SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. **Product identifier**

Product Code(s): 05797700-M  
Product Name: STACK GUARD  
Recommended use: Hydraulic Fluid  
Uses advised against: Any other purpose.

**Manufacturer, Importer, Supplier**

Houghton International Inc.  
Madison & Van Buren Aves.  
Valley Forge, PA 19482  
Telephone: 610-666-4000 FAX: 610-666-1376  
Website: www.houghtonintl.com  
Customer Service: 888-459-9844

Houghton Canada  
915 Meyerside Drive  
Mississauga  
ON LST 1R8

**Emergency telephone number**

3E Company  1-866-519-4752 (USA, Canada, Mexico)  
Company Access Code: 333938

SECTION 2: HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

**GHS Label elements, including precautionary statements**

**Signal Word**

Warning

**Hazard Statements**

Harmful if swallowed  
May cause damage to organs through prolonged or repeated exposure

Precautionary Statements
**Precautionary Statements - Prevention**
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray

**Precautionary Statements - Response**
Get medical advice/attention if you feel unwell

**Ingestion**
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

**Precautionary Statements - Disposal**
Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**
Not applicable

**Other information**
Causes mild skin irritation

---

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane-1,2-diol</td>
<td>107-21-1</td>
<td>25% - 60%</td>
</tr>
<tr>
<td>2,2',2''-Nitrilotriethanol</td>
<td>102-71-6</td>
<td>2.5% - 10%</td>
</tr>
<tr>
<td>Glycerol, ethoxylated</td>
<td>31694-55-0</td>
<td>1% - 2.5%</td>
</tr>
<tr>
<td>2-Diethylaminoethanol</td>
<td>100-37-8</td>
<td>0% - 1%</td>
</tr>
</tbody>
</table>

**Additional information**
**. Substances for which there are Community workplace exposure limits.

### SECTION 4: FIRST AID MEASURES

#### 4.1. Description of first-aid measures

**General advice**
Do not get in eyes, on skin, or on clothing. When symptoms persist or in all cases of doubt seek medical advice.

**Inhalation**
Move to fresh air.

**Skin contact**
Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use.

**Eye contact**
Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.

**Ingestion**
Do not induce vomiting without medical advice. Clean mouth with water and afterwards drink plenty of water. If symptoms persist, call a physician. Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

**Protection of First-aiders**
Use personal protective equipment. Avoid contact with skin, eyes and clothing.

#### 4.2. Most important symptoms and effects, both acute and delayed

**Main Symptoms**
Gastrointestinal discomfort

#### 4.3. Indication of immediate medical attention and special treatment needed

**Notes to physician**
Treat symptomatically.
SECTION 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use CO2, dry chemical, or foam, Water spray or fog

Extinguishing media which shall not be used for safety reasons
None

5.2. Special hazards arising from the substance or mixture

Special Hazard
Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Decomposition Products
None under normal use

5.3. Advice for firefighters

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Advice for non-emergency personnel
Material can create slippery conditions.

Advice for emergency responders
For personal protection see section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dike to collect large liquid spills.

6.4. Reference to other sections

See Section 8/12/13 for additional information

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions
Keep container tightly closed in a dry and well-ventilated place.
Recommended Shelf Life
Shelf life 12 months.

Incompatible Materials
Strong oxidizing agents, Strong acids, Strong bases

7.3. Specific end uses
Specific use(s) Hydraulic Fluid

SECTION 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>
<th>AIHA WEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane-1,2-diol</td>
<td>Ceiling: 100 mg/m³ aerosol only</td>
<td>(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>107-21-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,2',2''-Nitrilotriethanol</td>
<td>TWA: 5 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102-71-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Diethylaminoethanol</td>
<td>TWA: 2 ppm S*</td>
<td>TWA: 10 ppm TWA: 50 mg/m³ (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m³ (vacated) S*</td>
<td>IDLH: 100 ppm TWA: 10 ppm TWA: 50 mg/m³</td>
<td></td>
</tr>
<tr>
<td>100-37-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other Exposure Guidelines
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Exposure controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Tightly fitting safety goggles.

Skin and body protection
Wear protective gloves/clothing.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Regular cleaning of equipment, work area and clothing is recommended. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties
SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
None under normal use conditions

10.2. Chemical stability
Stable under normal conditions

10.3. Possibility of hazardous reactions
None under normal use conditions

10.4. Conditions to avoid
Do not freeze

10.5. Incompatible Materials
Strong oxidizing agents, Strong acids, Strong bases

10.6. Hazardous decomposition products
None under normal use conditions

SECTION 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Product Information

Inhalation
There is no data available for this product.

