

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

1.1. Product identifier

Product form : Mixture
 Product name : RS-2

1.2. Intended use of the product

Use of the substance/mixture : Tack Coat; Chip Seal

1.3. Details of the supplier of the safety data sheet

UNIQUE Paving Material Corp.
 3993 East 93rd Street
 Cleveland, 44105 - United States of America
 T (216) 441-4880
<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
 Eye Irrit. 2A H319
 Carc. 2 H351

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) :

Warning

Hazard statements (GHS-US) :

H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.
 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
 P264 - Wash hands thoroughly after handling
 P280 - Wear personal protective equipment
 P302+P352 - If on skin: Wash with plenty of water.
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P308+P313 - If exposed or concerned: Get medical advice/attention
 P321 - Specific treatment (see first aid measures on this label)
 P332+P313 - If skin irritation persists: Get medical attention/advice.
 P337+P313 - If eye irritation persists: Get medical attention/advice.
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P405 - Store locked up
 P501 - Dispose of contents/container to meet all regulations.

2.3. Other hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. May defat skin and cause contact dermatitis. Contains a small amount of hydrogen sulfide. Hydrogen sulfide is a fatal and highly flammable gas with a rotten egg odor that quickly causes odor fatigue. Although this product is not flammable, it may create flammable levels of hydrogen sulfide if stored or used improperly. Heating of this product and storage under elevated temperatures or over long periods of time may release higher amounts of hydrogen sulfide. Hydrogen sulfide is also an asphyxiant. 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. Product may contain low levels of polynuclear aromatic hydrocarbons (PNAs). Evidence from animal studies indicates that prolonged exposure to various PNAs can cause cancer of the lungs, skin and other organs.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Asphalt	(CAS No) 8052-42-4	57 - 65	Carc. 2, H351
Proprietary Emulsifier	(CAS No) Proprietary	1.5 - 3.5	Not classified
Sodium hydroxide	(CAS No) 1310-73-2	<= 0.6	Met. Corr. 1, H290 Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
Potassium hydroxide	(CAS No) 1310-58-3	<= 0.6	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Eye Dam. 1, H318

Full text of H-phrases: see section 16

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].

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 : When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.
- First-aid measures after skin contact : In contact with cold form: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists. In contact with molten form: Cool skin rapidly with cold water after contact with molten product. Removal of solidified molten material from skin requires medical assistance.
- First-aid measures after eye contact : In contact with cold form: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention. In contact with molten form: Protect skin and eyes from contact with molten material. Removal of solidified molten material from the eyes requires medical assistance.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Causes serious eye irritation. Causes skin irritation. Suspected of causing cancer.
Symptoms/injuries after inhalation	: Prolonged exposure may cause irritation. WARNING: irritating and toxic hydrogen sulphide gas may be present. Greater than 15-20ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50-500 ppm can cause headache, nausea, and dizziness. Continued exposure at these levels can lead to loss of reasoning and balance, difficulty in breathing, fluid in the lungs, and possible loss of consciousness. Greater than 500ppm can cause rapid unconsciousness and death if not promptly revived.
Symptoms/injuries after skin contact	: Causes skin irritation. Redness, pain, swelling, itching, burning, dryness, and dermatitis. Risk of thermal burns on contact with molten product.
Symptoms/injuries after eye contact	: Causes serious eye irritation. Contact causes severe irritation with redness and swelling of the conjunctiva. Risk of thermal burns on contact with molten product.
Symptoms/injuries after ingestion	: Ingestion is likely to be harmful or have adverse effects.
Chronic symptoms	: Suspected of causing cancer.

4.3. Indication of any immediate medical attention and special treatment needed

If burned by hot product, cool affected area immediately with cool water. Do not attempt to remove solidified material from skin. Seek medical attention immediately. If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical powder. Earth. Sand.
Unsuitable extinguishing media	: Do not use water when molten material is involved, contact of hot product with water will result in a violent expansion as the water turns to steam causing explosion with massive force. A heavy water stream may spread burning liquid.

