Material Safety Data Sheet

Material Name: AS Foam

*** Section 1 - Chemical Product and Company Identification ***

Distributor Information
Uline
2200 S. Lakeside Dr
Waukegan, IL 60085

Phone: 847-473-3000
Fax: 847-473-5157

*** Section 2 - Hazards Identification ***

Emergency Overview
Can burn in fire, releasing toxic vapors, gases, and fumes.

Potential Health Effects: Eyes
May cause slight irritation.

Potential Health Effects: Skin
No hazard in normal industrial use. Sensitive individuals may experience dermatitis from antistatic or flame retardant additive if present.

Potential Health Effects: Ingestion
Ingestion unlikely, material physiologically inert.

Potential Health Effects: Inhalation
Inhalation at ambient temperatures unlikely except for dust from grinding, slitting, die cutting, etc. At elevated temperatures, fumes may cause irritation.

HMIS Ratings: Health: 0 Fire: 0 HMIS Reactivity 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe  * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>Polyethylene resin (1-Butene polymer with ethene, tris-nonylphenyl phosphite,</td>
<td>&gt;88</td>
</tr>
<tr>
<td>75-28-5</td>
<td>Isobutane</td>
<td>&lt;5</td>
</tr>
<tr>
<td>9002-88-4</td>
<td>Polyethylene</td>
<td>&lt;5</td>
</tr>
<tr>
<td>25087-34-7</td>
<td>1-Butene, polymer with ethene</td>
<td>&lt;5</td>
</tr>
<tr>
<td>14807-96-6</td>
<td>Talc</td>
<td>&lt;4</td>
</tr>
<tr>
<td>67701-33-1</td>
<td>Glycerides, C14-18 mono- and di-</td>
<td>&lt;2</td>
</tr>
<tr>
<td>68603-42-9</td>
<td>Coconut diethanolamide</td>
<td>&lt;1</td>
</tr>
<tr>
<td>31886-11-0</td>
<td>Poly(oxy-1,2-ethanediyl), α-[2-{(1-oxooctadecyl)amino}ethyl]-ω-hydroxy-</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

*** Section 4 - First Aid Measures ***

First Aid: Eyes
Flush eye with water for 15 minutes. Get medical attention if irritation persists.

First Aid: Skin
Wash contaminated skin with mild soap and water. Individuals experiencing skin sensitivity should obtain medical advice.

First Aid: Ingestion
Not considered a likely route of entry. Swallowing small quantities will not cause harm.

First Aid: Inhalation
If respiratory irritation occurs, remove affected personnel to fresh air. Obtain medical attention if irritation persists or is severe.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards
See Section 9 for Flammability Properties.
Not established for product as a whole. Polyethylene is combustible and contains some residual flammable blowing agent that might accumulate in confined spaces to produce concentrations in the explosive range. Processes such as grinding could produce fine dust and flammable vapors. Both could be potential explosion hazards.
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Hazardous Combustion Products
Temperatures above 480°F could cause product degradation potentially producing toxic vapors.

Extinguishing Media
Dry chemical, carbon dioxide, water, foam

Fire Fighting Equipment/Instructions
Wear full bunker gear including a positive pressure self-contained breathing apparatus.

NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures
No special containment needed.

Clean-Up Procedures
No special measures are necessary beyond good general housekeeping.

Evacuation Procedures
None

Special Procedures
None

*** Section 7 - Handling and Storage ***

Handling Procedures
Further processing of polyethylene foam products with any fabrication processes such as slitting, grinding, skiving, sawing, routing, or die cutting that cuts cells can release residual flammable blowing agent. A flammable concentration could accumulate, if air is not properly circulated. All sources of ignition should be prevented in areas where foam is fabricated. Humidifiers or ionized air blowers can be used to reduce the possibility of static spark. Grinding equipment and any bins or hoppers should be purged with a positive airflow to dissipate any build up of blowing agent gases. Monitoring systems should be in place to insure that a concentration of blowing agent does not accumulate during shutdowns or malfunctions. For hot wire cutting or thermal welding airflow should be provided to adequately disperse potential blowing agent build up.

