**Section 1. Identification**

**GHS Product Identifier**: Deckguard Membrane, Part B

**Other Means of Identification**: Not available.

**Product Type**: Liquid

**Product Use**: Component of a Polyurethane System

**Supplier**: The D.S. Brown Company
300 East Cherry Street
North Baltimore, Ohio 45872

**In Case of Emergency**: Chemtrec 1-800-262-8200 International 01-703-741-5500

**Section 2. Hazards Identification**

**OSHA/HCS Status**: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the Substance or Mixture**: Acute Toxicity: Inhalation - Category 4
Skin Corrosion/Irritation - Category 1B
Serious Eye Damage/Eye Irritation - Category 1
Specific Target Organ Toxicity (Repeated Exposure) Oral [eyes, liver and thyroid] - Category 2
Aquatic Hazard (Acute) - Category 1
Aquatic Hazard (Long-Term) - Category 1

**Hazard Pictograms**: 

**Signal Word**: Danger

**Hazard Pictograms**: Harmful if swallowed. Causes severe skin burns and eye damage. May cause damage to organs through prolonged or repeated exposure if swallowed. (eyes, liver, thyroid) Very toxic to aquatic life with long lasting effects.

**Precautionary Statements**: Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Collect spillage. Get medical attention if you feel unwell. **If inhaled**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. **If swallowed**: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. **If on skin (or hair)**: Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. **If in eyes**: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Other Hazards Which Do Not Result in Classification**: Not known.
Section 3. Composition/Information on Ingredients

Substance/Mixture: Mixture

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyoxypropylenediamine</td>
<td>9046-10-0</td>
<td>60-100</td>
</tr>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>68479-98-1</td>
<td>13-30</td>
</tr>
<tr>
<td>Glyceryl poly(oxy propylene)triamine</td>
<td>64852-22-8</td>
<td>3-7</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
Occupational exposure limits, if available, are listed in Section 8.

Section 4. First Aid Measures

Eye Contact: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin Contact: Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Section 4. First Aid Measures  

POTENTIAL ACUTE HEALTH EFFECTS

Eye Contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin Contact : Causes severe burns.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

OVER-EXPOSURE SIGNS/SYMPOTOMS

Eye Contact : Adverse symptoms may include the following:
- pain
- watering
- redness

Inhalation : No specific data.

Skin Contact : Adverse symptoms may include the following:
- pain or irritation
- redness
- blistering may occur

Ingestion : Adverse symptoms may include the following:
- stomach pains

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY

Notes to Physician : Symptomatic treatment and supportive therapy as indicated. Following severe exposure the patient should be kept under medical review for at least 48 hours.

Protection of First-Aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)
Section 5. Fire-Fighting Measures

**Flashpoint (Method Used)**
- Open cup: 185°C (365°F) [ASTM D 92 (Cleveland open cup)]

**EXTINGUISHING MEDIA**

**Suitable Extinguishing Media**
- Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable Extinguishing**
- None known.

**Specific Hazards Arising From the Chemical**
- In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazard Thermal Decomposition Products**
- Decomposition products may include the following materials:
  - Carbon dioxide
  - Carbon monoxide
  - Nitrogen oxides

**Special Protective Actions for Fire-Fighters**
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special Protective Equipment for Fire-Fighters**
- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. PVC boots, gloves, safety helmet and protective clothing should be worn.

Section 6. Accidental Release Measures

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

**For Non-Emergency Personnel**
- No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For Emergency Responders**
- If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental Precautions**
- Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

**Methods and Materials for Containment and Cleaning Up**
- Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Section 7. Handling and Storage

PRECAUTIONS FOR SAFE HANDLING

Protective Measures: Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on General Occupational Hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

CONDITIONS FOR SAFE STORAGE

Information for Safe Storage, Including Any Incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure Controls/Personal Protection

CONTROL PARAMETERS

Appropriate Engineering Controls: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

INDIVIDUAL PROTECTION MEASURES

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Section 8. Exposure Controls/Personal Protection cont’d.

INDIVIDUAL PROTECTION MEASURES cont’d.

Eye/Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other Skin Protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Thermal Hazards: Not available.

Section 9. Physical and Chemical Properties

Appearance
Physical State: Liquid
Color: Not available.
Odor: Not available.
Odor Threshold: Not available.
pH: Not available.
Melting Point/Freezing Point: Not available.
Boiling/Condensation Point: Not available.
Flash Point: Open cup: 185°C (365°F) [ASTM D 92 (Cleveland open cup)]
Section 9. Physical and Chemical Properties cont’d.

