



|  |  |
|--|--|
| <b>Storage</b>                                   | Store in a well-ventilated place. Keep container tightly closed. Store locked up.  |
| <b>Disposal</b>                                  | Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law. Waste from normal use may be sewered to a public-owned treatment works in compliance with applicable federal, state and local requirements. |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.  |
| <b>Supplemental information</b>                  | Not available.   |

### 3. Composition/information on ingredients

#### Mixtures

| Chemical name                            | Common name and synonyms | CAS number | %         |
|--|--------------------------|------------|-----------|
| 2-(2-ethoxyethoxy)ethanol                |                          | 111-90-0   | 20 - < 30 |
| Alcohols, C9-11, ethoxylated             |                          | 68439-46-3 | 5 - < 10  |
| Ethanol, 2-amino-                        |                          | 141-43-5   | 5 - < 10  |
| 1-Butoxy-2-propanol                      |                          | 5131-66-8  | 3 - < 5   |
| Tetrasodium ethylenediamine tetraacetate |                          | 64-02-8    | 3 - < 5   |
| Propanol, 2-                             |                          | 67-63-0    | 1 - < 3   |
| Other components below reportable levels |                          |            | 50 - < 60 |

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

|   |  |
|---|--|
| <b>Inhalation</b>   | 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.  |
| <b>Skin contact</b>   | Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.   |
| <b>Eye contact</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.  |
| <b>Ingestion</b>  | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.  |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.  |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed. |
| <b>General information</b>  | If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.   |

### 5. Fire-fighting measures

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).    |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.                        |
| <b>Specific hazards arising from the chemical</b>                    | During fire, gases hazardous to health may be formed.   |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| <b>Fire fighting equipment/instructions</b>                          | Move containers from fire area if you can do so without risk.                                 |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.    |
| <b>General fire hazards</b>  | No unusual fire or explosion hazards noted.   |

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

### Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

### Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

## 7. Handling and storage

### Precautions for safe handling

Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components                       | Type | Value                            |
|----------------------------------|------|----------------------------------|
| Ethanol, 2-amino- (CAS 141-43-5) | PEL  | 6 mg/m <sup>3</sup><br>3 ppm     |
| Propanol, 2- (CAS 67-63-0)       | PEL  | 980 mg/m <sup>3</sup><br>400 ppm |

#### US. ACGIH Threshold Limit Values

| Components                       | Type | Value   |
|----------------------------------|------|---------|
| Ethanol, 2-amino- (CAS 141-43-5) | STEL | 6 ppm   |
|                                  | TWA  | 3 ppm   |
| Propanol, 2- (CAS 67-63-0)       | STEL | 400 ppm |
|                                  | TWA  | 200 ppm |

#### US. NIOSH: Pocket Guide to Chemical Hazards

| Components                       | Type | Value                             |
|----------------------------------|------|-----------------------------------|
| Ethanol, 2-amino- (CAS 141-43-5) | STEL | 15 mg/m <sup>3</sup><br>6 ppm     |
|                                  | TWA  | 8 mg/m <sup>3</sup><br>3 ppm      |
| Propanol, 2- (CAS 67-63-0)       | STEL | 1225 mg/m <sup>3</sup><br>500 ppm |
|                                  | TWA  | 980 mg/m <sup>3</sup><br>400 ppm  |

#### US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

| Components                               | Type | Value                           |
|--|------|---------------------------------|
| 2-(2-ethoxyethoxy)ethanol (CAS 111-90-0) | TWA  | 140 mg/m <sup>3</sup><br>25 ppm |

## Biological limit values

### ACGIH Biological Exposure Indices

| Components                 | Value   | Determinant | Specimen | Sampling Time |
|----------------------------|---------|-------------|----------|---------------|
| Propanol, 2- (CAS 67-63-0) | 40 mg/l | Acetone     | Urine    | *             |

\* - For sampling details, please see the source document.

