

SAFETY DATA SHEET

Issue Date 01-Aug-2017 Revision Date 01-Aug-2017 Version 1

1. IDENTIFICATION

Product identifier

Product Name Sharda Metolachlor 55.49% + Imazethapyr 2.77% EC

Other means of identification

Product Code83529-72SynonymsPunchRegistration Number(s)83529-72

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

Hockessin, DE 19707

Emergency Telephone

Website: www.shardausa.com

Emergency telephone number

Company Phone Number 610-350-6930 (US)

+91 22 5678 2800 (India) 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 |
|-----------------------------------|-------------|
| Skin sensitization | Category 1 |
| Reproductive toxicity | Category 1B |
| Flammable liquids | Category 4 |

Label elements

Emergency Overview

Danger

Hazard statements

Causes eye irritation May cause an allergic skin reaction May damage fertility or the unborn child Combustible liquid



Appearance Liquid Physical state liquid Odor Aromatic

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

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves/protective clothing/eye protection/face protection

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

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

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

In case of fire: Use CO2, 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

Harmful to aquatic life with long lasting effects.

Unknown acute toxicity

14.14% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Substance</u>

Not applicable

<u>Mixture</u>

| Chemical Name | CAS No | Weight-% |
|--------------------------|-------------|----------|
| Metolachlor | 51218-45-2 | 55.49 |
| Other ingredients * | Proprietary | 20 - 40 |
| 1-Methyl-2-pyrrolidone * | 872-50-4 | 7 - 13 |
| Imazethapyr | 81335-77-5 | 2.77 |

^{*}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 allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Note to physicians 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 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.

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 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. Wash contaminated

clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state liquid Appearance Liquid

AppearanceLiquidOdorAromatic

Color light yellow Odor threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

pH 3.53 solution (1 %)

Melting point / freezing point No information available Boiling point / boiling range No information available

Flash point 73 °C / 163 °F Seta Closed Cup

Evaporation rateFlammability (solid, gas)
No information available
No information available

Flammability Limit in Air

Upper flammability limit:No information availableLower flammability limit:No information available

Vapor pressure ~0.5 mmHg @ 25 °C

Vapor density No information available

Relative density 1.0381 Water solubility Emulsifies

Solubility in other solvents
Partition coefficient
Autoignition temperature
Decomposition temperature
No information available
No information available
No information available

Kinematic viscosity ~ 20 mm2/s

Dynamic viscosity No information available

Explosive properties Not an explosive Oxidizing properties Not applicable

Other Information

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

10. STABILITY AND REACTIVITY

@ 40 °C

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 sensitization by skin contact.

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) |
| Other ingredients | = 20 g/kg (Rat) | = 20800 mg/kg (Rabbit) | - |
| 1-Methyl-2-pyrrolidone 872-50-4 | = 3914 mg/kg (Rat) | = 8 g/kg (Rabbit) | = 3.1 mg/L (Rat) 4 h |
| Imazethapyr 81335-77-5 | > 5 g/kg (Rat) | - | - |

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes. 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 mutagenicityBased on available data, the classification criteria are not met.
Based on available data, the classification criteria are not met.

Reproductive toxicity Contains a known or suspected reproductive toxin.

STOT - single exposure

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

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) 19,516.00 mg/kg
ATEmix (dermal) 12,971.00 mg/kg
ATEmix (inhalation-dust/mist) 22.18 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects

16.91 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|------------------------|-----------------------------------|---------------------------------------|-----------------------------------|
| Metolachlor | Green algae 96-hr EC50 = 0.4 mg/L | Bluegill 96-hr EC50 = 10 mg/L | 25.1: 48 h Daphnia magna mg/L |
| 51218-45-2 | | | LC50 4.25: 48 h Daphnia magna |
| | | | mg/L EC50 13 - 18.4: 48 h Daphnia |
| | | | magna mg/L EC50 Static |
| Other ingredients | 19000: 96 h Pseudokirchneriella | 51600: 96 h Oncorhynchus mykiss | 1000: 48 h Daphnia magna mg/L |
| | subcapitata mg/L EC50 | mg/L LC50 static 41 - 47: 96 h | EC50 Static 10000: 24 h Daphnia |
| | | Oncorhynchus mykiss mL/L LC50 | magna mg/L EC50 |
| | | static 51400: 96 h Pimephales | |
| | | promelas mg/L LC50 static 710: 96 | |
| | | h Pimephales promelas mg/L LC50 | |
| 1-Methyl-2-pyrrolidone | 500: 72 h Desmodesmus | 832: 96 h Lepomis macrochirus | 4897: 48 h Daphnia magna mg/L |
| 872-50-4 | subspicatus mg/L EC50 | mg/L LC50 static 1072: 96 h | EC50 |
| | | Pimephales promelas mg/L LC50 | |
| | | static 1400: 96 h Poecilia reticulata | |
| | | mg/L LC50 static 4000: 96 h | |
| | | Leuciscus idus mg/L LC50 static | |

Persistence and degradability

Not readily biodegradable.

Bioaccumulation

Bioaccumulative potential.

| Chemical Name | Partition coefficient |
|------------------------------------|-----------------------|
| Metolachlor 51218-45-2 | 2.9 |
| 1-Methyl-2-pyrrolidone 872-50-4 | -0.46 |

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), 9, III

IMDG

UN/ID no UN3082

Proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Hazard Class9Packing GroupIIIEmS-NoF-A, S-FSpecial Provisions274, 335

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Metolachlor), 9, III

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 % | |
|-----------------------------------|-------------------------------|--|
| 1-Methyl-2-pyrrolidone - 872-50-4 | 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 contains the following Proposition 65 chemicals

| Chemical Name | California Proposition 65 |
|-----------------------------------|---------------------------|
| 1-Methyl-2-pyrrolidone - 872-50-4 | Developmental |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|------------------------------------|------------|---------------|--------------|
| Metolachlor 51218-45-2 | X | - | - |
| Other ingredients | X | - | Х |
| 1-Methyl-2-pyrrolidone 872-50-4 | X | X | Х |

U.S. EPA Label Information

EPA Pesticide Registration Number 83529-72

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

CAUTION: Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Causes moderate eye irritation. This product may cause skin sensitization reaction in some people. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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

NFPA Health hazards 2 Flammability 2 Instability 0 Physical and Chemical

Properties HMIS Health hazards 2* Flammability 2 Physical hazards 0 Personal protection X

Chronic Hazard Star Legend *= Chronic Health Hazard

 Issue Date
 01-Aug-2017

 Revision Date
 01-Aug-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

01Aug2017