1. IDENTIFICATION

Product identifier
Product Name Acetochlor 70.87% EC Safened

Other means of identification
Product Code 83529-73
Synonyms Asset-S Plus
Registration Number(s) 83529-73

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

Label elements

Warning

Emergency Overview

Hazard statements
Harmful if swallowed
Harmful if inhaled
Causes skin irritation
Causes eye irritation
May cause respiratory irritation
Combustible liquid
Appearance  Liquid  Physical state  liquid  Odor  Strong Aromatic

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep cool

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
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
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
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
In case of fire: Use CO2, dry chemical, or foam for extinction

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 in contact with skin. 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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance  Not applicable
Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetochlor</td>
<td>34256-82-1</td>
<td>70.87</td>
</tr>
<tr>
<td>Other ingredients *</td>
<td>Proprietary</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Solvent naphtha, petroleum, heavy aromatic *</td>
<td>64742-94-5</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.

**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

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>Solvent naphtha, petroleum, heavy aromatic 64742-94-5</td>
<td>TWA - 200 mg/m³ (non-aerosol as total hydrocarbon)</td>
<td>TWA - 400 mg/m³ (hydrocarbons, unspecified)</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 • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>light yellow</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Strong Aromatic</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>7.65</td>
<td>solution (1 %)</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>83 °C / 181 °F</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>~0.5 mmHg</td>
<td>@ 25 °C</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>1.1076</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Emulsifies</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>&gt; 20.5 mm2/s</td>
<td>@ 40 °C</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not an explosive</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not applicable</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

Product Information

Inhalation
May cause irritation of respiratory tract. Harmful by inhalation.

Eye contact
Irritating to eyes.

Skin contact
May cause irritation.

Ingestion
Harmful if swallowed.

<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>= 763 mg/kg (Rat)</td>
<td>= 3667 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>= 2146 mg/kg (Rat) = 2.146 mg/kg (Rat)</td>
<td>= 2.04 mg/kg (Rat) &gt; 5 g/kg (Rabbit)</td>
<td>= 5500 mg/m³ (Rat) 1 h</td>
</tr>
<tr>
<td>Solvent naphtha, petroleum, heavy</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>&gt; 2 mL/kg (Rabbit)</td>
<td>&gt; 590 mg/m³ (Rat) 4 h</td>
</tr>
<tr>
<td>aromatic 64742-94-5</td>
<td></td>
<td></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.

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
May cause adverse liver effects.

STOT - repeated exposure

Chronic toxicity

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) 1,065.00 mg/kg
ATEmix (dermal) 4,590.00 mg/kg
ATEmix (inhalation-dust/mist) 2.10 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.

24.22 % 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>Solvent naphtha, petroleum, heavy aromatic</td>
<td>2.5: 72 h Skeletonema costatum mg/L EC50</td>
<td>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</td>
<td>0.95: 48 h Daphnia magna mg/L EC50</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>Solvent naphtha, petroleum, heavy aromatic</td>
<td>6.1</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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other ingredients</td>
<td>Toxic</td>
</tr>
</tbody>
</table>

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
Special Provisions: 274, 335
Description: UN3082, Environmentally hazardous substance, liquid, n.o.s. (Acetochlor), 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 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
- 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, 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

<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>
</tbody>
</table>

U.S. State Right-to-Know Regulations

U.S. EPA Label Information
EPA Pesticide Registration Number 83529-73
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: Causes skin and eye irritation. Harmful if swallowed, inhaled, or absorbed through skin. Do not get on skin, in eyes, or on clothing. Avoid breathing spray mist.

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

Chronic Hazard Star Legend
* = Chronic Health Hazard

Issue Date 04-Aug-2017
Revision Date 04-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

04Aug2017