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

1.1. Product identifier

Product form : Mixture
Trade name : Foam-Lok FL 2000-4G HE
Product code : FL 2000-4G HE – 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

Lapolla Industries, Inc.
15402 Vantage Parkway East, Ste. 322
Houston, Texas 77032
Tel: +1 281 219 4100 , (877) 636-2648
Email: sds@lapolla.com

1.4. Emergency telephone number

Emergency number : CARECHEM (866) 928-0789

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
Foam-Lok FL 2000-4G HE
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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

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


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: 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)

<table>
<thead>
<tr>
<th>USA ACGIH</th>
<th>ACGIH Ceiling (mg/m³)</th>
<th>100 mg/m³</th>
</tr>
</thead>
</table>

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.


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
Foam-Lok FL 2000-4G HE
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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

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

<table>
<thead>
<tr>
<th>Ethylene glycol (107-21-1)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>4000 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>500.00000000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diethylene glycol (111-46-6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>12565 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>11890 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>500.00000000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>930 - 1550 mg/kg</td>
</tr>
</tbody>
</table>
Foam-Lok FL 2000-4G HE
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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

SECTION 12: Ecological information

12.1. Toxicity

Ethylene glycol (107-21-1)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
<td>41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])</td>
</tr>
</tbody>
</table>

Diethylene glycol (111-46-6)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
<td>75200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>84000 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
</tbody>
</table>

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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
<td>56.2 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>63 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>EC50 other aquatic organisms 1</td>
<td>45 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>180 mg/l (Exposure time: 96 h - Species: Leuciscus idus [static])</td>
</tr>
<tr>
<td>EC50 other aquatic organisms 2</td>
<td>4 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Ethylene glycol (107-21-1)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>-1.93</td>
</tr>
</tbody>
</table>
Foam-Lok FL 2000-4G HE
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Diethylene glycol (111-46-6)

<table>
<thead>
<tr>
<th>BCF fish 1</th>
<th>100 - 180</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>-1.98 (at 25 °C)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>BCF fish 1</th>
<th>1.9 - 4.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>2.59</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>EPA TSCA Regulatory Flag</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ (Reportable quantity, section 304 of EPA’s List of Lists)</td>
<td>5000 lb</td>
</tr>
<tr>
<td>SARA Section 313 - Emission Reporting</td>
<td>1.0 %</td>
</tr>
</tbody>
</table>

Ethylene glycol (107-21-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on United States SARA Section 313

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)

**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 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

**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

**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. 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**


**Full text of H-phrases: see section 16:**

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

10/17/2014 EN (English) 7/8
Foam-Lok FL 2000-4G HE
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

| 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)**

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth, or that the products, designs, data or information may be used without infringing the intellectual property rights of others. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the descriptions, designs, data, and information furnished by Lapolla Industries, Inc. hereunder are given gratis and Lapolla Industries, Inc. assumes no obligation or liability for the description, designs, data and information given or results obtained, all such being given and accepted at your risk. Lapolla Industries, Inc. will not make its products available to customers for use in the manufacture of medical devices which are intended for permanent implantation in the human body or in permanent contact with internal bodily tissues or fluids.