



HOUGHTON

# SAFETY DATA SHEET

Revision Date: 07-16-2015

Version 2

## 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)

Acute Toxicity - Oral	Category 4
Specific target organ toxicity (repeated exposure)	Category 2

### 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



## 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**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	AIHA WEEL
Ethane-1,2-diol 107-21-1	Ceiling: 100 mg/m <sup>3</sup> aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m <sup>3</sup>		
2,2',2"-Nitrilotriethanol 102-71-6	TWA: 5 mg/m <sup>3</sup>			
2-Diethylaminoethanol 100-37-8	TWA: 2 ppm S*	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m <sup>3</sup> (vacated) S* S*	IDLH: 100 ppm TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>	

**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**

<b>Physical state @20°C</b>	liquid	<b>Appearance</b>	clear , slightly yellow
<b>Odor</b>	amine-like	<b>Odor Threshold</b>	Not Applicable

<u>Property</u>	<u>Values</u>	<u>Note</u>
<b>pH</b>	9.7	
<b>Melting Point / Freezing Point</b>	No information available	
<b>Boiling point/boiling range</b>	102 °C / 216 °F	
<b>Flash point</b>	Not Applicable	
<b>Evaporation rate</b>	< 1	(BuAc = 1)
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limits in Air</b>		
<b>upper flammability limit</b>	No information available	
<b>Lower flammability limit</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Vapor density</b>	No information available	
<b>Relative density</b>	1.05	@15.5°C
<b>Solubility(ies)</b>	Water solubility: Miscible	
<b>Partition coefficient: n-octanol/water</b>	Not Applicable	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Viscosity, kinematic</b>	No information available	
<b>Explosive properties</b>	Not Applicable	
<b>Oxidizing Properties</b>	Not Applicable	

**9.2 Other information**

<b>Viscosity, kinematic (100°C)</b>	No information available	
<b>Pour point</b>	No information available	
<b>VOC Content (ASTM E-1868-10)</b>	No information available	
<b>VOC Content</b>	0.36 lbs/gal	MOD. EPA METHOD 24

**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**

<b>Product Information</b>	Harmful if swallowed
<b>Inhalation</b>	There is no data available for this product.
<b>Eye contact</b>	There is no data available for this product.
<b>Skin contact</b>	There is no data available for this product.
<b>Ingestion</b>	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**

Chemical Name	LD50 Oral (Rat)	LD50 Dermal (Rat/Rabbit)	LC50 Inhalation
Ethane-1,2-diol 107-21-1	4000 mg/kg ( Rat )	= 9530 µL/kg ( Rabbit )	
2,2',2''-Nitrilotriethanol 102-71-6		> 16 mL/kg ( Rat ) > 2000 mg/kg ( Rabbit )	
2-Diethylaminoethanol 100-37-8	1320 mg/kg ( Rat )	1100 mg/kg ( Rabbit )	

**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

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Ethane-1,2-diol	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	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		46300: 48 h Daphnia magna mg/L EC50

		mg/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static	
2,2',2''-Nitrilotriethanol	216: 72 h Desmodesmus subspicatus mg/L EC50 169: 96 h Desmodesmus subspicatus mg/L EC50	10600-13000: 96 h Pimephales promelas mg/L LC50 flow-through 1000: 96 h Pimephales promelas mg/L LC50 static 450-1000: 96 h Lepomis macrochirus mg/L LC50 static	1386: 24 h Daphnia magna mg/L EC50
2-Diethylaminoethanol	30: 72 h Desmodesmus subspicatus mg/L EC50	1660-1920: 96 h Pimephales promelas mg/L LC50 flow-through 100-220: 96 h Leuciscus idus mg/L LC50 static	83.6: 48 h Daphnia magna Straus mg/L EC50

**Persistence and degradability**

No information available.

**Bioaccumulation**

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Chemical Name	log Pow
Ethane-1,2-diol 107-21-1	-1.93
2,2',2''-Nitrilotriethanol 102-71-6	-2.53
2-Diethylaminoethanol 100-37-8	0.21

**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**

TSCA	Complies
DSL	All components are NOT on the Chemical Inventory
AICS	Does not Comply
PICCS	Does not Comply
KECL	Does not Comply
IECSC	Complies
ENCS	Does not Comply

**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:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Ethane-1,2-diol	107-21-1	30	1.0

#### **SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	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):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Ethane-1,2-diol	5000 lb	

### 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



**SECTION 16: OTHER INFORMATION**

**NFPA**                      **Health Hazard 2**                      **Flammability 1**                      **Instability 0**                      **Physical and chemical hazards -**

**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.

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