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

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

**Eye/face protection** Chemical safety goggles when working with concentrate.

#### Skin protection

**Hand protection** Use protective gloves when dealing with the concentrate.

**Other** Wear appropriate chemical resistant clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** None known.

### General hygiene considerations

Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

|   |                                       |
|---|---------------------------------------|
| <b>Appearance</b>                                   | Black liquid                          |
| <b>Physical state</b>                               | Liquid.                               |
| <b>Form</b>   | Liquid.                               |
| <b>Color</b>  | Black                                 |
| <b>Odor</b>   | Berry                                 |
| <b>Odor threshold</b>                               | Not available.                        |
| <b>pH</b>   | 12 - 13                               |
| <b>Melting point/freezing point</b>                 | Not applicable / Not available        |
| <b>Initial boiling point and boiling range</b>      | 213 °F (100.56 °C)                    |
| <b>Flash point</b>                                  | > 200.0 °F (> 93.3 °C) Tag Closed Cup |
| <b>Evaporation rate</b>                             | < 1 Ethyl ether=1                     |
| <b>Flammability (solid, gas)</b>                    | Not available.                        |
| <b>Upper/lower flammability or explosive limits</b> |                                       |
| <b>Explosive limit - lower (%)</b>                  | Not available.                        |
| <b>Explosive limit - upper (%)</b>                  | Not available.                        |
| <b>Vapor pressure</b>                               | 15.87 mm Hg                           |
| <b>Vapor density</b>                                | 1.8776 Air=1                          |
| <b>Relative density</b>                             | 1.0232 at 77°F                        |
| <b>Solubility(ies)</b>                              |                                       |
| <b>Solubility (water)</b>                           | 100 %                                 |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.                        |
| <b>Auto-ignition temperature</b>                    | Not available.                        |
| <b>Decomposition temperature</b>                    | Not available.                        |
| <b>Viscosity</b>                                    | Not available.                        |
| <b>Other information</b>                            |                                       |
| <b>Density</b>                                      | 8.52 lb/gal                           |
| <b>Percent volatile</b>                             | 85 - 86 %                             |
| <b>VOC (Weight %)</b>                               | 35.54 % EPA VOC<br>10.54 % CARB VOC   |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                         | Reacts violently with strong acids. This product may react with oxidizing agents.                                   |
| <b>Chemical stability</b>                 | Material is stable under normal conditions.   |
| <b>Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.   |
| <b>Conditions to avoid</b>                | Avoid temperatures exceeding the flash point. Do not mix with other chemicals. Contact with incompatible materials. |
| <b>Incompatible materials</b>             | Strong acids. Acids. Strong oxidizing agents. Oxidizing agents.   |
| <b>Hazardous decomposition products</b>   | No hazardous decomposition products are known.  |

## 11. Toxicological information

### Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | May cause irritation to the respiratory system. Prolonged inhalation may be harmful. |
| <b>Skin contact</b> | Causes severe skin burns.  |

Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

**Eye contact** Causes serious eye damage.

**Ingestion** Causes digestive tract burns. May be harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

### Information on toxicological effects

**Acute toxicity** In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. May be harmful if swallowed. May cause respiratory irritation.

| <b>Product</b>                           | <b>Species</b> | <b>Test Results</b>  |
|--|----------------|--|
| Spray Clean HD                           |                |  |
| <b>Acute</b>                             |                |  |
| <i>Dermal</i>                            |                |  |
| LD50                                     | Rabbit         | 86231.8828 ml/kg estimated<br>11818.9805 mg/kg estimated                 |
|  | Rat            | 23850.7227 mg/kg estimated   |
| <i>Inhalation</i>                        |                |  |
| LC50                                     | Mouse          | 3338.7097 mg/l, 4 Hours estimated<br>3225.8064 mg/l, 2 Hours estimated   |
|  | Rat            | 6612.9033 mg/l, 0.5 Hours estimated<br>3870.9678 mg/l, 4 Hours estimated |
| <i>Oral</i>                              |                |  |
| LD50                                     | Guinea pig     | 5801.4375 mg/kg estimated  |
|  | Mouse          | 11552.1973 mg/kg estimated   |
|  | Rabbit         | 14480 mg/kg estimated  |
|  | Rat            | 7457.7251 mg/kg estimated  |
| <b>Components</b>                        | <b>Species</b> | <b>Test Results</b>  |
| 2-(2-ethoxyethoxy)ethanol (CAS 111-90-0) |                |  |
| <b>Acute</b>                             |                |  |
| <i>Dermal</i>                            |                |  |
| LD50                                     | Rabbit         | 8476 mg/kg   |
|  | Rat            | 6000 mg/kg   |
| <i>Oral</i>                              |                |  |
| LD50                                     | Mouse          | 6.58 g/kg  |

