

Chemical Name	CAS No	Weight-%
Inert ingredients *	Proprietary	60 - 100
Fomesafen-sodium	108731-70-0	22.1

*The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**Description of first aid measures**

General advice	Call a poison control center or doctor for treatment advice. Have the product containers or label with you when calling a poison control center or doctor, or going for treatment.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. Call a poison control center or doctor for treatment advice.
Inhalation	Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician or poison control center immediately. Administer oxygen if breathing is difficult.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms	May cause redness and tearing of the eyes. Repeated contact may cause allergic reactions in very susceptible persons.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically. Repeated contact may cause allergic reactions in very susceptible persons. Probable mucosal damage may contraindicate the use of gastric lavage.
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5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Dry chemical, CO₂, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal. Water spray, fog or regular foam.

Unsuitable extinguishing media None.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous combustion products Carbon oxides. Hydrogen halides.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Avoid runoff to waterways and sewers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

For emergency responders Use personal protection recommended in Section 8. Ventilate the area.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Cover liquid spill with sand, earth or other non-combustible absorbent material. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required. Wash thoroughly after handling. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep out of the reach of children. Keep/store only in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from food, drink and animal feeding stuffs.

Packaging materials Do not reuse container.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. And. Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear suitable protective clothing. Wear protective butyl rubber gloves. Protective shoes or boots.

Respiratory protection Ensure adequate ventilation, especially in confined areas. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid	Odor	Slight
Appearance	aqueous solution	Odor threshold	No information available
Color	light yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	6.2	solution (1 %)
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	> 100 °C / > 212 °F	Seta Closed Cup
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	~17 mmHg	@ 25 °C
Vapor density	No information available	
Relative density	1.11	
Water solubility	Miscible in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	~ 3 mm ² /s	@ 40 °C
Dynamic viscosity	No information available	
Explosive properties	Not an explosive	
Oxidizing properties	Not applicable	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available

Bulk density 9.26 lbs/gal

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Elevated Temperature. Storage near to reactive materials.

Incompatible materials

Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Nitrogen oxides (NO_x). Carbon oxides. Hydrogen halides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Product data is noted below:

Acute Oral LD50 (rat): >3863 mg/kg
 Acute Dermal LD50 (rabbit): > 2000 mg/kg
 Eye Irritation (rabbit): Mildly irritating.
 Skin Irritation (rabbit): Slightly irritating.
 Inhalation LC50 (rat): 2.1 mg/L (4 HR)
 Skin Sensitization (guinea pig): Moderate sensitizer.

Inhalation

Based on available data, the classification criteria are not met.

Eye contact

Contact with eyes may cause irritation.

Skin contact

May be harmful in contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Substance may cause slight skin irritation.

Ingestion

May be harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Inert ingredients	> 90 mL/kg (Rat)	-	-
Fomesafen-sodium 108731-70-0	= 1250 mg/kg (Rat)	> 1 g/kg (Rabbit)	-

Information on toxicological effects

Symptoms

May cause redness and tearing of the eyes. May cause an allergic skin reaction. Redness.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization

Repeated or prolonged contact may cause allergic reactions in very susceptible persons.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. Based on available data, the classification criteria are not met.

Increased rates of malignant liver tumors in a 2-yr mouse feeding study (1000 ppm), but the results are not considered relevant to man.

Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Target Organ Effects	liver.
Aspiration hazard	Based on available data, the classification criteria are not met.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	5,656.00 mg/kg
ATEmix (dermal)	4,529.00 mg/kg mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

77.9 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability

Not readily biodegradable.

Bioaccumulation

Not likely to bioaccumulate.

Other adverse effects

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Pesticide wastes may be acutely hazardous. Improper disposal is a violation of federal law. Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance on proper disposal of waste product.

Contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations. Consult product label for additional information. Do not reuse container.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
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DSL/NDSL	Complies
EINECS/ELINCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Fomesafen-sodium - 108731-70-0	1.0

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Inert ingredients	-	-	X
Fomesafen-sodium 108731-70-0	X	-	-

U.S. EPA Label Information

EPA Pesticide Registration Number 83529-25

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Difference between SDS and EPA Pesticide label

WARNING. This product contains Fomesafen which has been determined to cause tumors in laboratory animals (mice). Risks can be reduced by closely following use directions and precautions and by wearing the protective clothing specified elsewhere on this label.

Causes skin irritation. Harmful if swallowed. Causes moderate eye irritation. Do not get on skin or on clothing. Avoid contact with eyes. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION
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<u>NFPA</u>	Health hazards 0	Flammability 0	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection X

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Revision Note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

09Aug2016