- Evaporation Rate: Not available.
- Flammability (Solid, Gas): Not available.
- Lower and Upper Explosive (Flammable) Limits: Not available.
- Vapor Pressure: Not available.
- Vapor Density: Not available.
- Relative Density: 1.023
- Solubility in Water (%): Not available.
- Partition Coefficient: n-Octanol/Water: Not available.
- Auto-Ignition Temperature: Not available.
- Decomposition Temperature: Not available.
- Viscosity: Not available.

Section 10. Stability and Reactivity

- Reactivity: No specific test data related to reactivity available for this product or its ingredients.
- Chemical Stability: The product is stable.
- Possibility of Hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to Avoid: No specific data.
- Incompatible Materials: No specific data.
- Hazardous Decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

INFORMATION ON TOXICOLOGICAL EFFECTS

<table>
<thead>
<tr>
<th>Acute Toxicity</th>
<th>Test</th>
<th>Endpoint</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyoxypropylenediamine</td>
<td>-</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>2090 mg/kg</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>LD 50 Oral</td>
<td>Rat</td>
<td>480 mg/kg</td>
</tr>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>OECD 402 Acute Dermal Toxicity</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>&gt;2000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>OECD 401 Acute Oral Toxicity</td>
<td>LD50 Oral</td>
<td>Rat-Male, Female</td>
<td>1738 mg/kg</td>
</tr>
<tr>
<td>Glyceryl poly(oxy propylene)</td>
<td>-</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>12500 mg/kg</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2690 mg/kg</td>
</tr>
</tbody>
</table>
### Section 11. Toxicological Information cont’d.

**INFORMATION ON TOXICOLOGICAL EFFECTS cont’d.**

#### Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>Test</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>OECD 404 Acute Dermal Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Skin-Irritant</td>
</tr>
<tr>
<td></td>
<td>Unknow guidelines</td>
<td>Rabbit</td>
<td>Eyes-Irritant</td>
</tr>
</tbody>
</table>

**Conclusion/Summary**

- **Skin**: Polyoxypropylenediamine - Corrosive to the skin.
- Diethyltoluenediamine (DETDA) - Non-irritating to the skin.
- Glyceryl poly(oxypropylene)triamine - No additional information.

- **Eyes**: Polyoxypropylenediamine - Corrosive to eyes.
- Diethyltoluenediamine (DETDA) - Irridtation to eyes.
- Glyceryl poly(oxypropylene)triamine - No additional information.

- **Respiratory**: Polyoxypropylenediamine - No additional information.
  - Diethyltoluenediamine (DETDA) - No additional information.
  - Glyceryl poly(oxypropylene)triamine - No additional information.

#### Sensitization

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>Test</th>
<th>Route of Exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>No official guidelines</td>
<td>Skin</td>
<td>Guinea Pig</td>
<td>Not Sensitizing</td>
</tr>
</tbody>
</table>

#### Mutagenicity

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>Experiment: In vitro Subject: Mammalian-Animal Metabolic Activation: +</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Experiment: In vitro Subject: Mammalian-Animal</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Experiment: In vivo Subject: Mammalian-Animal</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Subject: Mammalian-Animal</td>
<td>Negative</td>
</tr>
</tbody>
</table>

#### Carcinogenicity

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>Test</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
<th>Result/Result Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>OECD 451 Carcinogenicity Studies</td>
<td>Rat-Male, Female</td>
<td>1.8-3.2 mg/kg</td>
<td>24 months; 7 days per seek</td>
<td>Negative - Oral-LOAEL</td>
</tr>
</tbody>
</table>

#### Reproductive Toxicity

: Not available.

#### Teratogenicity

: Not available.

#### Specific Target Organ Toxicity (Single Exposure)

: Not available.
Section 11. Toxicological Information  cont’d.

Specific Target Organ Toxicity (Repeated Exposure)

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>Category</th>
<th>Route of Exposure</th>
<th>Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>Category 2</td>
<td>Oral</td>
<td>Eyes, liver, and thyroid</td>
</tr>
</tbody>
</table>

Aspiration Hazard : Not available.

Information on the Likely Routes of Exposure : Not available.

POTENTIAL ACUTE HEALTH EFFECTS

Eye Contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin Contact : Causes severe burns.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics

Eye Contact : Adverse symptoms may include the following;
- pain
- watering
- redness

Inhalation : No specific data.