| Components   | Species       | Test Results |              |
|--|---------------|--------------|--------------|
| Ethanol, 2-amino- (CAS 141-43-5)                       | Rat           | 1920 mg/kg   |              |
|  | <b>Acute</b>  |              |              |
|  | <i>Dermal</i> |              |              |
|  | LD50          | Rabbit       | 1025 mg/kg   |
|  | <i>Oral</i>   |              |              |
| Propanol, 2- (CAS 67-63-0)                             | LD50          | Guinea pig   | 620 mg/kg    |
|  |               | Mouse        | 700 mg/kg    |
|  |               | Rat          | 10.2 g/kg    |
|  | <i>Dermal</i> |              |              |
|  | LD50          | Rabbit       | 12800 mg/kg  |
| Tetrasodium ethylenediamine tetraacetate (CAS 64-02-8) | <i>Oral</i>   |              |              |
|  | LD50          | Mouse        | 3600 mg/kg   |
|  |               | Rabbit       | 5.03 g/kg    |
|  |               | Rat          | 4.7 g/kg     |
|  | LD50          | Rat          | > 2000 mg/kg |

\* Estimates for product may be based on additional component data not shown.

|   |   |
|---|---|
| <b>Skin corrosion/irritation</b>  | Causes severe skin burns and eye damage.  |
| <b>Serious eye damage/eye irritation</b>                                  | Causes serious eye damage.  |
| <b>Respiratory or skin sensitization</b>                                  |   |
| <b>Respiratory sensitization</b>  | Not a respiratory sensitizer.   |
| <b>Skin sensitization</b>   | This product is not expected to cause skin sensitization.   |
| <b>Germ cell mutagenicity</b>   | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.  |
| <b>Carcinogenicity</b>  | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.                                   |
| <b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b> |   |
| Not listed.   |   |
| <b>Reproductive toxicity</b>  | This product is not expected to cause reproductive or developmental effects.                                      |
| <b>Specific target organ toxicity - single exposure</b>                   | May cause respiratory irritation.   |
| <b>Specific target organ toxicity - repeated exposure</b>                 | Not classified.   |
| <b>Aspiration hazard</b>  | Not an aspiration hazard.   |
| <b>Chronic effects</b>  | May be harmful if absorbed through skin. Prolonged inhalation may be harmful.                                     |
|   | Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans. |

## 12. Ecological information

|                    |  |                |                                 |
|--------------------|--|----------------|---------------------------------|
| <b>Ecotoxicity</b> | Harmful to aquatic life with long lasting effects. |                |                                 |
|                    | <b>Product</b>                                     | <b>Species</b> | <b>Test Results</b>             |
|                    | Spray Clean HD                                     |                |                                 |
|                    | <b>Aquatic</b>                                     |                |                                 |
|                    | Crustacea  | EC50           | Daphnia                         |
|                    |  |                | 69.154 mg/l, 48 hours estimated |

