SAFETY DATA SHEET

Issue Date 23-Feb-2021 **Revision Date** 23-Feb-2021 **Version** 1

1. IDENTIFICATION

Product identifier

Product Name Sharda Bromacil Lithium Salt 21.9% SL ABN: Bright

Other means of identification

Product Code 83529-136
UN/ID no UN1987
Synonyms None
Registration Number(s) 83529-136

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

Serious eye damage/eye irritation	Category 2B
Specific target organ toxicity (single exposure)	Category 1
Flammable liquids	Category 3

Label elements

Emergency Overview

Danger

Hazard statements
Causes eye irritation
Causes damage to organs
Flammable liquid and vapor

Appearance Liquid **Physical state** liquid **Odor** Aromatic

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Do not eat, drink or smoke when using this product
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ ventilating/ lighting/ equipment
Use only non-sparking tools
Take precautionary measures against static discharge

Precautionary Statements - Response
IF exposed: Call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
In case of fire: Use CO_2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Inhalation, ingestion, or skin absorption of methanol can cause blindness. May be harmful if swallowed. May be harmful if inhaled. May be harmful in contact with skin. Toxic 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

Mixture

Chemical Name	CAS No	Weight-%
Other ingredients *	Proprietary	15 - 40
Ethylene glycol *	107-21-1	15 - 40
Bromacil, lithium salt	53404-19-6	21.9
Ethyl alcohol *	64-17-5	3 - 7
Methyl alcohol *	67-56-1	1 - 5

*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 Redness. Drowsiness. Dizziness.

Indication of any immediate medical attention and special treatment needed

Note to physicians Inhalation, ingestion, or skin absorption of methanol can cause blindness. 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. Keep away from sources of ignition. Prevent fire fighting water from entering surface water or groundwater. Cool containers with spray water from a safe distance. Never use welding or cutting torch on or near container (even empty) because product may ignite explosively.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Remove all sources of ignition. 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 Use personal protective equipment as required. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Keep from freezing.

Packaging materials Do not reuse container.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylene glycol 107-21-1	TWA: 25 ppm (vapor fraction) STEL: 50 ppm (vapor fraction)	-	-
Ethyl alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m^3
Methyl alcohol 67-56-1	STEL: 250 ppm TWA: 200 ppm S*	TWA: 200 ppm TWA: 260 mg/m^3	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m^3 STEL: 250 ppm STEL: 325 mg/m^3

NIOSH IDLH Immediately Dangerous to Life or Health

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. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Liquid	**Odor**	Aromatic
Color	light brown	**Odor threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	11.26	solution (1 %)
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	43.7 °C / 111 °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	~18 mmHg	@ 20 °C
Vapor density	No information available	
Relative density	1.12058 g/mL	
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	No information available	
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	No information available

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. Heat, flames and sparks.
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

Methanol is more toxic to humans and primates than to most experimental animals, due to differences in how it is metabolized. Non-primates do not appear to experience the acidosis or vision effects observed in humans and primates. Inhalation, ingestion, or skin absorption of methanol can cause blindness

Acute Oral LD50 (rat): >2000 mg/kg
Acute Dermal LD50 (rabbit): > 2000 mg/kg
Eye Irritation (rabbit): Moderate irritant.

Skin Irritation (rabbit): Mild irritant.
Inhalation LC50 (rat): >4.52 mg/L (4 HR)
Skin Sensitization (guinea pig): Not a sensitizer

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

Eye contact Moderately irritating to the eyes.

Skin contact Based on available data, the classification criteria are not met. Substance may cause slight skin irritation.

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

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Other ingredients	> 90 mL/kg (Rat)	-	-
Ethylene glycol 107-21-1	= 4700 mg/kg (Rat)	= 10600 mg/kg (Rat) = 9530 µL/kg (Rabbit)	-
Ethyl alcohol 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
Methyl alcohol 67-56-1	= 6200 mg/kg (Rat)	= 15800 mg/kg (Rabbit) = 15840 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 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. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl alcohol 64-17-5	A3	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
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. Eyes. Central nervous system.
STOT - repeated exposure Based on available data, the classification criteria are not met.
Chronic toxicity May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects. Contains a known or suspected reproductive toxin.
Target Organ Effects blood, Central nervous system, Eyes, Gastrointestinal tract (GI), liver, Reproductive System, Respiratory system, Skin.
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

Refer to product information above.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic life with long lasting effects

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in

areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift or runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ethylene glycol 107-21-1	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static	46300: 48 h Daphnia magna mg/L EC50
Ethyl alcohol 64-17-5	-	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50
Methyl alcohol 67-56-1	-	28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through	-

Persistence and degradability

Not readily biodegradable.

Bioaccumulation

Bioaccumulative potential.

Chemical Name	Partition coefficient
Ethylene glycol 107-21-1	-1.93
Ethyl alcohol 64-17-5	-0.32
Methyl alcohol 67-56-1	-0.77

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 D001

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methyl alcohol 67-56-1	-	Included in waste stream: F039	-	U154

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
Ethyl alcohol 64-17-5	Toxic Ignitable
Methyl alcohol 67-56-1	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT Not regulated (If shipped in NON BULK packaging by ground transport)

Bulk containers are regulated as shown below:

UN/ID no	UN1987
Proper shipping name	Alcohols, n.o.s.
Hazard Class	3
Packing Group	III
Special Provisions	172, B1, IB3, T4, TP1, TP29
Description	UN1987, Alcohols, n.o.s., 3, III
Emergency Response Guide Number	127

TDG Not regulated (If shipped in NON BULK packaging by ground transport)

UN/ID no	UN1987
Proper shipping name	Alcohols, n.o.s.
Hazard Class	3
Packing Group	III
Description	UN1987, Alcohols, n.o.s. (Ethyl alcohol, Methyl alcohol), 3, III

IATA

UN/ID no	UN1987
Proper shipping name	Alcohols, n.o.s.
Hazard Class	3
Packing Group	III
ERG Code	3L
Special Provisions	A3, A180
Description	UN1987, Alcohols, n.o.s. (Ethyl alcohol, Methyl alcohol), 3, III

IMDG

UN/ID no	UN1987
Proper shipping name	Alcohols, n.o.s.
Hazard Class	3
Packing Group	III
EmS-No	F-E, S-D
Special Provisions	223, 274
Marine pollutant	Marine pollutant
Description	UN1987, Alcohols, n.o.s. (Ethyl alcohol, Methyl alcohol), 3, 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 %
Ethylene glycol - 107-21-1	1.0
Methyl alcohol - 67-56-1	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	Yes
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, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ethylene glycol 107-21-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Methyl alcohol 67-56-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals. Ethyl alcohol is only a considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage

Chemical Name	California Proposition 65
Ethyl alcohol - 64-17-5	Carcinogen Developmental
Methyl alcohol - 67-56-1	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Other ingredients	-	-	X
Ethylene glycol 107-21-1	X	X	X
Ethyl alcohol 64-17-5	X	X	X
Methyl alcohol 67-56-1	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number 83529-136

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

DANGER (Skull & Crossbones): Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

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

NFPA	**Health hazards**	3	**Flammability**	2	**Instability** 0	**Physical and Chemical Properties**	-
HMIS	**Health hazards**	3	**Flammability**	2	**Physical hazards** 0	**Personal protection**	X

Issue Date 23-Feb-2021
Revision Date 23-Feb-2021
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

23Feb2021