Material Safety Data Sheet

1 - Product and company information

Product name: GLUCAM* E-20
Product number: GCME20
Effective date: 10/30/2007

Company identification:
Lubrizol Advanced Materials, Inc.
9911 Brecksville Rd.
Cleveland, OH 44141-3247
United States of America

Canadian Address:
Lubrizol Advanced Materials Canada, Inc.
100 Regina Street South
Suite 360
Waterloo, Ontario, N2J 4P9
Canada

Telephone:
(216) 447-5000
(800) 424-9300

Preparer:
Health, Safety, and Environmental Department

Product description:
Personal care applications

2 - Composition / information on ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Weight % Less Than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Gluceth-10 -Methyl Gluceth-20</td>
<td>53026-67-8</td>
<td>100</td>
</tr>
</tbody>
</table>

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

Notes: No Additional Information

3 - Hazards identification

Emergency overview:
See below for product details

Acute health effects:
This material has no known health hazards.

Chronic health effects:
None known.

Signs/Symptoms of exposure:
Irritation

Routes of exposure/entry:
Skin Contact, Inhalation, Ingestion, Eye Contact
Target organs
Eyes, Respiratory tract, Skin

Medical conditions aggravated by exposure
None known.

Carcinogenic status
The components of this mixture are not known to be listed or regulated by IARC, NTP, OSHA or ACGIH.

Reproductive effects
None known.

4 - First aid measures

If irritation or other symptoms (as noted above) occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

Eye contact
Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. If irritation persists, call a physician.

Skin contact
Wash the affected area thoroughly with plenty of water and soap. If irritation develops, call a physician.

Inhalation
If affected, remove to fresh air.

Ingestion
Do not induce vomiting. Rinse out mouth and have patient drink several glasses of water. Do not give liquids if victim is unconscious, very drowsy or unable to swallow. Call a physician.

Notes to physician
Treat symptomatically.

5 - Fire fighting measures

NFPA flammability class: N/A

Flash point: 595.4 °F (313 °C)
Cleveland Open Cup

Explosive range: LEL Not Applicable
UEL Not Applicable

Notes: No Additional Information

Fire and explosive properties
This product is not known to present any fire hazard.

Extinguishing media
Carbon dioxide, foam, dry chemical, water.
Fire fighting instructions
Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.

Unusual fire/explosion hazards
Irritating or toxic substances will be emitted upon burning, combustion or decomposition.

6 - Accidental release measures

Containment techniques
Contain spill. If spilled in an enclosed area, ventilate.

Clean-up techniques
Wear proper personal protective clothing and equipment. Do not flush liquid into public sewer, water systems or surface waters. Recover as much as possible for reuse. Absorb remainder with an inert material. Wash the spill area with soap and water.

Evacuation instructions
No specific requirements known.

7 - Handling and storage

Handling
Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities.

Storage
Keep container closed when not in use. Avoid prolonged exposure to heat and air. Empty container contains residual product which may exhibit hazards of product.

8 - Exposure controls / personal protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH - TWA</th>
<th>ACGIH - STEL</th>
<th>OSHA - TWA</th>
<th>OSHA - STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Gluceth-10</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>Methyl Gluceth-20</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
</tbody>
</table>

Notes: No Additional Information

Engineering controls
Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation.

Eye/face protection
Safety glasses or goggles required.

Skin protection
Wear nitrile or neoprene gloves. Wear long sleeve shirt and trousers and other equipment as needed to avoid skin contact.

Respiratory protection
Respiratory protection is not needed with proper ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Use respirator in accordance with manufacturer’s use limitations and OSHA standard 1910.134 (29CFR).

**General protection**
No Additional Information

### 9 - Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>Yellow</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Mild</td>
</tr>
<tr>
<td><strong>Solubility in water</strong></td>
<td>Soluble</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>% Volatile by weight</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Specific gravity</strong></td>
<td>1.20</td>
</tr>
<tr>
<td><strong>VOC</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Boiling point °F</strong></td>
<td>601.0</td>
</tr>
<tr>
<td><strong>Boiling point °C</strong></td>
<td>316.0</td>
</tr>
</tbody>
</table>