| Product  | Species | Test Results  |                                  |
|--|---------|---|----------------------------------|
| Fish   | LC50    | Fish  | 88.6743 mg/l, 96 hours estimated |
| Components   | Species | Test Results  |                                  |
| 2-(2-ethoxyethoxy)ethanol (CAS 111-90-0)               |         |   |                                  |
| <b>Aquatic</b>   |         |   |                                  |
| Fish   | LC50    | Bluegill (Lepomis macrochirus)                      | > 10000 mg/l, 96 hours           |
| Alcohols, C9-11, ethoxylated (CAS 68439-46-3)          |         |   |                                  |
| <b>Aquatic</b>   |         |   |                                  |
| Crustacea  | EC50    | Water flea (Daphnia magna)                          | 2.9 - 8.5 mg/l, 48 hours         |
| Fish   | LC50    | Fathead minnow (Pimephales promelas)                | 6 - 12 mg/l, 96 hours            |
| Ethanol, 2-amino- (CAS 141-43-5)                       |         |   |                                  |
| <b>Aquatic</b>   |         |   |                                  |
| Fish   | LC50    | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 114 - 196 mg/l, 96 hours         |
| Propanol, 2- (CAS 67-63-0)                             |         |   |                                  |
| <b>Aquatic</b>   |         |   |                                  |
| Fish   | LC50    | Bluegill (Lepomis macrochirus)                      | > 1400 mg/l, 96 hours            |
| Tetrasodium ethylenediamine tetraacetate (CAS 64-02-8) |         |   |                                  |
| <b>Aquatic</b>   |         |   |                                  |
| Fish   | LC50    | Bluegill (Lepomis macrochirus)                      | 472 - 500 mg/l, 96 hours         |

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential**

**Partition coefficient n-octanol / water (log Kow)**

|                           |       |
|---------------------------|-------|
| 2-(2-ethoxyethoxy)ethanol | -0.54 |
| Ethanol, 2-amino-         | -1.31 |
| Propanol, 2-              | 0.05  |

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

**Disposal instructions** Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

**14. Transport information**

**DOT**

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN1760  |
| <b>UN proper shipping name</b>      | CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE, TETRA-SODIUM EDTA)              |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 8   |
| <b>Subsidiary risk</b>              | -   |
| <b>Label(s)</b>                     | 8   |
| <b>Packing group</b>                | III   |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |

|                             |                    |
|-----------------------------|--------------------|
| <b>Special provisions</b>   | IB3, T7, TP1, TP28 |
| <b>Packaging exceptions</b> | 154                |
| <b>Packaging non bulk</b>   | 203                |
| <b>Packaging bulk</b>       | 241                |
| <b>ERG number</b>           | 154                |

PACKAGES 1 GALLON AND SMALLER ARE SHIPPED LIMITED QUANTITY OR ORM-D

## DOT



**General information** This material is regulated under IATA and IMDG regulations. Contact manufacturer for shipping instructions.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
One or more components are not listed on TSCA.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

### SARA 304 Emergency release notification

Not regulated.

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** No

### SARA 313 (TRI reporting)

Not regulated.

## Other federal regulations

**Safe Drinking Water Act (SDWA)** Not regulated.

## US state regulations

### US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

### US. Massachusetts RTK - Substance List

Ethanol, 2-amino- (CAS 141-43-5)  
Propanol, 2- (CAS 67-63-0)

### US. New Jersey Worker and Community Right-to-Know Act

Ethanol, 2-amino- (CAS 141-43-5)  
Propanol, 2- (CAS 67-63-0)



**US. Pennsylvania Worker and Community Right-to-Know Law**

Ethanol, 2-amino- (CAS 141-43-5)

Propanol, 2- (CAS 67-63-0)

**US. Rhode Island RTK**

Propanol, 2- (CAS 67-63-0)

**US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International Inventories**

| Country(s) or region        | Inventory name                                | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | No                     |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

|                      |  |
|----------------------|--|
| <b>Issue date</b>    | 09-25-2015   |
| <b>Version #</b>     | 01   |
| <b>HMIS® ratings</b> | Health: 3<br>Flammability: 0<br>Physical hazard: 0 |

**Disclaimer** No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.