

SAFETY DATA SHEET

This Safety Data Sheet complies with the Canadian Hazardous Product Regulations (WHMIS 2015), the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910 (OSHA HCS2012).

1. Product and Supplier Identification

- 1.1 **Product:** AQUA PATCH
- 1.2 **Product Use:** Cold-Mix, permanent repair solution for asphalt and concrete applications
Product Code: None
- 1.3 **Producer:** Aqua Patch Road Materials, LLC
390 N. Pacific Coast Highway, Suite 2000
El Segundo, California, USA, 90245

Telephone: (844) 869-8873 (Toll Free)
Telephone: (310) 686-8022 (Direct)
Fax: (310) 524-1091
Website: www.aquapatchasphalt.com

Supplier: As above
- 1.4 **Emergencies (24-hour number):** (844) 869-8873 (Toll Free)

2. Hazards Identification

- 2.1 **Classification of product or mixture**
Note to reader: This product in an untested mixture and GHS classification is based on the classification of the ingredients and their concentrations. Proprietary ingredients, if any, do NOT exhibit any health effects not listed in this SDS.
GHS Classification: None*
- In Section 3, asphalt is classified as carcinogenic. Reports indicate that the route of entry is by inhalation of fumes from application of hot asphalt. Under the manufacturer's recommended use, no fumes will become airborne and as a result, this product is not classifiable under GHS (WHMIS2). Health effects described herein may refer to heated product, should that accidentally happen.
- 2.2 **GHS Label Elements, including precautionary statements**
Pictogram: None
Signal Word: None
GHS Hazard Statements: None

GHS Precautionary Statements:

Prevention: None

Response: None.

Storage: None

Disposal: None

- 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS:** This product contains asphalt and when heated, may emit fumes and vapours that are suspected to cause cancer. Under the manufacturer's recommended application directions, no fumes are likely to evolve.

2.4 Additional Information

Primary Routes of Entry:

Skin Contact: Yes

Skin Absorption: Yes

Eye Contact: Yes

Ingestion: No

Inhalation: Not under proper application directions. Yes, only if heated or in a fire situation.

Emergency Overview: Accidental ingestion may cause mild gastrointestinal irritation and upset. Inhalation of particulate unlikely due to the incorporation binders to prevent free dusting. Eye contact may cause minor eye irritation. Contact with skin may cause irritation or skin sensitization. Prolonged or repeated contact may cause defatting of the skin, dryness and cracking. Dermatitis may result. For those workers who have pre-existing skin problems, acute effects may be amplified.

Effects of Short-Term (Acute) Exposure:

Inhalation: Under normal conditions of use, no adverse health effects are indicated. If this product is heated excessively, the possible release of hydrogen sulphide may occur. Hydrogen sulphide has a "rotten egg" odour when released in low concentrations. In higher concentrations, hydrogen sulphide has little or no odour and is extremely toxic. Since this product is used out of doors, recommendations of proper ventilation are unnecessary. Use of heated product is NOT recommended for use indoors without proper ventilation.

Skin Contact: Workers with chronic skin problems may require additional protection to the generally recommended Personal Protective Equipment (PPE). Persons pre-disposed to skin irritation may experience reddening of the skin and/or the occurrence of a rash.

Eye Contact: May cause minor irritation of the eyes.

Ingestion: Ingestion is an unlikely route of entry, but if ingestion occurs, mild upset of the gastrointestinal tract may occur.

Effects of Long-Term (Chronic) Exposure: Asphalt is listed as being suspected of causing cancer. This health effect is only expected if fumes are created by the heating of the product. Prolonged use without skin protection may cause defatting of the skin, dryness and cracking. Dermatitis may result.

Medical Conditions Aggravated By Exposure: Persons susceptible to skin problems may find that the use of this product will cause increased symptoms of existing skin problems.

