1. IDENTIFICATION

Product identifier
Product Name: Sharda Acetochlor 33% CS

Other means of identification
Product Code: 83529-84
Synonyms: Arrest CS
Registration Number(s): 83529-84

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)

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2B</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

Label elements

Warning

Hazard statements
Harmful if inhaled
Causes skin irritation
Causes eye irritation
May cause an allergic skin reaction
May cause respiratory irritation

Emergency Overview
Appearance  Liquid  Physical state  liquid  Odor  Slight

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
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
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

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
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
May be harmful if swallowed. 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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture</td>
<td>Other ingredients *</td>
<td>Proprietary</td>
<td>65.0</td>
</tr>
<tr>
<td></td>
<td>Acetochlor *</td>
<td>34256-82-1</td>
<td>33.0</td>
</tr>
<tr>
<td></td>
<td>Ethylene glycol *</td>
<td>107-21-1</td>
<td>1 - 5</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
May cause redness and tearing of the eyes. May cause skin irritation. Coughing and/or wheezing. May cause allergic skin reaction.

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.

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
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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>Ceiling: 100 mg/m³ aerosol only</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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

<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></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid</td>
<td>Odor</td>
<td>Slight</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
<td>Odor threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>6.3</td>
<td></td>
<td>solution (1 %)</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 100 °C / &gt; 212 °F</td>
<td></td>
<td>Seta Closed Cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>~0.5 mmHg</td>
<td>@ 25 ºC</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>1.0556</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>dispersible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>&gt; 300 mm2/s</td>
<td>@ 40 ºC</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not an explosive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Product Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inhalation</strong></td>
<td>May cause irritation of respiratory tract. Harmful by inhalation.</td>
</tr>
<tr>
<td><strong>Eye contact</strong></td>
<td>Moderately irritating to the eyes.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>May cause irritation. May cause sensitization by skin contact.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetochlor</td>
<td>&gt; 90 mL/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>763 mg/kg (Rat)</td>
<td>3667 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>34256-82-1</td>
<td>= 4700 mg/kg (Rat)</td>
<td>= 10600 mg/kg (Rat) = 9530 µL/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

**Information on toxicological effects**
- **Symptoms**
  - May cause redness and tearing of the eyes. May cause skin irritation. Coughing and/or wheezing. 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.

**Numerical measures of toxicity - Product Information**

- The following values are calculated based on chapter 3.1 of the GHS document.
  - **ATEmix (oral)**: 2,097.00 mg/kg
  - **ATEmix (dermal)**: 10,859.00 mg/kg
  - **ATEmix (inhalation-dust/mist)**: 4.50 mg/l

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**
Very toxic to aquatic life with long lasting effects. This product is toxic to fish. Drift or runoff from treated areas may be hazardous to aquatic organisms and non-target plants. 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
contaminate water when cleaning equipment or disposing of equipment washwaters.
64.78 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>6500 - 13000: 96 h</td>
<td>41000: 96 h Oncorhynchus mykiss</td>
<td>46300: 48 h Daphnia magna</td>
</tr>
<tr>
<td>107-21-1</td>
<td>Pseudokirchneriella subcapitata</td>
<td>mg/L EC50</td>
<td>mg/L EC50</td>
</tr>
<tr>
<td></td>
<td>mg/L EC50</td>
<td>Oncorhynchus mykiss mL/L LC50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>static 40000 - 60000: 96 h</td>
<td>Oncorhynchus mykiss mL/L LC50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pimephales promelas mg/L LC50</td>
<td>static 27540: 96 h Lepomis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>static 16000: 96 h Poecilia</td>
<td>static 40761: 96 h Oncorhynchus mykiss mL/L</td>
<td></td>
</tr>
<tr>
<td></td>
<td>reticulata mg/L LC50 static</td>
<td>LC50 static 46300: 48 h Daphnia magna</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16000: 96 h Poecilia reticulata</td>
<td>mg/L LC50 static</td>
<td></td>
</tr>
<tr>
<td></td>
<td>40761: 96 h Oncorhynchus</td>
<td>46300: 48 h Daphnia magna</td>
<td></td>
</tr>
<tr>
<td></td>
<td>mykiss mL/L LC50 static</td>
<td>mg/L EC50</td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and degradability**
Not readily biodegradable.

**Bioaccumulation**
Bioaccumulative potential.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>-1.93</td>
</tr>
<tr>
<td>107-21-1</td>
<td></td>
</tr>
</tbody>
</table>

**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. (Acetochlor), 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
15. REGULATORY INFORMATION

International Inventories

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>5000 lb</td>
<td></td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td>107-21-1</td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetochlor - 34256-82-1</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>Ethylene glycol - 107-21-1</td>
<td>Developmental</td>
</tr>
</tbody>
</table>
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>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>Ethylene glycol 107-21-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. EPA Label Information

EPA Pesticide Registration Number 83529-84

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. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating drinking, chewing gum, using tobacco, or using the toilet. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</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>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Chronic Hazard Star Legend
* = Chronic Health Hazard

Issue Date 13-Oct-2017
Revision Date 13-Oct-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