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.
3993 East 93rd Street
Cleveland, 44106 - United States of America
T (216) 341-7711
http://www.uniquepavingmaterials.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
P405 - 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, Acute Tox. 4 (Dermal), H312, Acute Tox. 4 (Inhalation), H332, Skin Irrit. 2, H315, Carc. 2, H351, STOT RE 2, H373, Asp. Tox. 1, H304, Aquatic Chronic 2, H411</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, teraing 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.
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>Material</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent Pavement Repair Material</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Petroleum Solvent (68476-34-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td></td>
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</tr>
</tbody>
</table>

ACGIH TWA (mg/m³): 100 mg/m³
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
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Explosive limits : 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>
</tr>
</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 ppm V/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>
</tbody>
</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

### Germ cell mutagenicity:
Not classified

### Carcinogenicity:
May cause cancer.

#### Petroleum Asphalt Base (8052-42-4)
- **IARC group:** 2A - Probably carcinogenic to humans, 2B - Possibly carcinogenic to humans

#### Quartz (14808-60-7)
- **IARC group:** 1 - Carcinogenic to humans

- **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
- **Potential Adverse human health effects and symptoms:** Based on available data, the classification criteria are not met.
- **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.

## 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>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Solvent (68476-34-6)</td>
<td>Not established.</td>
</tr>
<tr>
<td>Petroleum Asphalt Base (8052-42-4)</td>
<td>Not established.</td>
</tr>
<tr>
<td>Quartz (14808-60-7)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Permanent Pavement Repair Material</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Solvent (68476-34-6)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

Although there is no evidence that the components of UPM asphalt cold mix bioaccumulate in the food chains, the heavier molecular eight components of asphalt and Petroleum solvent may be persistent under some environmental conditions. Release of these products into surface waters should be avoided.
Petroleum Asphalt Base (8052-42-4)
Bioaccumulative potential | Not established.

Quartz (14808-60-7)
Bioaccumulative potential | Not established.

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
Other information : No supplementary information available.

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
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 (8052-42-4)
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>Acute Tox. 4 (Dermal)</td>
<td>Acute toxicity (dermal) Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4 (Inhalation)</td>
<td>Acute toxicity (inhalation) Category 4</td>
</tr>
<tr>
<td>Aquatic Chronic 2</td>
<td>Hazardous to the aquatic environment - Chronic Hazard Category 2</td>
</tr>
<tr>
<td>Asp. Tox. 1</td>
<td>Aspiration hazard Category 1</td>
</tr>
<tr>
<td>Carc. 1A</td>
<td>Carcinogenicity Category 1A</td>
</tr>
<tr>
<td>Carc. 1B</td>
<td>Carcinogenicity Category 1B</td>
</tr>
<tr>
<td>Carc. 2</td>
<td>Carcinogenicity Category 2</td>
</tr>
<tr>
<td>Flam. Liq. 3</td>
<td>Flammable liquids Category 3</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>STOT RE 2</td>
<td>Specific target organ toxicity (repeated exposure) Category 2</td>
</tr>
<tr>
<td>H226</td>
<td>Flammable liquid and vapour</td>
</tr>
<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.