

1. IDENTIFICATION

Product identifier

Product Name Sharda Bifenthrin 17.15% LFR

Other means of identification

Product Code 83529-79
UN/ID no UN3352
Synonyms Seize LFC
Registration Number(s) 83529-79

Recommended use of the chemical and restrictions on use

Recommended Use Pesticide
Uses advised against Consumer use

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 considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 1
Specific target organ toxicity (repeated exposure)	Category 1

Label elements

Emergency Overview

Danger

Hazard statements

Toxic if swallowed
 Harmful if inhaled
 Suspected of causing cancer
 Causes damage to organs
 Causes damage to organs through prolonged or repeated exposure

**Appearance** Opaque aqueous solution**Physical state** liquid**Odor** Slight**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Specific treatment (see instructions on this label)
 IF exposed: Call a POISON CENTER or doctor/physician
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Mild eye irritation. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

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-%
Other ingredients	Proprietary	82.85
Bifenthrin	82657-04-3	17.15

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.

Indication of any immediate medical attention and special treatment needed

Note to physicians This product contains a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided. May cause sensitization in susceptible persons. Treat symptomatically.

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 Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

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

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	Tight sealing safety 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	Opaque aqueous solution	Odor threshold	No information available
Color	White		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	6.3	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	1.0276		
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	> 200 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	~8.5 lb/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 (NOx). Carbon oxides. Hydrogen halides.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Product Information	Acute Oral LD50 (rat): 175 mg/kg Acute Dermal LD50 (rabbit): > 5000 mg/kg Irritation (rabbit): Causes mild eye irritation. Skin Irritation (rabbit): Not an irritant. Inhalation LC50 (rat): >2.28 mg/L (4 HR) Skin Sensitization (guinea pig): Not a sensitizer.
Inhalation	Harmful by inhalation.
Eye contact	Based on available data, the classification criteria are not met. May cause slight irritation.
Skin contact	Based on available data, the classification criteria are not met.
Ingestion	Toxic if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Other ingredients	> 90 mL/kg (Rat)	-	-
Bifenthrin 82657-04-3	= 54.5 mg/kg (Rat)	= 790 mg/kg (Rat) > 2 g/kg (Rabbit)	= 0.61 mg/L (Rat) 1 h

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes.

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

Sensitization Based on available data, the classification criteria are not met.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Bifenthrin 82657-04-3	-	Group 2A	-	X

*IARC (International Agency for Research on Cancer)**Group 2A - Probably Carcinogenic to Humans**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**X - Present*

Reproductive toxicity Based on available data, the classification criteria are not met.
STOT - single exposure May cause disorder and damage to the. Central nervous system.
STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.
Chronic toxicity Repeated or prolonged exposure may cause central nervous system damage.
Target Organ Effects Central nervous system.
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) 317.0 mg/kg

ATEmix (inhalation-dust/mist) 2.92 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

76.85 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Bifenthrin 82657-04-3	-	0.0001 - 0.00019: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.0003 - 0.00038: 96 h Lepomis macrochirus mg/L LC50 flow-through	0.00135 - 0.00195: 48 h Daphnia magna mg/L EC50 Static
1,2-Propylene glycol 57-55-6	19000: 96 h Pseudokirchneriella subcapitata mg/L EC50	51600: 96 h Oncorhynchus mykiss mg/L LC50 static 41 - 47: 96 h Oncorhynchus mykiss mL/L LC50 static 51400: 96 h Pimephales promelas mg/L LC50 static 710: 96 h Pimephales promelas mg/L LC50	1000: 48 h Daphnia magna mg/L EC50 Static 10000: 24 h Daphnia magna mg/L EC50

Persistence and degradability

Not readily biodegradable.

: Bifenthrin degrades slowly in soil, the rate being influenced by soil characteristics; it is also stable in the aquatic environment. Bifenthrin, present at a concentration of 4.5 mg/kg and incubated for 24 months, was very stable to biodegradation in one soil (red brown earth: pH 7.1, 1.2% organic carbon, 59.1% sand, 28.3% silt, 10.5% clay) and two bedding materials (sand-dolomite (pH 9.2, 0.1% organic carbon, 80.2% sand) and quarry sand (pH 9.6, 0.2% organic carbon, 55.0% sand)). Degradation rate constants were 5.2×10^{-4} , 4.9×10^{-4} , and 5.0×10^{-4} /day corresponding to half-lives of 1332, 1410, and 1386 days, respectively. Soil moisture had little effect on the rate of biodegradation.

Bioaccumulation

Bioaccumulative potential.

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.

US EPA Waste Number

U165

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Bifenthrin 82657-04-3	Toxic

14. TRANSPORT INFORMATION

DOT

UN/ID no UN3352
Proper shipping name Pyrethroid pesticide, liquid, toxic
Hazard Class 6.1
Packing Group III
Special Provisions IB3, T7, TP2, TP28
Description UN3352, Pyrethroid pesticide, liquid, toxic mixture, 6.1, III
Emergency Response Guide Number 151

TDG

UN/ID no UN3352
Proper shipping name Pyrethroid pesticide, liquid, toxic mixture
Hazard Class 6.1
Packing Group III
Description UN3352, Pyrethroid pesticide, liquid, toxic mixture (Bifenthrin), 6.1, III

IATA

UN/ID no UN3352
Proper shipping name Pyrethroid pesticide, liquid, toxic
Hazard Class 6.1
Packing Group III
ERG Code 6L
Special Provisions A3, A4
Description UN3352, Pyrethroid pesticide, liquid, toxic (Bifenthrin), 6.1, III

IMDG

UN/ID no UN3352
Proper shipping name Pyrethroid pesticide, liquid, toxic
Hazard Class 6.1
Packing Group III
EmS-No F-A, S-A
Special Provisions 61, 223, 274
Description UN3352, Pyrethroid pesticide, liquid, toxic (Bifenthrin), 6.1, III, Marine Pollutant

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
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 %
Bifenthrin - 82657-04-3	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
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
Other ingredients	-	-	X
Bifenthrin 82657-04-3	X	-	-
1,2-Propylene glycol 57-55-6	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number 83529-79

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. May be fatal if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION
--

NFPA	Health hazards 2	Flammability 0	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 2*	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	<i>* = Chronic Health Hazard</i>			

Issue Date 11-Jul-2017

Revision Date 11-Jul-2017

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