Section 1 - Product and Company Identification

Material Name       • Gardner Aluma-Seal Aluminum Roof Coating
Chemical Category    • Mixture
Product Code         • 7225-GA
Product Description  • Asphalt Based Aluminium Reflective Roof Coating.
Product Use          • Fibered Aluminum Roof Coating
Manufacturer         • Gardner-Gibson
                      4161 E. 7th Avenue
                      Tampa, FL 33605
                      United States
Telephone            
                      Emergency • 800-424-9300 - CHEMTREC
                      Emergency • 703-527-3887 - CHEMTREC (Outside US)
Last Revision Date   • 4/29/2015

Section 2 - Hazards Identification

Signal Word: WARNING!

Hazards and Precautions

Flammable Liquid and Vapor per HCS2012. Contains Combustible Petroleum Distillates. Keep away from heat, sparks, and open flame. Keep container tightly closed when not in use. Contains Aluminum Pigment. Avoid contact with water. Contact with water can liberate highly flammable hydrogen gas. Avoid prolonged breathing of vapor and use only in adequate ventilation. Repeated and prolonged overexposure to solvent vapor may cause brain and nervous system damage. May cause skin and eye irritation. Harmful or Fatal if swallowed. Use safety glasses, gloves, and skin protection when using this product. Protect building fresh air inlets from product vapors. Do not use in drinking water or food systems. Dispose in accordance to Federal, State, and local regulations. Do not reuse empty container.

Prevention            Do not handle until all safety precautions have been read and understood. Avoid breathing dust, fume, gas, mist, vapors and/or spray. Keep away from flames and hot surfaces. - No smoking. Wear protective gloves, clothing, and eye/face protection.
Response              IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
Storage/Disposal      Store in a closed container. Store in a well-ventilated place. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
Physical Form
- Liquid

Color
- Black

Odor
- Mild Hydrocarbon.

Flash Point
- 105°F (40.5°C) CC (Closed Cup)

UEL
- 6 %

LEL
- 0.9 %

OSHA(HCS2012)
- Flammable Liquids - Category 3, Skin Corrosion/Irritation - Category 2, Serious Eye Damage, Eye Irritation - Category 2A, Carcinogenicity - Category 1A

WHMIS
- Combustible Liquids - B3, Other Toxic Effects - D2A, Other Toxic Effects - D2B R65, R25, R36/37/38, R45

GHS
- Flammable Liquids - Category 3, Skin Corrosion/Irritation - Category 2, Serious Eye Damage, Eye Irritation - Category 2A, Carcinogenicity - Category 1A

Potential Health Effects

Inhalation:
Aceute (Immediate)
- May cause irritation. Excessive breathing of high vapor concentration can cause possible unconscious and even asphyxiation.

Chronic (Delayed)
- Refer to other information found in Section 11-Toxicology.

Skin:
Acute (Immediate)
- May cause irritation.

Chronic (Delayed)
- Repeated and prolonged exposure may be harmful. Repeated and prolonged exposure to the skin may cause dermatitis.

Eye:
Acute (Immediate)
- May cause irritation. Likely to cause eye irritation, burning, tearing, etc. on contact with the eyes. If swelling and irritation persist, seek medical attention.

Chronic (Delayed)
- Repeated and prolonged exposure may cause irritation.

Ingestion:
Acute (Immediate)
- May be harmful or fatal if swallowed.

Chronic (Delayed)
- Repeated and prolonged exposure may be harmful.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>% (weight)</th>
<th>LD50/LC50</th>
<th>Classifications According to Regulation/Directive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>35% TO 45%</td>
<td>Ingestion/Oral-Rat LD50 • &gt;5000 mg/kg</td>
<td>OSHA HCS 1994: Carc.; Irrit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inhalation-Rat LC50 • &gt;94.4 mg/m³</td>
<td>WHMIS: Other Toxic Effects - D2A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UN GHS: Carc. 2; Eye Irrit. 2A; Skin Irrit. 2</td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>5% TO 15%</td>
<td>OSHA HCS 1994: Irrit.; Pyr.; Water React.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>UN GHS: Pyr. Sol. 1; Water-react. 2</td>
<td></td>
</tr>
</tbody>
</table>

Carcinogenic Effects

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>8052-42-4</td>
<td>Group 2B-Possible Carcinogen</td>
<td>Under Consideration</td>
</tr>
</tbody>
</table>

Section 3 - Composition/Information on Ingredients
This product is an encapsulated mixture which reduces the likelihood of exposure to hazardous particulates. Airborne exposures to hazardous dusts or mists may be generated by spraying, sanding or grinding.