3. Composition

3.1 Mixture composition (100%)

| Components | % (w/w) | GHS Classification |
|---|-----------|--|
| Limestone CAS No 1317-65-3 | } 90 - 95 | Skin Irritation, Category 2, H315 Eye Irritation, Category 2, H319 |
| Quartz (total in product) CAS No 14808-60-7 | | Carcinogenicity, Category 1A (inhalation), H350 |
| Gravel (Aggregate) CAS No None | | N/ap |
| Organic based oil CAS No None (Mixture) | 2.0 – 4.0 | No GHS Classification |
| Asphalt, containing Sulphur and Heavy Paraffinic Distillates. CAS No 8052-42-4 | 1.5 – 4.0 | Carcinogenicity (inhalation), Category 2 |
| Carbon Black CAS No 1333-86-4 | 0.2 – 0.5 | Carcinogenicity, Category 2, H351 |
| Styrene-butadiene Co-polymer CAS No 9003-55-8 | 0.1 – 0.4 | Skin Sensitization, Category 1, H317 Hazardous the Aquatic Environment, Category 3, H412 |
| <i>May contain trace amounts of the following:</i> | | |
| Magnesium Oxide CAS No1309-48-4 | } < 0.1 | No GHS Classification |
| Calcium Sulphate, CAS No 13397-24-5 | | No GHS Classification |
| Calcium Oxide, CAS No 1305-78-8 | | Acute Toxicity, Oral, Category 4, H302 Skin Irritation, Category 2, H315 Eye Damage, Category1, H318 STOT SE, Category 3, H335, |
| Flue Dust, CAS No 68475-76-3 | | Skin Irritation, Category 2, H315 Eye Damage, Category1, H318 Skin Sensitization, Category 1, H317 STOT SE, Category 3, H335 |

4. First Aid Measures

4.1 Description of First Aid Measures

General advice: Follow directions below. If adverse health effects linger, discomfort continues, or you have concerns, contact a physician immediately.

In case of eye contact: Immediately flush eyes with plenty of water for several minutes, lifting eyelids. Remove contact lens if present and easy to do. If irritation occurs or persists, call a physician.

In case of skin contact: Wash contaminated skin with soap and water. Remove contaminated clothing and launder before re-use. If a skin irritation or allergic reaction occurs, seek medical attention. Wash hands thoroughly before eating or smoking.

In case of inhalation: Move to fresh air. Keep victim in a comfortable position for breathing. Apply artificial respiration or give oxygen, if needed. If decomposition products have been inhaled, symptoms may be delayed and the victim should be monitored for a minimum of 48 hours.

If ingestion: Ingestion is an unlikely route of entry. Do NOT induce vomiting unless advised by a physician. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Small amounts of water may be administered to a conscious person. If vomiting occurs naturally, keep head low to reduce chances of aspiration into the lungs. Seek immediate medical advice.

4.2 Most important symptoms and effects, both acute and delayed

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Skin Contact: Workers with chronic skin problems may require additional protection to the generally recommended Personal Protective Equipment (PPE). Persons pre-disposed to skin irritation may experience reddening of the skin and/or the occurrence of a rash.

Eye Contact: May cause minor irritation of the eyes.

Ingestion: Ingestion is an unlikely route of entry, but if ingestion occurs, mild upset of the gastrointestinal tract may occur.

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Medical Conditions Aggravated By Exposure: Persons susceptible to skin problems may find that the use of this product will cause increased symptoms of existing skin problems.

4.3 Indication of any immediate medical attention and special treatment needed

If you feel unwell, seek medical advice. Treat symptomatically.

5. Fire Fighting Measures

5.1 Extinguishing Media

Suitable extinguishing media: Dry chemical powder, alcohol-resistant foam or carbon dioxide (CO₂).

Unsuitable extinguishing media: Do NOT use a heavy water stream. Use of a heavy water stream may spread a fire. Use of water on hot product, in general, is not recommended due to the production of steam and frothing.

5.2 Special hazards arising from mixture:

This product is not considered flammable but will burn if temperature is high enough. Burning will produce toxic combustion products or upon heating, flammable vapours may collect above the product. This product does not have explosive properties.

Protective Equipment: When fighting a fire from this source, general fire-fighting bunker gear, including helmet, self-contained pressure or pressure demand breathing apparatus is required.

Advice for firefighters: Use water spray to cool containers exposed to flames until well after the fire is out. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Use pressurized air mask if product is involved in a fire. Product decomposition products are hazardous to the respiratory tract. Do not allow run-off from fire fighting to enter sewers or natural waterways.