Whenever possible ship polyethylene foam products in ventilated trailers. When opening doors and unloading foam shipments, extinguish all possible sources of ignition such as matches, cigarettes, sparks, and lighters. Allow air circulation into the trailer for ten minutes after opening trailer doors before unloading foam. Control any vapor or dust emissions that may be generated by further processing of product.

Storage Procedures

*** Section 8 - Exposure Controls / Personal Protection ***

A: Component Exposure Limits
Isobutane (75-28-5)
ACGIH: 1000 ppm TWA
NIOSH: 800 ppm TWA; 1900 mg/m³ TWA

Talc (14807-96-6)
ACGIH: 2 mg/m³ TWA (respirable fraction, particulate matter containing no asbestos and <1% crystalline silica)
OSHA: 2 mg/m³ TWA (less than 1% crystalline silica, containing no asbestos, respirable dust)
NIOSH: 2 mg/m³ TWA (containing no asbestos and less than 1% quartz, respirable dust)

Engineering Controls
Local ventilation should be provided if product is further processed producing dust or fumes. General ventilation may also be used, but local ventilation is usually preferable. See also recommendation for ventilation in Section 7 to control potential release of flammable blowing agent.
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PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face
Not normally required, but is recommended if product is further processed.

Personal Protective Equipment: Skin
Not normally required. Wearing gloves is consistent with good industrial safety / hygiene practice.

Personal Protective Equipment: Respiratory
Not normally required. If product is being further processed producing dust or fumes, local ventilation should be provided. Respiratory protection is normally only to be used as a temporary measure until proper ventilation can be installed.

Personal Protective Equipment: General

*** Section 9 - Physical & Chemical Properties ***

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Plastic foam in a variety of colors.</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>NA</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>NA</td>
</tr>
<tr>
<td>Solubility (H2O)</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Softening Point</td>
<td>170°F</td>
</tr>
<tr>
<td>VOC</td>
<td>ND</td>
</tr>
<tr>
<td>Flash Point</td>
<td>For polyethylene resin (major component) 343°C (650°F)</td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>ND</td>
</tr>
<tr>
<td>(UFL):</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>ND</td>
</tr>
<tr>
<td>(LFL):</td>
<td></td>
</tr>
<tr>
<td>Burning Rate</td>
<td>ND</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>NA</td>
</tr>
<tr>
<td>Melting Point</td>
<td>220°F</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>For polyethylene resin (major component) 0.87-1.05</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>ND</td>
</tr>
<tr>
<td>Octanol/H2O Coeff.</td>
<td>ND</td>
</tr>
<tr>
<td>Flash Point Method</td>
<td>ND</td>
</tr>
</tbody>
</table>

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability
This is a stable material.

Chemical Stability: Conditions to Avoid
Extreme heat

Incompatibility
Strong oxidizing agents

Hazardous Decomposition
Temperatures above 480°F could cause product degradation potentially producing toxic vapors including carbon monoxide, olefinic, and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes, and/or alcohols.

Possibility of Hazardous Reactions
Will not occur.

*** Section 11 - Toxicological Information ***

Acute Dose Effects
A: General Product Information
Not established for product as a whole. Polyethylene resin (main ingredient) not considered to be toxic to humans or animals. Rats inhaling polyethylene dust developed mild inflammatory changes in the lungs. Prolonged inhalation of thermal degradation products from polyethylene caused neurological effects in rats. Animal studies showed no adverse health effects on the digestive system when fed up to 20% polyethylene. No skin effects are expected from polymer contact. Subchronic (50 to 90 day) feeding studies conducted on rats, dogs, and swine showed no effects from dietary levels of 1 to 20% powdered and shredded polyethylene. IARC has listed polyethylene as a Group 3 substance (Not classifiable as to carcinogenicity to humans).