See Section 11 for Toxicological Information.

### Section 4 - First Aid Measures

| Inhalation | • Move victim to fresh air. If signs/symptoms continue, get medical attention. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. |
| Skin       | • Immediately flush skin with soap and plenty of water. Call a physician if symptoms occur. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. |
| Eye        | • IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| Ingestion  | • If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. |

**Notes to Physician** • Aspiration of liquid into the lungs during swallowing or vomiting can cause lung inflammation, serious lung damage and even death from chemical pneumonitis.

### Section 5 - Fire Fighting Measures

| Extinguishing Media | • LARGE FIRE: Water spray, fog or regular foam. |
| Small Fires         | • SMALL FIRES: Dry chemical, CO2, water spray or regular foam. |
| Unsuitable          | • Do not use direct stream of water. The product has a portion of Aluminum content. Aluminum is reactive with water but is expected to be encapsulated in the asphalt material. |
| Firefighting Procedures | • Fight advanced or massive fires from safe distance or protected location. Avoid water in a straight hose stream as the stream will cause splatter and spread fire. If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release. |
| Unusual Fire and Explosion Hazards | • Combustible liquid. Containers may explode when heated. May release irritating or toxic gases, fumes, or vapors. Flammable Liquid and Vapor Class III per HCS2012 / GHS |
| Hazardous Combustion Products | • Carbon monoxide, carbon dioxide, hydrocarbons. |
| Protection of Firefighters | • Fire fighters should wear complete protective clothing including self-contained breathing apparatus. |
| Flash Point         | • 105°F (40.5°C) CC (Closed Cup) |
| Explosion Limits:   | • Upper 6 % |
|                     | • Lower 0.9 % |
| Autoignition Temperature | • No data available |
Section 6 - Accidental Release Measures

Personal Precautions
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stay upwind. Ventilate the area before entry.

Emergency Procedures
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Isolate the area and contain the spilled material. Persons not wearing the appropriate PPE should be removed from the area until the spill is cleaned up.

Environmental Precautions
- Prevent entry into waterways, sewers, basements or confined areas. Do NOT wash away into sewer.

Containment/Clean-up Measures
- Contain and recover liquid when possible. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container. Do not flush to sewer or allow to enter waterways. Do not use water to flush spill area. Use appropriate Personal Protective Equipment (PPE)

Prohibited Materials
- Avoid contact with strong oxidizing agents and acids.

Section 7 - Handling and Storage

Handling
- KEEP OUT OF THE REACH OF CHILDREN! Keep away from heat and ignition sources. Keep away from fire - No Smoking. Do not use in areas without adequate ventilation.

Storage
- Store in a well-ventilated place. Keep container tightly closed. No open flames, no sparks and no smoking.

Special Packaging Materials
- No data available

Incompatible Materials or Ignition Sources
- Avoid contact with strong oxidizing agents and acids.

Section 8 - Exposure Controls Personal Protection

Personal Protective Equipment

Pictograms

Respiratory
- In case of insufficient ventilation, wear suitable respiratory equipment. If listed exposure limits are expected to be exceeded, use approved respiratory protection suitable for the hazard.

Eye/Face
- Wear ANSI approved safety glasses with side shields or safety goggles.

Hands
- Wear chemical protective gloves made of Nitrile or Neoprene.

Skin/Body
- Wear clothing that covers the skin to prevent skin exposure.

General Industrial Hygiene Considerations
- Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Avoid breathing vapors.

