Section 1 - Product and Company Information

Product Name: Agar, Type E
Product Number: A4675
Brand: Sigma Chemical
Company: Sigma-Aldrich
Street Address: 3630 S鄱nce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 800-325-9632
Fax: 800-325-5002
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
<th>EC no</th>
<th>Annex I Index Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGAR</td>
<td>9002-18-0</td>
<td>No</td>
<td>232-658-1</td>
<td></td>
</tr>
</tbody>
</table>

Formula: Agar-agar, Agar agar flake, Agar-agar gum, Bengal, Bengal gelatin, Bengal isinglass, Ceylon, Ceylon isinglass, Chinese isinglass, Digenes simplex moulage, Gelose, Japan agar, Japan isinglass, Layor canex, NCA 602475

Section 3 - Hazards Identification

HMIS Rating
Health: 0
Flammability: 0
Reactivity: 0

NFPA Rating
Health: 0
Flammability: 0
Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A
Extinguishing Media
Suitable: Water spray
Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)
Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Protection(s)
Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

Methods for Cleaning Up
Shovel up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage
Suitable: Keep tightly closed.

Special Requirements
Moisture sensitive.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment
Respiratory
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

Hand
Protective gloves.

Eye
Chemical safety goggles.
**Section 9 - Physical/Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>5 - 7</td>
</tr>
<tr>
<td>BP/VP Range</td>
<td>N/A</td>
</tr>
<tr>
<td>MP/VP Range</td>
<td>N/A</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>N/A</td>
</tr>
<tr>
<td>Saturated Vapor Conc.</td>
<td>N/A</td>
</tr>
<tr>
<td>SG/Density</td>
<td>N/A</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>N/A</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>N/A</td>
</tr>
<tr>
<td>Volatile%</td>
<td>N/A</td>
</tr>
<tr>
<td>VOC Content</td>
<td>N/A</td>
</tr>
<tr>
<td>Water Content</td>
<td>N/A</td>
</tr>
<tr>
<td>Solvent Content</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Viscosity</td>
<td>N/A</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>N/A</td>
</tr>
<tr>
<td>Decomposition Temp</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point °F</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point °C</td>
<td>N/A</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>Flammability</td>
<td>N/A</td>
</tr>
<tr>
<td>Autoignition Temp</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Section 11 - Toxicological Information**

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Contact</td>
<td>May cause skin irritation.</td>
</tr>
<tr>
<td>Skin Absorption</td>
<td>May be harmful if absorbed through the skin.</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>May cause eye irritation.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed.</td>
</tr>
</tbody>
</table>

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**RTECS Number**: AW7350000

**Toxicity Data**

- Oral - Rat: 11000 mg/kg (LD50)
- Oral - Mouse: 16000 mg/kg (LD50)
- Oral - Rabbit: 5800 mg/kg (LD50)
- Oral - Hamster: 6100 mg/kg (LD50)

**NTP Carcinogen List**

- Rating: No evidence
- Species: Mouse, Rat
- Route: Feed

**Section 12 - Ecological Information**

No data available.

**Section 13 - Disposal Considerations**

**Appropriate Method of Disposal of Substance or Preparation**

- Contact a licensed professional waste disposal service to dispose of this material.
- Do not allow this material to be mixed with combustible solvents or burned in a chemical incinerator equipped with an afterburner and scrubber.
- Dispose of in accordance with federal, state, and local environmental regulations.

**Section 14 - Transport Information**

**DOT**

- Proper Shipping Name: None
- Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

**IATA**

- Non-Hazardous for Air Transport: Non-hazardous for air transport.

**Section 15 - Regulatory Information**

**United States Regulatory Information**

- SARA Listed: No

**Sigma Chemical - A4675**

**Page 4**

Sigma-Aldrich Corporation

www.sigma-aldrich.com
TSCA Inventory Item: Yes

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDNL: No

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2006 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.