



# Safety Data Sheet

Issue Date: 02-May-2019

Revision Date: 01-Oct-2019

Version 2

## 1. IDENTIFICATION

### Product identifier

**Product Name** Zurax L

### Other means of identification

**SDS #** ADAMA-293

**Registration Number(s)** EPA Reg. No. 66222-283

### Recommended use of the chemical and restrictions on use

**Recommended Use** EPA registered pesticide.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604  
1-919-256-9300

### Emergency telephone number

**Emergency Telephone** For fire, spill and/or leak contact INFOTRAC:  
1-800-535-5053 (North America) 1-352-323-3500 (International)  
For medical emergencies and health/safety inquiries, contact ProPharma Group:  
1-877-250-9291

## 2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

**Appearance** Off-white liquid

**Physical state** Liquid

**Odor** Odorless

### Classification

|   |             |
|---|-------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4  |
| Skin corrosion/irritation                 | Category 2  |
| Serious eye damage/eye irritation         | Category 2B |

### Signal Word

**Warning**

### Hazard statements

Harmful if inhaled  
Causes skin irritation  
Causes eye irritation



### **Precautionary Statements - Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 Use personal protective equipment as required  
 Wash face, hands and any exposed skin thoroughly after handling

### **Precautionary Statements - Response**

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 water and soap  
 Wash contaminated clothing before reuse  
 If skin irritation 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 - Disposal**

Dispose of contents/container to an approved waste disposal plant

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical name                             | CAS No     | Weight-%  |
|---|------------|-----------|
| 8-Quinolinecarboxylic acid, 3,7-dichloro- | 84087-01-4 | 14.5-16.1 |
| Tallow Alkylamine Ethoxylate              | 61791-26-2 | 2.88-3.18 |
| Dimethylamine                             | 124-40-3   | 2.76-3.04 |

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

## **4. FIRST AID MEASURES**

### **Description of first aid measures**

|                       |   |
|-----------------------|---|
| <b>General Advice</b> | When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment. If exposed or concerned: Get medical advice/attention.                                 |
| <b>Eye Contact</b>    | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.                             |
| <b>Skin Contact</b>   | IF ON SKIN: Wash with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.   |
| <b>Inhalation</b>     | Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Call a poison control center or doctor for further treatment advice.  |
| <b>Ingestion</b>      | Immediately call a poison center or doctor/physician. Do not induce vomiting, unless directed by medical personnel. Never give anything by mouth to an unconscious person. If conscious, give 1 glass of water to dilute. |

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Harmful if inhaled. Causes skin and eye irritation.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically and supportively.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Foam. Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray (fog).

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Can burn under fire conditions.

**Hazardous combustion products** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Hydrogen chloride.

**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. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Remove all sources of ignition. Ventilate affected area.

**Environmental precautions**

**Environmental precautions** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up** Reclaim where possible. Soak up with inert absorbent material. Wash area with soap and water. Pick up wash liquid with inert absorbent and place in a chemical waste container for disposal.

**7. HANDLING AND STORAGE****Precautions for safe handling**

**Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands and any exposed skin thoroughly after handling. Use only with adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

**Conditions for safe storage, including any incompatibilities**

|                               |   |
|-------------------------------|---|
| <b>Storage Conditions</b>     | Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Keep/store only in original container. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Store at ambient conditions. Keep away from extreme heat or open flame. |
| <b>Incompatible Materials</b> | Strong oxidizing agents.  |

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Guidelines**

The following information is given as general guidance

| Chemical name             | ACGIH TLV                  | OSHA PEL   | NIOSH IDLH  |
|---------------------------|----------------------------|--|---|
| Dimethylamine<br>124-40-3 | STEL: 15 ppm<br>TWA: 5 ppm | TWA: 10 ppm<br>TWA: 18 mg/m <sup>3</sup><br>(vacated) TWA: 10 ppm<br>(vacated) TWA: 18 mg/m <sup>3</sup> | IDLH: 500 ppm<br>TWA: 10 ppm<br>TWA: 18 mg/m <sup>3</sup> |

**Appropriate engineering controls**

|                             |  |
|-----------------------------|--|
| <b>Engineering Controls</b> | Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. |
|-----------------------------|--|