Engineering Measures/Controls
- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Use precaution to protect building intake from fumes and vapors created outdoors.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Result</th>
<th>Mexico</th>
<th>NIOSH</th>
<th>OSHA</th>
<th>United States - California</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,4-Trimethylbenzene (95-63-6)</td>
<td>TWAs</td>
<td>Not established</td>
<td>25 ppm TWA; 125 mg/m3 TWA</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Benzene, 1,3,5-trimethyl (108-67-8)</td>
<td>TWAs</td>
<td>Not established</td>
<td>25 ppm TWA; 125 mg/m3 TWA</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Cellulose (9004-34-6)</td>
<td>TWAs</td>
<td>10 mg/m3 TWA LMPE-PPT</td>
<td>10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)</td>
<td>15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)</td>
<td>5 mg/m3 PEL (respirable fraction, listed under Particulates not otherwise regulated); 10 mg/m3 PEL (total dust, listed under Particulates not otherwise regulated)</td>
</tr>
</tbody>
</table>
**Material Description**

<table>
<thead>
<tr>
<th>Physical Form</th>
<th>Liquid</th>
<th>Appearance/Description:</th>
<th>Thick black semi-liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Black</td>
<td>Odor:</td>
<td>Mild Hydrocarbon.</td>
</tr>
</tbody>
</table>

**General Properties**

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>300 to 390 °F</th>
<th>Melting Point</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>No data available</td>
<td>Specific Gravity/Relative Density</td>
<td>0.98 Water=1</td>
</tr>
<tr>
<td>Density</td>
<td>~8.2 lbs/gal</td>
<td>Bulk Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No data available</td>
<td>Solvent Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>270 Centipoise (cPs, cP) or mPas @ 140 F(60 C)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Vapor Pressure**

| 2 mmHg (torr) @ 68 F(20 C) | 4.9 Air=1 |

**Evaporation Rate**

| < 1 Ether = 1 | < 500 g/L |

**Flash Point**

<table>
<thead>
<tr>
<th>105 °F(40.5 °C) CC (Closed Cup)</th>
<th>UEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 %</td>
<td>Autoignition</td>
</tr>
<tr>
<td>LEL</td>
<td>0.9 %</td>
</tr>
</tbody>
</table>

**Flash Point**

| 105 °F(40.5 °C) CC (Closed Cup) | UEL | LEL | Autoignition |

**Section 10 - Stability and Reactivity**

**Stability**

- Stable under normal temperatures and pressures.

**Hazardous Polymerization**

- Hazardous polymerization not indicated.

**Conditions to Avoid**

- Avoid contact with strong oxidizing agents and flame.

**Incompatible Materials**

- Strong oxidizers and acids.

**Hazardous Decomposition Products**

- Carbon monoxide, carbon dioxide and hydrocarbons.

**Section 11 - Toxicological Information**

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS</th>
<th>Acute Toxicity:</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>8052-42-4</td>
<td>orl-rat LD50: &gt;5000 mg/kg; ihl-rat LC50: &gt;94.4 mg/m3. Tumorigen/Carcinogen:</td>
<td>Acute Toxicity:</td>
</tr>
<tr>
<td>Cellulose (1% TO 5%)</td>
<td>9004-34-6</td>
<td>orl-rat LD50: &gt;5 gm/kg; ihl-rat LC50: &gt;5800 mg/m3/4H</td>
<td>Data</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light aromatic (1% TO 2.5%)</td>
<td>64742-95-6</td>
<td>orl-rat LD50:8400 mg/kg</td>
<td>Acute Toxicity:</td>
</tr>
<tr>
<td>Benzene, 1,3,5-trimethyl (0.5% TO 1.5%)</td>
<td>108-67-8</td>
<td>orl-rat LD50:5000 mg/kg; ihl-hmn TCLo:10 ppm</td>
<td>Acute Toxicity:</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene (0.5% TO 1%)</td>
<td>95-63-6</td>
<td>orl-rat LD50:5 gm/kg; ihl-LC50:18000 mg/m3/4H</td>
<td>Acute Toxicity:</td>
</tr>
</tbody>
</table>
Other Information

- This product contains petroleum asphalt. Petroleum asphalt is not listed as a carcinogen by OSHA or NTP. The National Institute of Occupational Safety and Health (NIOSH), has concluded that at higher temperatures roofing asphalt fumes are a potential occupational carcinogen. If this product is heated or comes in contact with heated material, avoid breathing fumes.

- This product may contain small amounts of polycyclic aromatic hydrocarbons (PAH’s) which are recognized carcinogens in humans and experimental animals. Mouse skin painting studies of roofing asphalt vapor concentrate have shown evidence of tumor formation associated with localized skin irritation in recent studies. Inhalation studies of high airborne concentrations of asphalt/bitumen fumes in rats and mice produced bronchitis, pneumonitis, and lung changes such as fibrosis and cell damage.