**Notes:** Amounts specified are typical and do not represent a specification.

### 10 - Stability and reactivity

**Stability**
This product is stable.

**Hazardous polymerization**
Hazardous polymerization will not occur.

**Notes:**
No Additional Information

**Conditions to avoid**
None known.

**Incompatibility with other materials**
Avoid strong acids and oxidizing agents.

**Hazardous decomposition products**

Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

**Additional reactivity / stability information**
None known.

**Thermal processing emissions**
Not Applicable

11 - Toxicological information

Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LC50 Inhalation</th>
<th>Species</th>
<th>LD50 Oral</th>
<th>Species</th>
<th>LD50 Skin</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Gluceth-10 - Methyl Gluceth-20</td>
<td>N/E</td>
<td></td>
<td>N/E</td>
<td></td>
<td>N/E</td>
<td></td>
</tr>
</tbody>
</table>

LD50 Oral Rat, adult > 5000 mg/kg
LD50 Dermal Rabbit: > 2000 mg/kg
Eye Irritation: Not expected to cause eye irritation. Based on actual data.
Skin Irritation: Not expected to cause skin irritation. Based on actual data.

Dermal Sensitization: Not expected to cause skin sensitization. Based on actual data.

12 - Ecological information

Biodegradation: This product will biodegrade moderately based on OECD 302-type test data for similar products.

Freshwater Fish Toxicity: The acute LC50 is >1000 mg/L based on similar products.
Freshwater Invertebrates Toxicity: The acute EC50 is >1000 mg/L based on similar products.

Bacteria Toxicity: The acute EC50 for bacteria is >1000 ppm based on similar materials.

Notes: No Additional Information

13 - Disposal information

For waste disposal purposes, this product is not known to be defined or designated as hazardous by current provisions of the Federal (EPA) Resource Conservation and Recovery Act (RCRA, 40CFR261). Incinerate or landfill waste in a properly permitted facility in accordance with federal, state and local regulations. Liquids cannot be disposed of in a landfill.

US RQ
Not Applicable

14 - Transportation information

UN/NA N/A Hazard Class: N/A IMDG Class: N/A
Name of Material: Not regulated

Notes: No Additional Information

### 15 - Regulatory information

This MSDS has been prepared in accordance with the hazard criteria of the OSHA Hazard Communication Standard, 29 CFR 1910.1200

**U.S. Toxic Substances Control Act:**

All components of this product are either listed on the U.S. Toxic Substances Control Act (TSCA) inventory of chemicals or are otherwise compliant with TSCA regulations.

**U.S. CERCLA – SARA:**

**SARA Title III Section 312 Hazard Category (40 CFR 311/312):**

Not Hazardous

**SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372:

None Known

**California Proposition 65:**

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

None known to be present or none in reportable amounts for occupational exposure as per OSHA’s approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards:

None known to be present or none in reportable amounts for occupational exposure as per OSHA’s approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

The chemical identity of some or all components present is confidential business information (trade secret) and is being withheld as permitted by 29CFR1910.1200 (i).

**Canadian Domestic Substances List (DSL):**

All components in this product are on the Canadian Domestic Substances List (DSL) or are exempt from listing.

**Canadian Ingredient Disclosure List:**
The following components are on the Canadian Ingredient Disclosure List (WHMIS):

None Listed

**Canadian WHMIS Class:**

Not controlled

**Notes:** No Additional Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

### 16 - Other information

**Notes:** No Additional Information

**HMIS Rating**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

**NFPA Rating**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Key: 0=Insignificant; 1=Slight; 2=Moderate; 3=High; 4=Extreme

Hazardous Materials Identification System (HMIS), National Paint and Coating Assn. rating applies to product "as packaged" (i.e., ambient temperature). Ratings are based upon HMIS® Rating Manual 1984. Values do not reflect HMIS® III.

National Fire Protection Association (NFPA) rating identifies the severity of hazards of material during a fire emergency (i.e., "on fire").

**Legend:**

* : Trademark owned by The Lubrizol Corporation.

ACGIH: American Conference of Governmental Industrial Hygienists

A1: Confirmed human carcinogen

A2: Suspected human carcinogen

A3: Animal carcinogen

CAS No: Chemical Abstract Service Registry Number

IARC: International Agency for Research on Cancer

Group 1: Carcinogenic to humans

Group 2A: Probably carcinogenic to humans

Group 2B: Possibly carcinogenic to humans

Group 3: Unclassified as a carcinogen to humans

MSHA: Mine Safety and Health Administration

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

N/A: Not Applicable

N/E: None Established

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

PNOC: Particulates Not Otherwise Classified

RTK: Right To Know

STEL: Short Term Exposure Limit (15 minute Time Weighted Average)

TLV: Threshold Limit Value

C: Ceiling Limit
S: Skin notation refers to the potential significant contribution to the overall exposure by the cutaneous route including mucous membranes and the eyes and by direct skin contact with the substance.

WHMIS: Canadian Workplace Hazardous Materials Information System

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