**Individual protection measures, such as personal protective equipment**

|                                       |  |
|---------------------------------------|--|
| <b>Eye/Face Protection</b>            | Wear safety glasses with side shields (or goggles). Goggles are recommended.   |
| <b>Skin and Body Protection</b>       | Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear long-sleeved shirt, long pants, and shoes plus socks. Use chemical resistant gloves, such as P.V.C., butyl-rubber, nitrile-rubber, or neoprene.  |
| <b>Respiratory Protection</b>         | NIOSH-approved respirator or mask in the absence of adequate ventilation.  |
| <b>General Hygiene Considerations</b> | Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Take off all contaminated clothing and wash it before reuse. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Contaminated work clothing must not be allowed out of the workplace. |

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

|                       |                  |                       |                |
|-----------------------|------------------|-----------------------|----------------|
| <b>Physical state</b> | Liquid           | <b>Odor</b>           | Odorless       |
| <b>Appearance</b>     | Off-white liquid | <b>Odor Threshold</b> | Not determined |
| <b>Color</b>          | Off-white        |                       |                |

| <b>Property</b>                       | <b>Values</b>  | <b>Remarks • Method</b> |
|---------------------------------------|----------------|-------------------------|
| <b>pH</b>                             | 4.0            |                         |
| <b>Melting point / freezing point</b> | Not determined |                         |
| <b>Boiling point / boiling range</b>  | Not applicable |                         |
| <b>Flash point</b>                    | Will not flash |                         |
| <b>Evaporation Rate</b>               | Not determined |                         |
| <b>Flammability (Solid, Gas)</b>      | Not determined |                         |

|   |                                  |
|---|----------------------------------|
| <b>Flammability Limit in Air</b>              |                                  |
| <b>Upper flammability or explosive limits</b> | Not applicable                   |
| <b>Lower flammability or explosive limits</b> | Not applicable                   |
| <b>Vapor Pressure</b>                         | < 1 x 10 <sup>-7</sup> mmHg@20°C |
| <b>Vapor Density</b>                          | Not determined                   |
| <b>Relative Density</b>                       | 1.129 g/ml (9.42 lbs/gal)        |
| <b>Water Solubility</b>                       | 65 ppm                           |
| <b>Solubility in other solvents</b>           | Not determined                   |
| <b>Partition Coefficient</b>                  | Not determined                   |
| <b>Autoignition temperature</b>               | Not determined                   |
| <b>Decomposition temperature</b>              | Not determined                   |
| <b>Kinematic viscosity</b>                    | Not determined                   |
| <b>Dynamic Viscosity</b>                      | Not determined                   |
| <b>Explosive Properties</b>                   | Not determined                   |
| <b>Oxidizing Properties</b>                   | Not determined                   |

**Other information**

**Bulk density** 10.10 lbs/gal

## 10. STABILITY AND REACTIVITY

**Reactivity**

Not reactive under normal conditions.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Conditions to Avoid**

See Sec. 7 Handling & Storage.

**Incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

Carbon oxides. Nitrogen oxides (NO<sub>x</sub>). Hydrogen chloride.

## 11. TOXICOLOGICAL INFORMATION

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

**Eye Contact** Causes eye irritation.

**Skin Contact** Causes skin irritation.

**Inhalation** Harmful if inhaled.

**Ingestion** Do not ingest.

**Component Information**

| Chemical name   | Oral LD50                               | Dermal LD50          | Inhalation LC50        |
|---|---|----------------------|------------------------|
| 8-Quinolinecarboxylic acid, 3,7-dichloro-<br>84087-01-4 | = 2190 mg/kg ( Rat )                    | > 2 g/kg ( Rat )     | -                      |
| Tallow Alkylamine Ethoxylate<br>61791-26-2              | = 620 mg/kg ( Rat ) = 500 mg/kg ( Rat ) | > 10 g/kg ( Rat )    | -                      |
| Dimethylamine<br>124-40-3                               | = 698 mg/kg ( Rat )                     | = 3900 mg/kg ( Rat ) | = 4540 ppm ( Rat ) 6 h |

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Please see section 4 of this SDS for symptoms.

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

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Sensitization** May cause an allergic skin reaction.