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### Section 12 - Ecological Information

**Ecological Fate**
- No data available

**Persistence/Degradability**
- No data available.

**Bioaccumulation Potential**
- No data available.

**Mobility in Soil**
- No data available

---

### Section 13 - Disposal Considerations

**Product**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

---

### Section 14 - Transportation Information

**DOT**
- Not restricted if shipped in containers <450L (119 gallons) Restricted if shipped in containers >450L (119 gallons)


**IMO/IMDG** –International Maritime Transport: Tars, Liquids; UN1999; Hazard Class: 3; Packing Group: III IMDG Code 2.3.2.5 - exempted from marking, labeling & testing of packages.

**IATA** - International Air Transportation Association - TARS, LIQUID; UN1999; Hazard Class: 3; Packing Group: III.

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### Section 15 - Regulatory Information

**SARA Hazard Classifications**
- Acute, Chronic

**Risk & Safety Phrases**
- California PROP 65: Asphalt and Asphalt Fumes may contain detectable amounts of chemicals known to the State of California to cause cancer or reproductive harm. Bituminous Fumes are PROP 65 listed. Asphalt is considered a bituminous material but would need to be heated in excess of 500°F to release fumes necessary for exposure. Normal use of this product does not require heating and the material is not recommended for heating by the manufacture.

#### Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>EU EINECS</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Spirits</td>
<td>8052-41-3</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Asphalt</td>
<td>8052-42-4</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>EU EINECS</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Spirits</td>
<td>8052-41-3</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Asphalt</td>
<td>8052-42-4</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Substance</td>
<td>CAS Number</td>
<td>Risk</td>
<td>WHMIS Classification</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------------</td>
<td>-------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Cellulose</td>
<td>9004-34-6</td>
<td>Yes</td>
<td>1% TO 5%</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light aromatic</td>
<td>64742-95-6</td>
<td>Yes</td>
<td>B3, D2B</td>
</tr>
<tr>
<td>Benzene, 1,3,5-trimethyl</td>
<td>108-67-8</td>
<td>Yes</td>
<td>B3</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>95-63-6</td>
<td>Yes</td>
<td>0.5% TO 1%</td>
</tr>
</tbody>
</table>

**Canada**

**Labor**

Canada - WHMIS - Classifications of Substances

- Cellulose: 9004-34-6 – 1% TO 5% - Uncontrolled product according to WHMIS classification criteria (including microcrystalline and paper fibers)
- Asphalt: 8052-42-4 – 30% TO 40% - Not Listed
- Aluminum: 7429-90-5 – 5% TO 15% - B6 (powder); Uncontrolled product according to WHMIS classification criteria
- 1,2,4-Trimethylbenzene: 95-63-6 – 0.5% TO 1% - B3
- Solvent naphtha (petroleum), light aromatic: 64742-95-6 – 1% TO 2.5% - B3, D2B
- Perlite: 130885-09-5 – 5% TO 10% - D2A (ore, containing >0.1% Crystalline silica); Uncontrolled product according to WHMIS classification criteria (ore)

**United States**

**Environment**

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

- Cellulose: 9004-34-6 – 1% TO 5% - Not Listed
- Asphalt: 8052-42-4 – 30% TO 40% - Not Listed
- Aluminum: 7429-90-5 – 5% TO 15% - 1.0 % de minimis concentration (dust or fume only)
- 1,2,4-Trimethylbenzene: 95-63-6 – 0.5% TO 1% - 1.0 % de minimis concentration
- Solvent naphtha (petroleum), light aromatic: 64742-95-6 – 1% TO 2.5% - Not Listed
- Perlite: 130885-09-5 – 5% TO 10% - Not Listed
- Mineral Spirits: 8052-41-3 – 35% TO 45% - Not Listed
- Benzene, 1,3,5-trimethyl: 108-67-8 – 0.5% TO 1.5% - Not Listed

**Section 16 - Other Information**

Prepared By: GG Inc.
Last Revision Date: 4/29/2015

Disclaimer/Statement of Liability:

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best knowledge and belief, accurate and reliable as of the date compiled. However, no representational warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user’s responsibility to verify the suitability and completeness of such information for particular use. Gardner-Gibson does not accept liability for any loss or damage that may occur from the use of information.