SAFETY DATA SHEET
According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): Geo-Seal DETAIL
Product Description: Polymer Modified Asphalt Emulsion
CAS No: N/A

Manufacturer / Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

GHS-US Classification of the Substance or Mixture
Carc.2: H351
STOT RE 2: H373
Aquatic Chronic 3: H412
Full text of H-phrases: see Section 16

GHS-US Label Elements
Signal Word: Warning
Hazard Statements
  H351: Suspected of causing cancer
  H373: May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure
  H412: Harmful to aquatic life with long lasting effects
Precautionary Statements
  P201: Obtain special instructions before use
  P202: Do not handle until all safety precautions have been read and understood
  P260: Do not breathe vapors, mist, and spray
  P273: Avoid release to the environment
  P280: Wear eye protection, protective clothing, and protective gloves
  P308+P313: If exposed or concerned, get medical advice/attention
  P314: Get medical advice/attention if you feel unwell
  P405: Store locked up
  P501: Dispose of contents/container in accordance with local, regional, national and international regulations

Other Hazards
Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. If stored under heat for extended periods or significantly agitated, this material might evolve or release hydrogen sulfide, a flammable gas, which can raise and widen this material's actual flammability limits and significantly lower its auto-ignition
temperature. Hydrogen sulfide is a toxic gas that can be fatal. It also has a rotten egg smell that causes odor fatigue very quickly and shouldn't be used as an indicator for the presence of gas. Flammable vapors can accumulate in head space of closed system.

Unknown Acute Toxicity (GHS-US)
Up to 30% of the mixture consists of ingredient(s) of unknown acute toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Mixture</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>50 - 70</td>
<td>Not classified</td>
</tr>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>30 - 40</td>
<td>Not classified</td>
</tr>
<tr>
<td>Proprietary Polymer</td>
<td>Proprietary*</td>
<td>&lt; 30</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
| Proprietary Hydrocarbon  | Proprietary*       | 0 - 5 | Flam. Liq. 3, H226  
Acute Tox. 3 (Inhalation:vapor), H331  
Skin Irrit. 2, H315  
Carc. 2, H351  
STOT RE 2, H373  
Asp. Tox. 1, H304  
Aquatic Acute 3, H402  
Aquatic Chronic 2, H411 |

*The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Full text of H-phrases: See Section 16

### 4. FIRST-AID MEASURES

**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.

First-aid Measures after Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures after Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.

First-aid Measures after Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if redness, pain, or irritation occurs.

First-aid Measures after Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention.

**Most important symptoms and effects, both acute and delayed**
Symptoms/Injuries: There are potential chronic health effects to consider.
Symptoms/Injuries after Inhalation: May cause respiratory irritation.
Symptoms/Injuries after Skin Contact: May cause skin irritation.
Symptoms/Injuries after Eye Contact: May cause eye irritation.
Symptoms/Injuries after Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: May cause damage to organs (Thymus, Liver, Bone Marrow) through prolonged or repeated exposure. Suspected of causing cancer.
Indication of Any Immediate Medical Attention and Special Treatment Needed
If you feel unwell, seek medical advice.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).
Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture
Fire Hazard: Not considered flammable but will burn at high temperatures.
Explosion Hazard: Product is not explosive. Contains Sulfur, may release small amounts of hydrogen sulfide.
Hydrogen sulfide is a highly flammable, explosive gas under certain conditions, is a toxic gas, and may be fatal. Gas can accumulate in the headspace of closed containers, use caution when opening sealed containers. Heating the product or containers can cause thermal decomposition of the product and release hydrogen sulfide.
Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters
Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Do not allow run-off from firefighting to enter drains or water sources. Do not breathe fumes or vapors from fire. Use water spray or fog for cooling exposed containers.
Protection During firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Other Information: Refer to Section 9 for flammability properties.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Use special care to avoid static electric charges. Keep away from heat, sparks, open flames, hot surfaces. – No smoking.

For Non-emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).

For Emergency Responders
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental Precautions
Prevent entry to sewers and public waters.