Eye contact
There is no data available for this product.

Skin contact
There is no data available for this product.

Ingestion
Harmful if swallowed. Ingestion constitutes the main danger because of the toxicity of ethylene glycol. May cause adverse liver effects. May cause adverse kidney effects.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral (Rat)</th>
<th>LD50 Dermal (Rat/Rabbit)</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane-1,2-diol</td>
<td>4000 mg/kg (Rat)</td>
<td>= 9530 μL/kg (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>107-21-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,2',2''-Nitrilotriethanol</td>
<td>&gt; 16 mL/kg (Rat) &gt; 2000 mg/kg (Rabbit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>102-71-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Diethylaminomethanol</td>
<td>1320 mg/kg (Rat)</td>
<td>1100 mg/kg (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>100-37-8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
No information available.

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

Sensitization
None known.

Germ Cell Mutagenicity
None known.

Carcinogenicity
None known.

Reproductive toxicity
None known.

Specific target organ systemic toxicity (single exposure)
None known.

Specific target organ systemic toxicity (repeated exposure)
May cause damage to organs through prolonged or repeated exposure if swallowed. Ingestion constitutes the main danger because of the toxicity of ethylene glycol.

Aspiration hazard
None known.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

No special environmental measures are necessary

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane-1,2-diol</td>
<td>6500 - 13000: 96 h</td>
<td>41000: 96 h Oncorhynchus mykiss mg/L LC50 14-18: 96 h Oncorhynchus mykiss ml/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 40000-60000: 96 h Pimephales promelas</td>
<td>46300: 48 h Daphnia magna mg/L EC50</td>
<td></td>
</tr>
</tbody>
</table>
### Persistence and degradability
No information available.

### Bioaccumulation

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane-1,2-diol</td>
<td>-1.93</td>
</tr>
<tr>
<td>2,2',2''-Nitrilotriethanol</td>
<td>-2.53</td>
</tr>
<tr>
<td>2-Diethylaminoethanol</td>
<td>0.21</td>
</tr>
</tbody>
</table>

**Mobility**  
Will likely be mobile in the environment due to its water solubility.

**Other adverse effects**  
No information available

### SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment**

**Waste Disposal Methods**  
Dispose of in accordance with federal, state, and local regulations.

**Contaminated packaging**  
Observe all label precautions until container is cleaned, reconditioned or destroyed.

### SECTION 14: TRANSPORT INFORMATION

**DOT**  
Not regulated

**TDG**  
Not regulated

**ICAO/IATA**  
Not regulated

**IMDG/IMO**  
Not regulated

### SECTION 15: REGULATORY INFORMATION

**International Inventories**

<table>
<thead>
<tr>
<th>TSCA</th>
<th>Compiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL</td>
<td>All components are NOT on the Chemical Inventory</td>
</tr>
<tr>
<td>AICS</td>
<td>Does not Comply</td>
</tr>
<tr>
<td>PICCS</td>
<td>Does not Comply</td>
</tr>
<tr>
<td>KECL</td>
<td>Does not Comply</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not Comply</td>
</tr>
</tbody>
</table>
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
AICS - Australian Inventory of Chemical Substances  
PICCS - Philippines Inventory of Chemicals and Chemical Substances  
KECL - Korean Existing and Evaluated Chemical Substances  
IECSC - China Inventory of Existing Chemical Substances  
ENCS - Japan Existing and New Chemical Substances

U.S. Federal Regulations

SARA 313  
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane-1,2-diol</td>
<td>107-21-1</td>
<td>30</td>
<td>1.0</td>
</tr>
</tbody>
</table>

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

Clean Water Act  
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA  
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane-1,2-diol</td>
<td>5000 lb</td>
<td></td>
</tr>
</tbody>
</table>

U.S. State Regulations

SCAQMD Rule 1144  
This product has not been tested for VOC content by the ASTM E-1868-10 method and is not approved for sale or distribution in the SCAQM District of California if the product is used as a metal forming, metal removal, metal treating, metal protection fluid or as a direct-contact lubricant.

California Proposition 65  
WARNING: This product contains a chemical(s) known to the State of California to cause cancer and/or birth defects or other reproductive harm.

International Regulations

Canada  
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class  
D2B Toxic materials

Other information  
Not applicable
Key or legend to abbreviations and acronyms used in the safety data sheet
STOT SE - Specific target organ systemic toxicity (Single exposure)
STOT RE - Specific target organ systemic toxicity (repeated exposure)
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
VOC - Volatile organic compounds
NIOSH IDLH: Immediately Dangerous to Life or Health

Revision Date: 07-16-2015
Revision Note
No information available

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