5.2. 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 a small amount of hydrogen sulphide. Hydrogen sulphide is a fatal and highly flammable gas with a rotten egg odor that quickly causes odor fatigue. Heating of this product and storage under elevated temperatures or over long periods of time may release higher amounts of hydrogen sulphide. Hydrogen sulphide is also an asphyxiant.
Reactivity	: Hazardous reactions will not occur under normal conditions.

5.3. Advice for firefighters

Precautionary measures fire	: Exercise caution when fighting any chemical fire. Under fire conditions closed containers may rupture or explode.
Firefighting instructions	: In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Remove containers from fire area if this can be done without risk. Do not get water inside containers. Do not apply water stream directly at source of leak. Do not breathe fumes from fires or vapors from decomposition.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.
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6.1.1. For non-emergency personnel

Protective equipment	: Use appropriate personal protective equipment (PPE).
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
 Emergency procedures : Ventilate area. 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.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. 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. As an immediate precautionary measure, isolate spill or leak area in all directions.
 Methods for cleaning up : Clean up spills immediately and dispose of waste safely. Cool molten material to limit spreading. Allow liquid material to solidify before cleaning up. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Risk of thermal burns on contact with molten product. 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.
 Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Protect skin and eyes from contact with molten material. Do not get in eyes, on skin, or on clothing. Do NOT breathe (dust, vapor, mist, gas). Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
 Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
 Storage conditions : Store in a dry, cool place. Store in a well-ventilated place. Keep container tightly closed. Keep/store away from direct sunlight, extremely high or low temperatures and incompatible materials.
 Incompatible products : Strong acids, strong bases, strong oxidizers. Chlorine. Permanganates. Chlorates. Metal salts.

7.3. Specific end use(s)

Tack coat

SECTION 8: Exposure controls/personal protection

8.1. 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), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Asphalt Base (8052-42-4)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³ (fume, inhalable fraction)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carinogen fume, coal tar-free
USA ACGIH	Biological Exposure Indices (BEI)	(Medium: urine – Time: end of shift at end of workweek – Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	5 mg/m ³ (fume)

Proprietary Emulsifier		
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ 8 hours; Inhalable fraction
USA ACGIH	ACGIH STEL (mg/m ³)	6 mg/m ³ 15 minutes; Inhalable fraction

Sodium hydroxide (1310-73-2)		
USA ACGIH	ACGIH Ceiling (mg/m ³)	2 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	2 mg/m ³
USA IDLH	US IDLH (mg/m ³)	10 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	2 mg/m ³

Potassium hydroxide (1310-58-3)		
USA ACGIH	ACGIH Ceiling (mg/m ³)	2 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	2 mg/m ³

8.2. Exposure controls

Appropriate engineering controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Gas detectors should be used when flammable gases or vapors may be released. Ensure all national/local regulations are observed. Storage and handling temperatures should be kept as low as feasible to minimize fume production. Do not enter empty storage tanks until measurements of hydrogen sulphide concentration and available oxygen have been carried out.

Personal protective equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: With molten material wear thermally protective clothing. Chemically resistant materials and fabrics.

Hand Protection

: Wear protective gloves. If material is hot, wear thermally 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. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Thermal Hazard Protection

: When working with hot material, use suitable thermally protective clothing.

Other Information

: When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Blasck/brown
Odor	: Asphalt
Odor threshold	: No data available
pH	: 9 – 12
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 212 °F (100 °C)
Flash point	: No data available
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	: No data available
Specific gravity	: 0.9 – 1.1
Specific gravity/density solubility	: 7.5 – 9.2 lb/gal
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: 20 – 100 SFS

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Hazardous reactions will not occire under normal conditions.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignitions sources.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizers. Chlorine. Permanganates. Chlorates. Metal salts.

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10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂). Hydrocarbons. Nitrogen oxides. Sulfur oxides. Hydrogen sulfide. Sodium oxides. Potassium oxides. Amines. Metal oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Asphalt (8052-42-4)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 94.4 ml/m ³

Proprietary Emulsifier	
LD50 oral rat	15000 mg/kg

Sodium hydroxide (1310-73-2)	
LD50 dermal rabbit	1350 mg/kg

Potassium hydroxide (1310-58-3)	
LD50 oral rat	3333 mg/kg

Skin corrosion/irritation : Causes skin irritation.
 pH: 9 - 12
 Serious eye damage/irritation : Causes serious eye irritation.
 pH: 9 - 12
 Respiratory or skin sensitization : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Suspected of causing cancer.