Methods and Material for Containment and Cleaning Up
For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill.
Reference to Other Sections
See heading 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. Precautions for Safe Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take precautionary measures against static discharge. Use only non-sparking tools. Keep away from heat, sparks, open flames, hot surfaces. – No smoking. Avoid breathing vapors, mist, spray.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, lighting, ventilating equipment.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.


Incompatible Materials: Heat sources.

Storage Temperature: > 0 °C (32 °F)

Storage Area: Store locked up.

Specific End Use(s): Asphalt Emulsion

8. EXPOSURE CONTROLS/PERSOAL PROTECTION

Control Parameters
For substances listed in Section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV, NIOSH (REL), or OSHA (PEL).

<table>
<thead>
<tr>
<th>Substance</th>
<th>USA ACGIH ACGIH TWA (mg/m³)</th>
<th>USA ACGIH ACGIH chemical category</th>
<th>USA NIOSH NIOSH REL (ceiling) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt (8052–42–4)</td>
<td>0.5 mg/m³ (fume, inhalable fraction)</td>
<td>Not classifiable as a human carcinogen fume, coat tar-free</td>
<td>5 mg/m³ (fume)</td>
</tr>
<tr>
<td>Proprietary Hydrocarbon</td>
<td>100 mg/m³ (inhalable fraction and vapor)</td>
<td>Skin – potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans</td>
<td></td>
</tr>
</tbody>
</table>

Exposure Controls
Appropriate Engineering Controls: Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Take precautionary measures against static discharges. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases/vapors may be released.
Personal Protective Equipment: Protective goggles, gloves, protective clothing. Insufficient ventilation: wear respiratory protection.

Materials for Protective Clothing: Chemically resistant materials and fabrics.
Hand Protection: Wear chemically resistant protective gloves.
Eye Protection: Chemical safety goggles.
Skin and Body Protection: Wear suitable protective clothing.
Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.
Thermal Hazard Protection: If material is hot, wear thermally resistant protective gloves.
Environmental Exposure Controls: Do not allow the product to be released into the environment.
Consumer Exposure Controls: Do not eat, drink or smoke during use.
Other Information: When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State: Liquid</td>
<td></td>
</tr>
<tr>
<td>Odor: No data available</td>
<td></td>
</tr>
<tr>
<td>pH: No data available</td>
<td></td>
</tr>
<tr>
<td>Melting Point: Not applicable</td>
<td></td>
</tr>
<tr>
<td>Boiling Point: 100°C (212.00°F)</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature: No data available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas): No data available</td>
<td></td>
</tr>
<tr>
<td>Flammable Density at 20°C: &gt;1.0 (air=1)</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity: 1.0+ / -0.2 at 60°F (15.6°C)</td>
<td></td>
</tr>
<tr>
<td>Viscosity: No data available</td>
<td></td>
</tr>
<tr>
<td>Appearance: Brown to Black</td>
<td></td>
</tr>
<tr>
<td>Order Threshold: No data available</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate: Slower (butyl acetate-1)</td>
<td></td>
</tr>
<tr>
<td>Freezing Point: No data available</td>
<td></td>
</tr>
<tr>
<td>Flash Point: No data available</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature: No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure: Not determined</td>
<td></td>
</tr>
<tr>
<td>Relative Density: No data available</td>
<td></td>
</tr>
<tr>
<td>Solubility: Water: miscible</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water: No data available</td>
<td></td>
</tr>
<tr>
<td>Other Information</td>
<td></td>
</tr>
<tr>
<td>VOC Content: 0</td>
<td></td>
</tr>
<tr>
<td>Volitales (includes water): 30 - 50%</td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.
Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
11. TOXICOLOGICAL INFORMATION

Acute Toxicity: Not classified

<table>
<thead>
<tr>
<th>Material</th>
<th>Oral Rat LD50</th>
<th>Dermal Rabbit LD50</th>
<th>Inhalation Rat LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt (8052-42-4)</td>
<td>&gt; 5000 mg/kg</td>
<td>&gt; 2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Proprietary Hydrocarbon</td>
<td></td>
<td>4720 µl/kg</td>
<td>4.6 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation: Not classified
Serious Eye Damage/Irritation: Not classified
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Suspected of causing cancer.