Skin Contact : Adverse symptoms may include the following;
- pain or irritation
- watering
- blistering may occur

Ingestion : Adverse symptoms may include the following;
- stomach pain

DELETED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT- AND LONG-TERM EXPOSURE

Short-Term Exposure

Potential Immediate Effects : Not available.

Potential Delayed Effects : Not available.

Long-Term Exposure

Potential Immediate Effects : Not available.

Potential Delayed Effects : Not available.
### Section 11. Toxicological Information cont’d.

**Potential Chronic Health Effects**

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents</td>
<td>Sub-chronic NOAEL Oral</td>
<td>Rat-Male, Female</td>
<td>8 to 10 mg/kg</td>
</tr>
</tbody>
</table>

- **General**: May cause damage to organs through prolonged or repeated exposure if swallowed.

- **Carcinogenicity**: No known significant effects or critical hazards.

- **Mutagenicity**: No known significant effects or critical hazards.

- **Teratogenicity**: No known significant effects or critical hazards.

- **Developmental Effects**: No known significant effects or critical hazards.

- **Fertility Effects**: No known significant effects or critical hazards.

**Numerical Measures of Toxicity**

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>572.1 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>324.8 mg/kg</td>
</tr>
</tbody>
</table>

**Other Information**: Not available.

### Section 12. Ecological Information

**Toxicity**

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyoxypropylenediamine</td>
<td>-</td>
<td>Acute EC50</td>
<td>48 Hours</td>
<td>Daphnia</td>
<td>15 mg/l</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute LC50</td>
<td>72 Hours</td>
<td>Algae</td>
<td>135 mg/l</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute LC50</td>
<td>96 Hours</td>
<td>Fish</td>
<td>&gt;100 mg/l</td>
</tr>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>Unknown Guidelines</td>
<td>Acute EC50</td>
<td>24 hours Static</td>
<td>Bacteria</td>
<td>&gt;=170 mg/l</td>
</tr>
<tr>
<td></td>
<td>EU EC C.2 Acute Toxicity for Daphnia</td>
<td>Acute EC50</td>
<td>48 Hours Static</td>
<td>Daphnia</td>
<td>0.5 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD 201 Alga, Growth Inhibition Test</td>
<td>Acute ErC50 (growth rate)</td>
<td>72 Hours Static</td>
<td>Algae</td>
<td>104 mg/l</td>
</tr>
<tr>
<td></td>
<td>DIN DIN 38412 Part 15</td>
<td>Acute LC50</td>
<td>48 Hours Static</td>
<td>Fish</td>
<td>200 mg/l</td>
</tr>
<tr>
<td></td>
<td>Unknown Guidelines</td>
<td>ChronicEC10</td>
<td>24 Hours Static</td>
<td>Bacteria</td>
<td>170 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD 201 Alga, Growth Inhibition Test</td>
<td>Chronic NOECr</td>
<td>72 Hours Static</td>
<td>Algae</td>
<td>32 mg/l</td>
</tr>
</tbody>
</table>

| Glyceryl poly(oxy propylene) triamine          | -                                | Acute LC50      | 96 Hours | Bacteria | 68 mg/l     |
Section 12. Ecological Information cont’d.

Persistence and Degradability

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>Test</th>
<th>Period</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>No Official Guidelines</td>
<td>28 Days</td>
<td>&lt;60%</td>
</tr>
<tr>
<td></td>
<td>OECD 301D Ready Biodegradability</td>
<td>28 Days</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aquatic Half-Life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>-</td>
<td>Not readily.</td>
</tr>
<tr>
<td>Glyceryl poly(oxy propylene) triamine</td>
<td>-</td>
<td>Not readily.</td>
</tr>
</tbody>
</table>

Bioaccumulative Potential

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyltoluenediamine (DETDA)</td>
<td>1.17</td>
<td>2.75</td>
<td>Low</td>
</tr>
</tbody>
</table>

Section 12. Ecological Information cont’d.

Mobility in Soil : Not available.

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

- **BOD5** : Not determined.
- **COD** : Not determined.
- **TOC** : Not determined.

