UPM® Permanent Pavement Repair Material
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

1.1. Product identifier
Product form : Mixture
Trade name : Permanent Pavement Repair Material

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet
UNIQUE Paving Materials Corp.
3933 East 93rd Street
Cleveland, 44106 - United States of America
T (216) 341-7711
http://www.uniquepavementmaterials.com/

1.4. Emergency telephone number
Emergency number : (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (GHS-US)
Skin Irrit. 2 H315
Carc. 1B H350
STOT RE 2 H373

Full text of H-phrases: see section 16

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

GHS07  GHS08

Signal word (GHS-US): Danger
Hazard statements (GHS-US)
H315 - Causes skin irritation
H350 - May cause cancer
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US)
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust
P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves, clothes, and goggles.
P302+P352 - If on skin: Wash with plenty of water for at least 15 minutes.
P308+P313 - If exposed or concerned: Get medical attention
P314 - Get medical attention if you feel unwell
P321 - Specific treatment (see first aid measures on this label)
P332+P313 - If skin irritation occurs: Get medical attention
P362 - Take off contaminated clothing and wash before reuse
F405 - Store locked up
P501 - Dispose of contents to meet all regulations.

2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS-US)
Not applicable
SECTION 3: Composition/Information on ingredients

3.1. Substance
Not applicable

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>Petroleum Asphalt Base</td>
<td>(CAS No) 8052-42-4</td>
<td>2 - 8</td>
<td>Carc. 1B, H350</td>
</tr>
<tr>
<td>Petroleum Solvent</td>
<td>(CAS No) 68476-34-6</td>
<td>1 - 3</td>
<td>Flam. Liq. 3, H226</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (Dermal), H312</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (Inhalation), H332</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carc. 2, H351</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT RE 2, H373</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Asp. Tox. 1, H304</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 2, H414</td>
</tr>
<tr>
<td>Quartz</td>
<td>(CAS No) 14808-60-7</td>
<td>0.091 - 0.97</td>
<td>Carc. 1A, H350</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 label where possible).
First-aid measures after inhalation : Give oxygen or artificial respiration if necessary. Get medical advice/attention if you feel unwell. Allow victim to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact : Take off contaminated clothing and wash it before reuse. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see first aid measures on this label).
First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
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

Symptoms/injuries after inhalation : Dizziness, headaches, nausea. May cause respiratory irritation.
Symptoms/injuries after skin contact : Irritation. Causes skin irritation.
Symptoms/injuries after eye contact : Severe irritation including redness, tearing and blurred vision.

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

Explosion hazard : Never use a welding or cutting torch on or near drums of this material (even empty drums) because the material can ignite explosively.
Reactivity : Stable under normal conditions.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
Special protective equipment for fire fighters : Full face piece respirator.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures
- The material can be reused; use old material as a base under fresh product.

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
- On land, sweep or shovel into suitable containers. Minimize generation of dust. 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 vapour. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust.

Hygiene measures
- Wash contaminated clothing before reuse. Wash hands thoroughly after handling.

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: Keep container closed when not in use.

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>Permanent Pavement Repair Material</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Petroleum Solvent (68476-34-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH TWA (mg/m³)</td>
</tr>
<tr>
<td>OSHA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Petroleum Asphalt Base (8052-42-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
</tr>
<tr>
<td>OSHA</td>
</tr>
</tbody>
</table>
### Quartz (14808-69-7)

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>0.025 respirable fraction</td>
</tr>
<tr>
<td>OSHA</td>
<td>Remark (OSHA)</td>
<td>0.1 mg/m³ respirable dust</td>
<td>(3) See Table Z-3.</td>
</tr>
</tbody>
</table>

### 8.2 Exposure controls

- **Personal protective equipment**: Avoid all unnecessary exposure.
- **Hand protection**: Wear protective gloves.
- **Eye protection**: Chemical goggles or safety glasses.
- **Skin and body protection**: Impervious clothing. Impervious shoes. Wear suitable protective clothing.
- **Respiratory protection**: Wear appropriate mask.
- **Other information**: Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

- **Physical state**: Solid
- **Appearance**: Black coated stone.
- **Color**: Black
- **Odor**: Tar, Petroleum
- **Odor threshold**: No data available
- **pH**: No data available
- **Relative evaporation rate (butyl acetate=1)**: Slower than ether.
- **Melting point**: No data available
- **Freezing point**: No data available
- **Boiling point**: No data available
- **Flash point**: > 200 °F Cleveland Tag Open Cup Method
- **Auto-ignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Flammability (solid, gas)**: No data available
- **Vapor pressure**: No data available
- **Relative vapor density at 20 °C**: No data available
- **Relative density**: Heavier than air.
- **Solubility**: Negligible.
  - Water: Solubility in water of component(s) of the mixture: ≤: 0.001 %
- **Log Pow**: No data available
- **Log Kow**: No data available
9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Stable under normal conditions.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
None known.

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

<table>
<thead>
<tr>
<th>Petroleum Solvent (68476-34-6)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>5000 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>2000 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>5000.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>2000.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>4500.000 ppmV/4h</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>11.000 mg/L/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>1.500 mg/L/4h</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Petroleum Asphalt Base (8052-42-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
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<table>
<thead>
<tr>
<th>Germ cell mutagenicity</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenicity</td>
<td>May cause cancer.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Petroleum Asphalt Base (8052-42-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
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<tr>
<th>Quartz (14808-60-7)</th>
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<tbody>
<tr>
<td>IARC group</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Reproductive toxicity</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
</tbody>
</table>

**Aspiration hazard**

<table>
<thead>
<tr>
<th>Potential Adverse human health effects and symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dizziness, headaches, nausea. May cause respiratory irritation.</td>
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<table>
<thead>
<tr>
<th>Symptoms/injuries after skin contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irritation. Causes skin irritation.</td>
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<thead>
<tr>
<th>Symptoms/injuries after eye contact</th>
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<tbody>
<tr>
<td>Severe irritation including redness, tearing and blurred vision.</td>
</tr>
</tbody>
</table>

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**SECTION 12: Ecological information**

12.1. Toxicity

No additional information available.

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Permanent Pavement Repair Material</th>
</tr>
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<tbody>
<tr>
<td>Persistence and degradability</td>
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</tr>
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<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Permanent Pavement Repair Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Petroleum Solvent (68476-34-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

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</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quartz (14808-60-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>
12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Effect on ozone layer

Effect on the global warming : No known ecological damage caused by this product.

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/national regulations. Dispose of contents to meet local and national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
Not regulated for transport

Additional information : No supplementary information available.

Other 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

Petroleum Solvent (68476-34-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Petroleum Asphalt Base (8052-42-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Quartz, Silica (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Not classified
15.2.2. National regulations
Quartz, Silica (14808-60-7)
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations
Petroleum Asphalt Base (8052-2-4)
U.S. - New Jersey - Right to Know Hazardous Substance List

Quartz, Silica (14808-60-7)
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information
Other information : None.

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H304</td>
<td>May be fatal if swallowed and enters airways</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects</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.