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

1.1. Product identifier

Product form : Mixture

Trade name : Foam-Lok FL 2000

Product code : FL 2000 - 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
2-Propanol, 1-chloro-, phosphate (3:1)	(CAS No) 13674-84-5	<20	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312
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	<10	Acute Tox. 4 (Oral), H302
1-Propanol, 2,2-dimethyl-, tribromo derivative	(CAS No) 36483-57-5	<10	Eye Irrit. 2A, H319
1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl-	(CAS No) 33329-35-0	0.5 - 3	Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Eye Dam. 1, H318
Ethylene glycol	(CAS No) 107-21-1	0.1 - 0.75	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Bis(2-dimethylaminoethyl) ether	(CAS No) 3033-62-3	<0.5	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318

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, the head should be kept low so that vomit does not enter the lungs. 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. Tremor. Cardiac disorders. 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.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing. Refer to section 8.

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 : Obtain special instructions before use. Avoid mixing with air or use for any purpose above atmospheric pressure . Product should not be mixed with air above atmospheric pressure for leak testing or any other purpose. Use dry nitrogen to transfer or leak test equipment pressurized with product.

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 : Keep out of direct sunlight. Store in original container. Keep container tightly closed in a cool, well-ventilated place. Keep away from heat. 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). Protect from moisture.

Storage temperature : 21 - 26 °C (70 - 80 °F)

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

Bis(2-dimethylaminoethyl) ether (3033-62-3)		
USA ACGIH	ACGIH TWA (ppm)	0.05 ppm
USA ACGIH	ACGIH STEL (ppm)	0.15 ppm

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/cm³ @ 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. Heat.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Ethylene glycol (107-21-1)	
LD50 oral rat	4000 mg/kg

Ethylene glycol (107-21-1)	
ATE US (oral)	500.00000000 mg/kg bodyweight

Diethylene glycol (111-46-6)	
LD50 oral rat	12565 mg/kg
LD50 dermal rabbit	11890 mg/kg
ATE US (oral)	500.00000000 mg/kg bodyweight

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
LD50 oral rat	930 - 1550 mg/kg
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

Bis(2-dimethylaminoethyl) ether (3033-62-3)	
LD50 oral rat	910 mg/kg
LD50 dermal rabbit	238 mg/kg
LC50 inhalation rat (ppm)	117 ppm (Exposure time: 6 h)
ATE US (oral)	910.00000000 mg/kg bodyweight
ATE US (dermal)	238.00000000 mg/kg bodyweight
ATE US (gases)	4500.00000000 ppmv/4h
ATE US (vapours)	11.00000000 mg/l/4h
ATE US (dust,mist)	1.50000000 mg/l/4h

1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl- (33329-35-0)	
ATE US (dermal)	1100.00000000 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. Tremor. Cardiac disorders. Incoordination, dizziness, headache, nausea, mental confusion slurred speech depending to quantity of ingested material.

SECTION 12: Ecological information

12.1. Toxicity

Ethylene glycol (107-21-1)	
LC50 fishes 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

Ethylene glycol (107-21-1)	
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])

Diethylene glycol (111-46-6)	
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)

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
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

Ethylene glycol (107-21-1)	
Log Pow	-1.93

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

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
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

Ethylene glycol (107-21-1)	
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 %

Diethylene glycol (111-46-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
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.

15.2. International regulations

CANADA

Ethylene glycol (107-21-1)	
Listed on the Canadian DSL (Domestic Sustances 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

Diethylene glycol (111-46-6)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects

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

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.

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. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) 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 Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
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)