Section 13. Disposal Considerations

Disposal Method : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.
# Section 14. Transport Information

**Proper Shipping Name**

<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
</table>

**Regulatory Information**

<table>
<thead>
<tr>
<th>Regulatory Information</th>
<th>UN No.</th>
<th>Classes</th>
<th>PG*</th>
<th>Label</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>UN2735</td>
<td>8</td>
<td>III</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDG Classification</td>
<td>UN2735</td>
<td>8</td>
<td>III</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMDG Classification</td>
<td>UN2735</td>
<td>8</td>
<td>III</td>
<td></td>
<td>Emergency Schedules (EmS)</td>
</tr>
<tr>
<td>IATA Classification</td>
<td>UN2735</td>
<td>8</td>
<td>III</td>
<td></td>
<td>Passenger and Cargo Aircraft</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Quantity limitation: 5 L</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Packaging instructions: 852</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cargo Aircraft Only</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Quantity limitation: 60 L</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Packaging instructions: 856</td>
</tr>
</tbody>
</table>

*PG: Packing Group

# Section 15. Regulatory Information

**SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT UNITED STATES REGULATIONS**

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA 8(b) Inventory</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>TSCA 5(a)2 Final Significant New Use Rule (SNUR)</td>
<td>No ingredients listed.</td>
</tr>
<tr>
<td>TSCA 5(e) Substance Consent Order</td>
<td>No ingredients listed.</td>
</tr>
<tr>
<td>TSCA 12(b) Export Notification</td>
<td>No ingredients listed.</td>
</tr>
<tr>
<td>SARA 311/312</td>
<td>Immediate (acute) health hazard. Delayed (chronic) health hazard.</td>
</tr>
<tr>
<td>Clean Air Act - Ozone Depleting Substances (ODS)</td>
<td>This product does not contain nor is it manufactured with ozone depleting substances.</td>
</tr>
</tbody>
</table>

*PG: Packing Group
Section 15. Regulatory Information  cont’d.

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT
UNITED STATES REGULATIONS  cont’d.

SARA 313  :  No ingredients listed.

<table>
<thead>
<tr>
<th>CERCLA Hazardous Substances</th>
<th>Ingredient Name</th>
<th>%</th>
<th>Section 304 CERCLA Hazardous Substance</th>
<th>CERCLA Reportable Quantity (Lbs)</th>
<th>Product Reportable Quantity (Lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOLUENEDIAMINE (TDA)</td>
<td>0.00439125</td>
<td>Listed</td>
<td>10</td>
<td>227726</td>
<td></td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>0.000003662</td>
<td>Listed</td>
<td>100</td>
<td>2730748225</td>
<td></td>
</tr>
</tbody>
</table>

STATE REGULATIONS

Pennsylvania - RTK  :  No ingredients listed.
California Prop 65  :  WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Cancer</th>
<th>Reproductive</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOLUENEDIAMINE (TDA)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

CANADIAN REGULATIONS

CEPA DSL  :  All components are listed or exempted.

WHMIS Classes  :  Class D-1B: Material causing immediate and serious toxic effects (Toxic).
                Class D-2B: Material causing other toxic effects (Toxic).
                Class E: Corrosive material.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

INTERNATIONAL REGULATIONS

Brazil  :  Classification System Used: Norma ABNT-NBR 14725-2:2012

International Lists  :  Australia inventory (AICS): At least one component is not listed.
                       China inventory (IECSC): All components are listed or exempted.
                       Japan inventory: All components are listed or exempted.
                       Korea inventory: All components are listed or exempted.
                       Malaysia Inventory (EHS Register): Not determined.
                       New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
                       Philippines inventory (PICCS): All components are listed or exempted.
                       Taiwan inventory (CSNN): Not determined.
### Section 16. Other Information

<table>
<thead>
<tr>
<th>Hazardous Material Information System (USA)</th>
<th>Health: *3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flammability: 1</td>
</tr>
<tr>
<td></td>
<td>Physical Hazards: 0</td>
</tr>
<tr>
<td></td>
<td>Personal Protection</td>
</tr>
</tbody>
</table>

**The customer is responsible for determining the PPE code for this material.**

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

<table>
<thead>
<tr>
<th>Nation Fire Protection Association (USA)</th>
<th>Health: 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flammability: 1</td>
</tr>
<tr>
<td></td>
<td>Instability: 0</td>
</tr>
<tr>
<td></td>
<td>Special</td>
</tr>
</tbody>
</table>

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**Date of Printing:** 04/30/2015

**Date of Issue:** 04/30/2015

**Date of Previous Issue:** 10/17/2014

**Version:** 3

⇒ Indicates information that has changed from previously issued version.
Notice to Reader

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.