Clippership Polymer Modified Asphalt Emulsion Coating
EM-12
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 03/27/2017 Version: 1.1

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

1.1. Product identifier
Product form: Mixture
Product name: Clippership Polymer Modified Asphalt Emulsion Coating
Product code: EM-12

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: Coating

1.3. Details of the supplier of the safety data sheet
Seaboard Asphalt Products Co.
3601 Fairfield Road
Baltimore, MD 21226
1-800-563-0332

1.4. Emergency telephone number
Emergency number: CHEMTREC 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (GHS-US)
Carc. 2 H351

2.2. Label elements
GHS-US labeling
Hazard pictograms (GHS-US):

Signal word (GHS-US): Warning
Hazard statements (GHS-US): H351 - Suspected of causing cancer
Precautionary statements (GHS-US):
- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P280 - Wear protective equipment
- P308 + P313 - If exposed or concerned: Get medical advice/attention

2.3. Other hazards
Other hazards not contributing to the classification:
Vapors and gases from heated asphalt may contain hydrogen sulfide and may be irritating to the eyes and skin. Skin contact with asphalt may cause skin irritation and allergic reactions in some individuals. Hot material may cause burns.

2.4. Unknown acute toxicity (GHS-US)
None of the ingredients in the mixture are of unknown toxicity

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable – product is a mixture

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>(CAS No) 8052-42-4</td>
<td>30-40</td>
<td>Carc. 2, H351</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general:
Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the product label where possible). Suspected of causing cancer.
First-aid measures after inhalation  : Allow victim to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and seek medical attention. No attempt should be made to remove material from skin.
First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed
No additional information available

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 : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture
No additional information available

5.3. Advice for firefighters
Firefighting instructions  : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Contain all water used for fire-fighting to the greatest extent possible
Protection during firefighting : Do not enter fire area without proper protective equipment, including NIOSH approved positive-pressure breathing apparatus with full face mask and full protective equipment.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Emergency procedures  : Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment  : Equip cleanup crew with proper protection.
Emergency procedures  : Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up  : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Precautions for safe handling  : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions  : Keep only in the original container in a cool, well ventilated place away from oxidizers, excessive heat, and open flame. Keep container closed when not in use. Do not freeze.
Incompatible products  : Strong bases. Strong acids.
Incompatible materials  : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)
No additional information available
SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>USA ACGIH</th>
<th>USA OSHA</th>
<th>OSHA Ceiling (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt (8052-42-4)</td>
<td>ACGIH TWA (mg/m³)</td>
<td>OSHA PEL (ppm) (Vacated limits)</td>
<td>20 ppm</td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>0.5 mg/m³ Inhalable fraction</td>
<td>10 ppm</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>ACGIH STEL (ppm)</td>
<td>OSHA STEL (ppm) (Vacated limits)</td>
<td>15 ppm</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>5 ppm</td>
<td>15 ppm</td>
<td></td>
</tr>
</tbody>
</table>

Hydrogen Sulfide (7783-06-4) may be released from this product

<table>
<thead>
<tr>
<th>Substance</th>
<th>USA ACGIH</th>
<th>USA OSHA</th>
<th>OSHA Ceiling (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TWA (ppm)</td>
<td>OSHA PEL (ppm) (Vacated limits)</td>
<td>20 ppm</td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>1 ppm</td>
<td>10 ppm</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA STEL (ppm) (Vacated limits)</td>
<td>15 ppm</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>5 ppm</td>
<td>15 ppm</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Ensure that proper ventilation is provided to maintain exposures below regulated limits.

Personal protective equipment: Avoid all unnecessary exposure. At a minimum wear long sleeved cotton shirt buttoned at the collar and full length cotton pants. Synthetic fibers can melt and adhere to the skin when heated. Do not fold back or roll up cuffs.

Hand protection: Wear protective gloves that protect against thermal burns when handling hot material.

Eye protection: Chemical goggles or safety glasses.

Respiratory protection: Not typically required. In cases where exposures exceed occupational control limits, a NIOSH approved respirator is recommended.

Other information: Do not eat, drink or smoke during use. Wash hands and other exposed areas after use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Odor</td>
<td>Organic</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>343.33 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available
## SECTION 10: Stability and reactivity

### 10.1. Reactivity
No additional information available

### 10.2. Chemical stability
Not established.

### 10.3. Possibility of hazardous reactions
Not established.

### 10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials
Strong acids. Strong bases.

### 10.6. Hazardous decomposition products
Hydrogen sulfide and other toxic vapors may be given off when heated excessively. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Likely routes of exposure</th>
<th>Skin and eye contact; Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Asphalt (8052-42-4)**

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Suspected of causing cancer.</td>
</tr>
</tbody>
</table>

**Asphalt (8052-42-4)**

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>2B - Possibly carcinogenic to humans</td>
</tr>
<tr>
<td>National Toxicology Program (NTP) Status</td>
<td>5 - Twelfth Report - Items under consideration</td>
</tr>
<tr>
<td>In OSHA Hazard Communication Carcinogen list</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Reproductive toxicity: Not classified

Specific target organ toxicity (single exposure): Not classified

Specific target organ toxicity (repeated exposure): Not classified

Aspiration hazard: Not classified

Potential Adverse human health effects and symptoms: Vapors and gases from heated asphalt may contain hydrogen sulfide and may cause eye, skin and respiratory tract irritation, headache and nausea. Ingestion or contact of hot material may cause burns on eyes, skin or gastrointestinal system. Asphalt may cause skin irritation with reddening, itching, burning and/or swelling and may cause allergic skin reaction in some individuals.

## SECTION 12: Ecological information

### 12.1. Toxicity
No additional information available

### 12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clippership Polymer Modified Asphalt Emulsion Coating EM-12</td>
<td>Not established.</td>
</tr>
<tr>
<td>Asphalt (8052-42-4)</td>
<td>Persistence and degradability Not established.</td>
</tr>
</tbody>
</table>

### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clippership Polymer Modified Asphalt Emulsion Coating EM-12</td>
<td>Bioaccumulative potential Not established.</td>
</tr>
</tbody>
</table>
Asphalt (8052-42-4)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>(no bioaccumulation expected)</td>
</tr>
<tr>
<td>Log Pow</td>
<td>&gt; 6</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local, state, and federal regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
No additional information available

Additional information

ADR
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

Clippership Polymer Modified Asphalt Emulsion Coating EM-12
SARA Section 311/312 Hazard Classes Delayed (chronic) health hazard
Asphalt (8052-42-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
Asphalt (8052-42-4)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
Asphalt (8052-42-4)
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

National regulations
Asphalt (8052-42-4)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECS (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)
Clippership Polymer Modified Asphalt Emulsion Coating
EM-12
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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.3. US State regulations

California - Proposition 65
WARNING: This product contains chemicals known to the State of California to cause cancer.

SECTION 16: Other information

Other information: This product is certified to the NSF/ANSI 61 Standard – Drinking Water System Components

Full text of H-phrases:

<table>
<thead>
<tr>
<th>Carc. 2</th>
<th>Carcinogenicity Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>H351</td>
<td>Suspected of causing cancer</td>
</tr>
</tbody>
</table>

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.