<table>
<thead>
<tr>
<th>Material</th>
<th>IARC Group</th>
<th>National Toxicology Program (NTP) Status</th>
<th>OSHA Hazard Communication Carcinogen List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt (8052-42-4)</td>
<td>2B</td>
<td>Twelfth Report-Items under consideration</td>
<td>In OSHA Hazard Communication Carcinogen list</td>
</tr>
<tr>
<td>Proprietary Polymer</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.
Aspiration Hazard: Not classified
Symptoms/Injuries after Inhalation: May cause respiratory irritation.
Symptoms/Injuries after Skin Contact: May cause skin irritation.
Symptoms/Injuries after Eye Contact: May cause eye irritation.
Symptoms/Injuries after Ingestion: Ingestion is likely to be harmful or have adverse effects.
Chronic Symptoms: May cause damage to organs (Thymus, Liver, Bone Marrow) through prolonged or repeated exposure. Suspected of causing cancer.

12. ECOLOGICAL INFORMATION

Ecology – General: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.
Ecology – Water: Harmful to aquatic life with long-lasting effects.

<table>
<thead>
<tr>
<th>Material</th>
<th>LC50 Fish 1</th>
<th>Exposure time: 96 h – Species: Pimephales promelas (flow-through)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary Hydrocarbon</td>
<td>35 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and Degradability: Not established.
Bioaccumulative Potential: Not established
**Asphalt (8052-42-4)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</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>
</tbody>
</table>

Mobility in Soil: No additional information available.
Other Adverse Effects: Avoid release to the environment.

### 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Sewage Disposal Recommendations: Do not empty into drains. Do not dispose of waste into sewer.
Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.
Additional Information: Handle empty containers with care because residual vapors are flammable.

### 14. TRANSPORT INFORMATION

DOT: Not regulated for transport
IMDG: Not regulated for transport
IATA: Not regulated for transport

### 15. REGULATORY INFORMATION (non-mandatory)

**US Federal Regulations**

SARA Section 311/312 Hazard Classes: Delayed (chronic) health hazard

TSCA (Toxic Substances Control Act) Inventory – Asphalt (8052-42-4): Listed
TSCA (Toxic Substances Control Act) Inventory – Water (7732-18-5): Listed
TSCA (Toxic Substances Control Act) Inventory – Proprietary Hydrocarbon: Listed
TSCA (Toxic Substances Control Act) Inventory – Proprietary Polymer: Listed

**US State Regulations**

Asphalt (8052-42-4)
Massachusetts: Right to Know List
New Jersey: Right to Know Hazardous Substance List
Pennsylvania: RTK (Right to Know) List
16. OTHER INFORMATION

GHS Full Text Phrases

| Acute Tox. 3 (Inhalation:vapor) | Acute toxicity (inhalation:vapor) Category 3 |
| Acquatic Acute 3 | Hazardous to the aquatic environment - Acute Hazard Category 3 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment - Chronic Hazard Category 2 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment - Chronic Hazard Category 3 |
| Asp. Tox. 1 | Aspiration hazard Category 1 |
| Carc. 2 | Carcinogenicity Category 2 |
| Flam. Liq. 3 | Flammable liquids Category 3 |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| STOT RE 2 | Specific target organ toxicity (repeated exposure) Category 2 |
| H226 | Flammable liquid and vapor |
| H304 | May be fatal if swallowed and enters airways |
| H315 | Causes skin irritation |
| H331 | Toxic if inhaled |
| H351 | Suspected of causing cancer |
| H373 | May cause damage to organs through prolonged or repeated exposure |
| H402 | Harmful to aquatic life |
| H411 | Toxic to aquatic life with long lasting effects |
| H412 | Harmful to aquatic life with long lasting effects |

NFPA Health Hazard: 1 – exposure could cause irritation but only minor residual injury even if not treatment is given.

NFPA Fire Hazard: 1 – must be preheated before ignition can occur

NFPA Reactivity: 0 – normally stable, even under fire exposure conditions, and are not reactive with water

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.