

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixture  
Trade name : ProSeal HFO  
Product code : ProSeal HFO All Grades

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Closed-cell spray applied foam when installed following application guidelines adheres to framing members and substrates.  
Use of the substance/mixture : A component for the production of spray insulation foam

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

Huntsman Building Solutions  
3315 E. Division Street,  
Arlington, TX 76011  
Tel: 817-640-4900 , 888-224-1533  
sdsinfo@huntsmanbuilds.com

### 1.4. Emergency telephone number

Emergency number : CHEMTREC (24 hours) 800-424-9300

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GHS-US classification

Skin Irrit. 2 H315  
Eye Dam. 1 H318

### 2.2. Label elements

#### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger  
Hazard statements (GHS-US) : H315 - Causes skin irritation  
H318 - Causes serious eye damage  
Precautionary statements (GHS-US) : P264 - Wash hands, face thoroughly after handling  
P280 - Wear eye protection, protective gloves, protective clothing  
P302+P352 - If on skin: Wash with plenty of water  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a doctor, a POISON CENTER  
P321 - Specific treatment (see on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Oxirane, methyl-, polymer with oxirane, ether with 2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol (5:1)	(CAS No) 52019-35-9	<15	Skin Irrit. 2, H315 Eye Dam. 1, H318
Diethylene glycol	(CAS No) 111-46-6	8 - 10	Acute Tox. 4 (Oral), H302
1-Propanol, 2,2-dimethyl-, tribromo derivative	(CAS No) 36483-57-5	<10	Eye Irrit. 2A, H319
2-Propanol, 1-chloro-, phosphate (3:1)	(CAS No) 13674-84-5	<5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312
Ethylene glycol	(CAS No) 107-21-1	<1	Acute Tox. 4 (Oral), H302 STOT RE 2, H373

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of breathing difficulties administer oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration. Seek medical advice.
First-aid measures after skin contact	: Remove contaminated clothing immediately. Wash skin thoroughly with mild soap and water. Seek medical attention immediately.
First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Contact lenses should be removed. Immediately get medical attention.
First-aid measures after ingestion	: Rinse mouth immediately and drink plenty of water. Call a POISON CENTER or doctor/physician. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Immediately seek medical advice. Induce vomiting as directed by medical professional. Never give anything by mouth to an unconscious person. If unconscious, place in the recovery position and seek medical advice.

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

Symptoms/injuries after inhalation	: Inhalation of mist or aerosol may cause irritation to nose and throat . May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Can occur: Gastrointestinal disturbance. Incoordination, dizziness, headache, nausea, mental confusion slurred speech depending to quantity of ingested material.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry extinguishing powder. Carbon dioxide. Foam.
Unsuitable extinguishing media	: None known.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Protective equipment for firefighters	: Use self-contained breathing apparatus and chemically protective clothing.
Other information	: Prevent entry to sewers and public waters.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Spills of this product present a serious slipping hazard. Avoid breathing mist or vapor . Avoid contact with skin, eyes and clothing.
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#### 6.1.1. For non-emergency personnel

Protective equipment	: Wear suitable protective clothing. Refer to section 8.
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#### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ensure adequate ventilation.

**6.2. Environmental precautions**

Prevent entry to sewers and public waters.

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

Methods for cleaning up : Take up liquid spill into inert absorbent material. Sweep or shovel spills into appropriate container for disposal. Ensure all national/local regulations are observed.

**6.4. Reference to other sections**

Refer to sections 8 and 13.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Precautions for safe handling : Avoid mixing with air or use for any purpose above atmospheric pressure . If possible use nitrogen (under pressure) to carry out transfers.

Hygiene measures : Wash contaminated clothing prior to re-use. Always wash hands and face immediately after handling this product, and once again before leaving the workplace. Do not eat, drink or smoke when using this product.

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

Technical measures : Provide local exhaust or general room ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

Storage conditions : Obtain special instructions before use. Keep out of direct sunlight. Store in original container. Keep container tightly closed in a cool, well-ventilated place. Keep away from heat. Receptacle under pressure. Do not freeze. Product that is frozen and/or tending to sedimentation can be liquefied or homogenized by careful application of indirect heat (do not use flames or direct contact with a heat source).

Storage temperature : 21 - 26 °C

**7.3. Specific end use(s)**

No additional information available

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

Ethylene glycol (107-21-1)		
USA ACGIH	ACGIH Ceiling (mg/m³)	100 mg/m³

**8.2. Exposure controls**

Appropriate engineering controls : Provide local exhaust or general room ventilation. Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



Hand protection : Wear suitable gloves resistant to chemical penetration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Eye protection : Tightly fitting safety goggles. Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Protective clothing.

Respiratory protection : Full face piece respirator. Approved supplied air respirator.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state : Liquid  
 Colour : Dark;orange to brown  
 Odour : Amine-like  
 Odour threshold : No data available

pH	: >= 7
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 200 °C (closed cup)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.15 - 1.17 g/cm <sup>3</sup> @ 25°C (Bulk Density)
Solubility	: Water: Slightly soluble
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 800 - 1000 mPa.s @ 23 °C
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

Temperatures above 26 °C / 80 °F . Moisture. Freezing. Direct sunlight. Excessive heat.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Carbon oxides (CO, CO<sub>2</sub>).

