1. IDENTIFICATION

Product identifier
Product Name: Sharda Mesotrione 40SC

Other means of identification
Product Code: 83529-51
Synonyms: Sharda Mesotrione 40SC Turf, Meso Star
Registration Number(s): 83529-51

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: Opaque
Physical state: liquid
Odor: Characteristic

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Very toxic to aquatic life with long lasting effects. Repeated or prolonged contact may cause allergic reactions in very susceptible persons.
Unknown acute toxicity
0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
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</thead>
<tbody>
<tr>
<td>Other ingredients *</td>
<td>Proprietary</td>
<td>40 - 70</td>
</tr>
<tr>
<td>Mesotrione</td>
<td>104206-82-8</td>
<td>40.0</td>
</tr>
</tbody>
</table>

*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
Repeated contact may cause allergic reactions in very susceptible persons.

Indication of any immediate medical attention and special treatment needed

Note to physicians
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.


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


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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Appearance</td>
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<td>Odor threshold</td>
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<td>Color</td>
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</tr>
<tr>
<td>pH</td>
<td>3.26</td>
<td></td>
<td>solution (1 %)</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 100 °C / &gt; 212 °F</td>
<td>Seta Closed Cup</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
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<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
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<td></td>
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<tr>
<td>Flammability Limit in Air</td>
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<tr>
<td>Upper flammability limit</td>
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<tr>
<td>Lower flammability limit</td>
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<tr>
<td>Vapor pressure</td>
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<td>@ 20 °C</td>
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<td>Vapor density</td>
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<td></td>
</tr>
<tr>
<td>Relative density</td>
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<tr>
<td>Water solubility</td>
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<td>Solubility in other solvents</td>
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<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
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<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
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</tr>
<tr>
<td>Decomposition temperature</td>
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</tr>
<tr>
<td>Kinematic viscosity</td>
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<tr>
<td>Dynamic viscosity</td>
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<tr>
<td>Explosive properties</td>
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<tr>
<td>Oxidizing properties</td>
<td>Not applicable</td>
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</table>

Other Information
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.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
Product does not present an acute toxicity hazard based on known or supplied information

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

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

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

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other ingredients</td>
<td>&gt; 90 mL/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
Redness.

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
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.

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

Numerical measures of toxicity
- Product Information

12. ECOLOGICAL INFORMATION
Ecotoxicity
Very toxic to aquatic life with long lasting effects

60% 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

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. (Mesotrione), 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. (Mesotrione), 9, III; Marine Pollutant

15. REGULATORY INFORMATION
International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Complies</th>
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<tbody>
<tr>
<td>TSCA</td>
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</tr>
<tr>
<td>DSL/NDSL</td>
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</tr>
<tr>
<td>EINECS/ELINCS</td>
<td></td>
</tr>
<tr>
<td>IECSC</td>
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</tr>
<tr>
<td>KECL</td>
<td></td>
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<tr>
<td>PICCS</td>
<td></td>
</tr>
<tr>
<td>AICS</td>
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</tr>
</tbody>
</table>

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 does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td>No</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other ingredients</td>
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<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. EPA Label Information

EPA Pesticide Registration Number 83529-51

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 absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals. Avoid contact with skin, eyes, or clothing.

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

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Properties</th>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
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</thead>
<tbody>
<tr>
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<td>0</td>
<td>0</td>
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</table>

Issue Date 04-Aug-2016
Revision Date 04-Aug-2016
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