Asphalt Base (8052-42-4)	
IARC group	2B
National Toxicology Program (NTP) Status	Twelfth Report - Items under consideration.
OSHA Hazard Communications Carcinogen List	In OSHA Hazard Communication Carcinogen list.

Reproductive toxicity : Not classified
 Specific target organ toxicity (single exposure) : Not classified
 Specific target organ toxicity (repeated exposure) : Not classified
 Aspiration hazard : Not classified
 Symptoms/injuries after inhalation : Prolonged exposure may cause irritation. WARNING: irritating and toxic hydrogen sulphide gas may be present. Greater than 15-20ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50-500 ppm can cause headache, nausea, and dizziness. Continued exposure at these levels can lead to loss of reasoning and balance, difficulty in breathing, fluid in the lungs, and possible loss of consciousness. Greater than 500ppm can cause rapid unconsciousness and death if not promptly revived.
 Symptoms/injuries after skin contact : Causes skin irritation. Redness, pain, swelling, itching, burning, dryness, and dermatitis. Risk of thermal burns on contact with molten product.
 Symptoms/injuries after eye contact : Causes serious eye irritation. Contact causes severe irritation with redness and swelling of the conjunctiva. Risk of thermal burns on contact with molten product.

Symptoms/injuries after ingestion : Ingestion is likely to be harmful or have adverse effects.
 Chronic symptoms : Suspected of causing cancer.

SECTION 12: Ecological information

12.1. Toxicity

Sodium hydroxide (1310-73-2)	
LC50 Fish 1	45.4 mg/l (exposure time: 96 h – Specioes: Oncorhynchus mykiss[static])
EC50 Daphnia 1	40 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Asphalt (8052-42-4)	
BCF fish 1	(no bioaccumulation expected)
Log Pow	> 6

Potassium hydroxide (1310-58-3)	
Log Pow	0.65

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local, regional, national, and international regulations.
 Additional information : Container may remain hazardous when empty. Continue to observe all precautions.
 Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

- 14.1 In accordance with DOT: Not regulated for transport.
- 14.2 In accordance with IMDG: Not regulated for transport.
- 14.3 In accordance with IATA: Not regulated for transport.

SECTION 15: Regulatory information

15.1. US Federal regulations

RS-2	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

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

Sodium hydroxide (1310-73-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard

Potassium hydroxide (1310-58-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State regulations

Asphalt (8052-42-4)	
U.S. - Massachusetts - Right to Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	

Sodium hydroxide (1310-73-2)	
U.S. - Massachusetts - Right to Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	

Potassium hydroxide (1310-58-3)	
U.S. - Massachusetts - Right to Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	

SECTION 16: Other information

Revision Date : 11/06/2015
 Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text pf Phrases:

Acute Tox. 4 (Dermal)
Acute Tox. 4 (Oral)
Aquatic Acute 3

Carc. 2
Eye Dam. 1
Eye Irrit. 2A
Met. Corr. 1
Skin Corr. 1A
Skin Irrit. 2
H290
H302
H312
H314
H315
H318
H319
H351
H402

Acute toxicity (dermal) Category 4
Acute toxicity (oral) Category 4
Hazardous to the aquatic environment – Acuter Hazard Category 3
Carcinogenicity Category 2
Serious eye damage/eye irritation Category 1
Serious eye damage/eye irritation Category 2A
Corrosive to metals Category 1
Skin corrosion/irritation Category 1A
Skin corrosion/irritation Category 2
May be corrosive to metals
Harmful if swallowed
Harmful in contact with skin
Causes severe skin burns and eye damage
Causes skin irritation
Causes serious eye damage
Causes serious eye irritation
Suspected of causing cancer
Harmful to aquatic life

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

GHS US (GHS HazCom)

“Providing valuable products from valuable people to valuable customers.”

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