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>Ethylene glycol (107-21-1)</b>	
LD50 oral rat	4000 mg/kg
ATE US (oral)	500.00000000 mg/kg bodyweight
<b>Diethylene glycol (111-46-6)</b>	
LD50 oral rat	12565 mg/kg
LD50 dermal rabbit	11890 mg/kg
ATE US (oral)	500.00000000 mg/kg bodyweight
<b>2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)</b>	
LD50 oral rat	930 - 1550 mg/kg

<b>2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)</b>	
LD50 dermal rabbit	1230 mg/kg
LC50 inhalation rat (mg/l)	> 17.8 mg/l (Exposure time: 1 h)
ATE US (oral)	930.00000000 mg/kg bodyweight
ATE US (dermal)	1230.00000000 mg/kg bodyweight
Skin corrosion/irritation	: Causes skin irritation. pH: >= 7
Serious eye damage/irritation	: Causes serious eye damage. pH: >= 7
Respiratory or skin sensitisation	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Symptoms/injuries after inhalation	: Inhalation of mist or aerosol may cause irritation to nose and throat . May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Can occur: Gastrointestinal disturbance. Incoordination, dizziness, headache, nausea, mental confusion slurred speech depending to quantity of ingested material.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>Ethylene glycol (107-21-1)</b>	
LC50 fishes 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
<b>Diethylene glycol (111-46-6)</b>	
LC50 fishes 1	75200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	84000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
<b>2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)</b>	
LC50 fishes 1	56.2 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	63 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	45 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)
LC50 fish 2	180 mg/l (Exposure time: 96 h - Species: Leuciscus idus [static])
EC50 other aquatic organisms 2	4 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

<b>Ethylene glycol (107-21-1)</b>	
Log Pow	-1.93

<b>Diethylene glycol (111-46-6)</b>	
BCF fish 1	100 - 180
Log Pow	-1.98 (at 25 °C)

<b>2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)</b>	
BCF fish 1	1.9 - 4.6
Log Pow	2.59

**12.4. Mobility in soil**

No additional information available

**12.5. Other adverse effects**

Effect on ozone layer : No additional information available

Effect on the global warming : No additional information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

- Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Product wastes can often be incinerated in approved facilities. Consult the appropriate authorities about waste disposal.
- Additional information : Do not re-use empty containers. Do not dispose of waste into sewer. Do not cut, grind, drill, weld, reuse or dispose off containers unless adequate precautions are taken against these hazards.  
Container Disposal:  
Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Refer to 40 CFR § 261.7 (residues of hazardous waste in empty containers). Decontaminate containers prior to disposal. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Ensure all national/local regulations are observed.
- Ecology - waste materials : Avoid release to the environment.

**SECTION 14: Transport information**

In accordance with DOT  
Not regulated for transport

**Additional information**

Other information : No supplementary information available.

**ADR**

Transport document description : No additional information available

**Transport by sea**

No additional information available

**Air transport**

No additional information available

**SECTION 15: Regulatory information**

**15.1. US Federal regulations**

<b>Ethylene glycol (107-21-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
EPA TSCA Regulatory Flag	Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb
SARA Section 313 - Emission Reporting	1.0 %

<b>Diethylene glycol (111-46-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

**Diethylene glycol (111-46-6)**

EPA TSCA Regulatory Flag	Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.
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**15.2. International regulations**

**CANADA**

**Ethylene glycol (107-21-1)**

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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**Diethylene glycol (111-46-6)**

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects
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**EU-Regulations**

**Ethylene glycol (107-21-1)**

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

No additional information available

**Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]**

No additional information available

**15.2.2. National regulations**

**Ethylene glycol (107-21-1)**

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Canadian IDL (Ingredient Disclosure List)

**15.3. US State regulations**

No additional information available

**SECTION 16: Other information**

Indication of changes	: according to the federal final rule of hazard communication revised on 2012 (HazCom 2012). 3. Composition/information on ingredients. 2.1. Classification of the substance or mixture.
Revision date	: 10/6/2014 12:00:00 AM
Sources of Key data	: Data sources: SDS - Safety Data Sheet.
Abbreviations and acronyms	: CAS - Chemical Abstracts Service. CSR - Chemical Safety Report. EC - European Community. EEC - European Economic Community. MSDS - Material Safety Data Sheet. PBT - Persistent, Bioaccumulative and Toxic substance. SDS - Safety Data Sheet . STEL- Short-Term Exposure Limit . TLV- Threshold Limit Value. TWA- Time Weighted Average. vPvB - Very Persistent and Very Bioaccumulative.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation

H373

May cause damage to organs through prolonged or repeated exposure

**HMIS III Rating**

Health : 1 Slight Hazard - Irritation or minor reversible injury possible  
 Flammability : 1 Slight Hazard  
 Physical : 1 Slight Hazard

SDS US (GHS HazCom 2012)

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