B: Component Analysis - LD50/LC50
Isobutane (75-28-5)
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Inhalation LC50 Rat 658 mg/L 4 h

**Polyethylene (9002-88-4)**
Inhalation LC50 Mouse 12 g/m3 30 min

**1-Butene, polymer with ethene (25087-34-7)**
Oral LD50 Rat 4 g/kg

**Coconut diethanolamide (68603-42-9)**
Oral LD50 Rat 12400 µL/kg

**Irritation**

Skin contact not normally a problem. Sensitive individuals may experience dermatitis from anti-static or flame retardant additive if present. Inhalation at ambient temperatures unlikely except for dust from grinding. At elevated temperatures, such as produced by hot cutting, fumes may cause respiratory or eye irritation.

**Carcinogenicity**

**A: General Product Information**

Crystalline silica (< 0.1%): IARC-classified 1 (Proven for human); NTP-Classified 2 (Reasonably anticipated) target organ is the lung; California Proposition 65-listed carcinogen (respirable). Release of these materials may occur in small quantities during processing of the product, but is not expected to present a hazard.

**B: Component Carcinogenicity**

**Polyethylene (9002-88-4)**

IARC: Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

**Talc (14807-96-6)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen (containing no asbestos fibers)

IARC: Monograph 93 [in preparation] (inhaled); Supplement 7 [1987]; Monograph 42 [1987] (Group 3 (not classifiable))

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### **Section 12 - Ecological Information**

**Ecotoxicity**

**A: General Product Information**

Not established for product as a whole. For polyethylene resin (main ingredient) ecotoxicity is expected to be low and bioaccumulation is not expected to occur.

**B: Component Analysis - Ecotoxicity - Aquatic Toxicity**

**Talc (14807-96-6)**

<table>
<thead>
<tr>
<th>Test &amp; Species</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 Hr LC50 Brachydanio rerio</td>
<td>&gt;100 g/L [semi-static]</td>
</tr>
</tbody>
</table>

**Glycerides, C14-18 mono- and di- (67701-33-1)**

<table>
<thead>
<tr>
<th>Test &amp; Species</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 Hr LC50 Brachydanio rerio</td>
<td>&gt;10000 mg/L</td>
</tr>
</tbody>
</table>

**Coconut diethanolamide (68603-42-9)**

<table>
<thead>
<tr>
<th>Test &amp; Species</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 Hr LC50 Brachydanio rerio</td>
<td>3.6 mg/L [semi-static]</td>
</tr>
<tr>
<td>24 Hr EC50 Daphnia magna</td>
<td>4.2 mg/L</td>
</tr>
</tbody>
</table>

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### **Section 13 - Disposal Considerations**

**US EPA Waste Number & Descriptions**
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Component Waste Numbers
No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions
If the material as supplied becomes a waste, dispose of in accordance with local, state, and federal laws and regulations. Contact your local or state environmental agency for specific rules. See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

US DOT Information
Shipping Name: Not Regulated

*** Section 15 - Regulatory Information ***

US Federal Regulations

Component Analysis
None of this product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

Component Analysis - State
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isobutane</td>
<td>75-28-5</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Component Analysis - WHMIS IDL
No components are listed in the WHMIS IDL.

Additional Regulatory Information

Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>TSCA</th>
<th>CAN</th>
<th>EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isobutane</td>
<td>75-28-5</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Polyethylene</td>
<td>9002-88-4</td>
<td>Yes</td>
<td>DSL</td>
<td>No</td>
</tr>
<tr>
<td>1-Butene, polymer with ethene</td>
<td>25087-34-7</td>
<td>Yes</td>
<td>DSL</td>
<td>No</td>
</tr>
<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
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<td>Glycerides, C14-18 mono- and di-</td>
<td>67701-33-1</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Coconut diethanolamide</td>
<td>68603-42-9</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), α-[2-[(1-oxooctadecyl)amino][ethyl]-ω-hydroxy-</td>
<td>31886-11-0</td>
<td>Yes</td>
<td>NDSL</td>
<td>No</td>
</tr>
</tbody>
</table>

*** Section 16 - Other Information ***

Other Information
The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Key/Legend
EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.