**Carcinogenicity** Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Numerical measures of toxicity**

**Acute Oral LD50 (Rat):** >3,500 mg/kg

**Acute Dermal LD50 (Rabbit):** >2,000 mg/kg

**Acute Inhalation LC50 (Rat):** >2.0 mg/L (4-hr)

**Eye Irritation:** Minimally irritating.

**Dermal Irritation:** Slightly irritating.

**Dermal Sensitization:** Not a skin sensitizer.

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the Environmental Protection Agency.

| Chemical name             | Algae/aquatic plants                              | Fish   | Crustacea                                 |
|---------------------------|---|--|---|
| Dimethylamine<br>124-40-3 | 9: 96 h Pseudokirchneriella subcapitata mg/L EC50 | 127 - 349: 96 h Poecilia reticulata mg/L LC50 semi-static 120: 96 h Oncorhynchus mykiss mg/L LC50 static 210: 96 h Poecilia reticulata mg/L LC50 static 111 - 125: 96 h Oncorhynchus mykiss mg/L LC50 396: 96 h Brachydanio rerio mg/L LC50 static | 88.7: 48 h Daphnia magna Straus mg/L EC50 |

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

There is no data for this product.

**Mobility**

| Chemical name             | Partition coefficient |
|---------------------------|-----------------------|
| Dimethylamine<br>124-40-3 | -0.274                |

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods****Disposal of Wastes**

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**US EPA Waste Number**

| Chemical name             | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---------------------------|------|--------------------------|------------------------|------------------------|
| Dimethylamine<br>124-40-3 |      |                          |                        | U092                   |

**California Hazardous Waste Status**

| Chemical name             | California Hazardous Waste Status |
|---------------------------|-----------------------------------|
| Dimethylamine<br>124-40-3 | Toxic<br>Ignitable                |

**14. TRANSPORT INFORMATION****Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**

Not regulated

**IATA**

Not regulated

**IMDG**

Not regulated

**15. REGULATORY INFORMATION****International Inventories**

| Chemical name                                | TSCA | DSL/NDSL | EINECS/E<br>LINCS | ENCS | IECSC | KECL | PICCS | AICS |
|--|------|----------|-------------------|------|-------|------|-------|------|
| 8-Quinolinecarboxylic acid,<br>3,7-dichloro- | X    | X        | X                 |      | X     |      | X     | X    |
| Tallow Alkylamine Ethoxylate                 | X    | X        | X                 |      | X     | X    | X     | X    |
| Dimethylamine                                | X    | X        | X                 | X    | X     | X    | X     | X    |

**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**

| Chemical name             | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ)                  |
|---------------------------|--------------------------|----------------|---|
| Dimethylamine<br>124-40-3 | 1000 lb                  |                | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |

**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  |

**SARA 313**

Not determined

**CWA (Clean Water Act)**

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Dimethylamine | 1000 lb                     |                        |                           | X                          |

**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 |
|---------------------------|------------|---------------|--------------|
| Dimethylamine<br>124-40-3 | X          | X             | X            |

**EPA Pesticide Registration Number** EPA Reg. No. 66222-283**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:

**EPA Pesticide Label**

CAUTION- Keep out of reach of children

**Difference between SDS and EPA pesticide label**

|   | EPA     | OSHA                   |
|---|---------|------------------------|
| <b>Signal Word</b>                        | Caution | Warning                |
| Acute toxicity - Inhalation (Dusts/Mists) | N/A     | Harmful if swallowed   |
| Skin corrosion/irritation                 | N/A     | Causes skin irritation |
| Serious eye damage/eye irritation         | N/A     | Causes eye irritation  |

**16. OTHER INFORMATION**

|                    |                       |                     |                         |                            |
|--------------------|-----------------------|---------------------|-------------------------|----------------------------|
| <b><u>NFPA</u></b> | <b>Health Hazards</b> | <b>Flammability</b> | <b>Instability</b>      | <b>Special Hazards</b>     |
|                    | 1                     | 0                   | 0                       | None                       |
| <b><u>HMIS</u></b> | <b>Health Hazards</b> | <b>Flammability</b> | <b>Physical hazards</b> | <b>Personal Protection</b> |
|                    | 1                     | 0                   | 0                       | See Section 8              |

**Issue Date:** 02-May-2019  
**Revision Date:** 01-Oct-2019  
**Revision Note:** Updated SDS

**Disclaimer**

The information provided in this 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**