

Issue Date 02-Aug-2017

Revision Date 16-Aug-2017

Version 2

1. IDENTIFICATION

Product identifier

Product Name Sharda Metolachlor 58.52% + Metribuzin 13.93% EC

Other means of identification

Product Code 83529-70
Synonyms Headwin
Registration Number(s) 83529-70

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)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Skin sensitization	Category 1

Label elements

Emergency Overview

Warning

Hazard statements

Causes skin irritation
 Causes eye irritation
 May cause an allergic skin reaction

**Appearance** Liquid**Physical state** liquid**Odor** Strong Aromatic**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

Specific treatment (see instructions on this label)
 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: Wash with plenty of soap and water
 Take off contaminated clothing and wash before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

May be harmful if swallowed. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

Unknown acute toxicity

11.23% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Name	CAS No	Weight-%
Metolachlor	51218-45-2	58.52
Metribuzin	21087-64-9	13.93
Other ingredients *	Proprietary	7 - 13
Solvent naphtha, petroleum, heavy aromatic *	64742-94-5	7 - 13
Dimethyl sulfoxide *	67-68-5	3 - 7

*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. Call a poison control center or doctor for treatment advice.
Ingestion	Call a physician or poison control center immediately. Drink 1 or 2 glasses of water. 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. May cause skin irritation. May cause allergic skin reaction.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Contains petroleum distillate. Vomiting may cause aspiration pneumonia. May cause sensitization by skin contact. Treat symptomatically.
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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 chloride.

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. Cool containers / tanks with water spray.

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 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.

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 in properly labeled containers.

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
Metribuzin 21087-64-9	TWA: 5 mg/m ³	-	TWA: 5 mg/m ³
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	TWA - 200 mg/m ³ (non-aerosol as total hydrocarbon)	TWA - 400 mg/m ³ (hydrocarbons, unspecified)	-

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	Odor	Strong Aromatic
Appearance	Liquid	Odor threshold	No information available
Color	light yellow		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	7.08	solution (1 %)	
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	110 °C / 220 °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	~0.5 mmHg	@ 25 °C	
Vapor density	No information available		
Relative density	1.1052		
Water solubility	Emulsifies		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	~ 86 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	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.

Incompatible materials

Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon oxides. Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Inhalation	Based on available data, the classification criteria are not met.
Eye contact	Irritating to eyes.
Skin contact	May cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	Based on available data, the classification criteria are not met.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Metolachlor 51218-45-2	>2000 mg/kg (rat)	>2000 mg/kg (rabbit)	>3.20 mg/L (rat)
Metribuzin 21087-64-9	= 2020 mg/kg (Male Rat) = 1100 mg/kg (Female Rat)	> 5000 mg/kg (Rat) > 20 g/kg (Rabbit)	> 860 mg/m ³ (Rat) 4 h
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h
Dimethyl sulfoxide 67-68-5	= 14500 mg/kg (Rat)	= 40 g/kg (Rat)	-

Information on toxicological effects

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

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

Sensitization May cause sensitization by skin contact.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
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.
Chronic toxicity May cause adverse liver effects.
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)	2,930.00 mg/kg
ATEmix (dermal)	9,080.00 mg/kg mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects

11.23 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Metolachlor 51218-45-2	Green algae 96-hr EC50 = 0.4 mg/L	Bluegill 96-hr EC50 = 10 mg/L	25.1: 48 h Daphnia magna mg/L LC50 4.25: 48 h Daphnia magna mg/L EC50 13 - 18.4: 48 h Daphnia magna mg/L EC50 Static
Metribuzin 21087-64-9	Green algae 72-hr EC50 = 0.007 mg/L	Fish (rainbow trout) 96-hr LC50 = 74.6 mg/L	Daphnia magna 48-hr EC50 = 98.5 mg/L
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	2.5: 72 h Skeletonema costatum mg/L EC50	19: 96 h Pimephales promelas mg/L LC50 static 1740: 96 h Lepomis macrochirus mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 2.34: 96 h Oncorhynchus mykiss mg/L LC50 41: 96 h Pimephales promelas mg/L LC50	0.95: 48 h Daphnia magna mg/L EC50
Dimethyl sulfoxide 67-68-5	12350 - 25500: 96 h Skeletonema costatum mg/L EC50	34000: 96 h Pimephales promelas mg/L LC50 33 - 37: 96 h Oncorhynchus mykiss g/L LC50 static 40: 96 h Lepomis macrochirus g/L LC50 static 41.7: 96 h Cyprinus carpio g/L LC50	7000: 24 h Daphnia species mg/L EC50

Persistence and degradability

Not readily biodegradable.

Bioaccumulation

Bioaccumulative potential.

Chemical Name	Partition coefficient
Metolachlor 51218-45-2	2.9
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	6.1
Dimethyl sulfoxide 67-68-5	-2.03

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

DOT Not regulated

TDG Not regulated

IATA

UN/ID no	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Hazard Class	9
Packing Group	III
ERG Code	9L
Special Provisions	A97, A158, A197
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Metolachlor, Metribuzin), 9, III

IMDG

UN/ID no	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Hazard Class	9
Packing Group	III
EmS-No	F-A, S-F
Special Provisions	274, 335
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Metolachlor, Metribuzin), 9, III

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDL	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/NDL - 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 %
Metribuzin - 21087-64-9	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
Metolachlor 51218-45-2	X	-	-
Metribuzin 21087-64-9	X	X	X
Dimethyl sulfoxide 67-68-5	X	-	-

U.S. EPA Label Information

EPA Pesticide Registration Number 83529-70

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: Harmful if swallowed. Causes skin irritation. Do not get on skin or on clothing. Causes moderate eye irritation. Avoid contact with eyes. This product may cause skin sensitization reactions in some people. 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

<u>NFPA</u>	Health hazards 2	Flammability 1	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 2	Flammability 1	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	* = Chronic Health Hazard			

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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

16Aug2017