5.3 Further Information:

Sensitivity to Impact: No
Sensitivity to Static Discharge: No

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD INDEX:

HEALTH: 0 Exposure under fire conditions would offer no hazard beyond that of ordinary materials.
FLAMMABILITY: 1 Must be preheated before combustion can occur.
REACTIVITY: 0 Normally stable, even under fire exposure conditions, and are not reactive to water.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

In the case of a major spill, keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Respiratory Protection: Under normal application conditions, a respirator is not required.
Skin protection: Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves. Chemical/oil resistant clothing is recommended. Launder contaminated clothing before reuse. Dispose of gloves after single use.
Eye and Face Protection: Wear sufficient eye protection to prevent pariculate from entering the eye.
Footwear: No specific recommendation. Wear footwear suitable for the workplace or as required by regulation.
Other: None

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers or confined areas. Small spills of Aquapatch need not be reported to authorities. Only contact local authorities in case of excessive spillage to drains/aquatic environment. Follow cleanup methods as described in Section 6.3

6.3 Methods and materials for containment and cleanup

Follow directions below for an appropriate method.

Remedial Measures:

Large Spills: ELIMINATE all heat sources. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Collect mechanically. Any rags, clothing, paper products or other porous products used to clean up the spill should be placed in appropriate fire-proof containers and labelled for disposal.

Small Spills: If safe to do so, stop the leak. Wipe up with rags, paper products or suitable porous material. Floor dry material may be spread on the spill. Any rags, clothing, paper products or other porous products used to clean up the spill should be placed in appropriate fire-proof containers and labelled for disposal.

6.4 Reference to other sections

For disposal, see Section 13

7. Handling and Storage

7.1 Precautions for safe handling

Handling Procedures: Do not allow product to be excessively heated. If heated, do not breathe vapours. Wash hands after handling and before eating. Do not get this material in contact with eyes. Avoid contact with skin. Avoid prolonged exposure. Remove and wash contaminated clothing promptly.

7.2 Conditions for safe storage, including incompatibilities

Storage: Keep away from heat, sparks and open flame. Store in original container. Store in a cool, well-ventilated place, away from incompatible materials and foodstuffs. Keep away from water until use. For a list of incompatible materials, see Section 10.

7.3 Specific end use(s)

No other uses except those mentioned in Section 1.2

8. Exposure Controls, Personal Protection

8.1 Control parameters

Components with workplace control parameters

| Component | Exposure Control |
|---|--|
| Asphalt, containing sulphur CAS No 8052-42-4 | 0.50 mg/m ³ , TLV-TWA (fume, inhalable fraction), ACGIH |
| Mixture of resin and fatty acids CAS No None (Mixture) | 5.0 mg/m ³ (oil mists, respirable), TLV-TWA, ACGIH 10 mg/m ³ (oil mists, respirable), TLV-STEL, ACGIH |
| Styrene-butadiene Co-polymer CAS No 9003-55-8 | No occupational exposure limits published |
| Carbon Black CAS No 1333-86-4 | 3.5 mg/m ³ TLV-TWA, ACGIH |
| Limestone CAS No 1317-65-3 | 5 mg/m ³ OSHA Table Z-1 Limits for Air Contaminants |
| Quartz (total in product) CAS No 14808-60-7 | 0.025 mg/m ³ TLV-TWA, ACGIH 0.05 mg/m ³ TLV-TWA, NIOSH recommended exposure limits |
| Gravel (Aggregate) CAS No None | No occupational exposure limits published |

ACGIH: American Conference of Governmental Industrial Hygienists. NIOSH: National Institute for Occupational Safety and Health. OSHA: Occupational Safety and Health Administration. Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.

8.2 Exposure Controls

- Engineering Controls:** Under the manufacturer's recommended application instructions, ventilation is not required. Adequate ventilation would be recommended if product was heated.
- Respiratory Protection:** Under normal application conditions, a respirator is not required.
- Skin protection:** Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves. Chemical/oil resistant clothing is recommended. Launder contaminated clothing before reuse. Dispose of gloves after single use.
- Eye and Face Protection:** Wear sufficient eye protection to prevent pariculate from entering the eye.
- Footwear:** No specific recommendation. Wear footwear suitable for the workplace or as required by regulation.
- Other:** Emergency eyes wash fountains should be available in vicinity of use.

Control of environmental exposure:

When used as directed, no specific environmental requirements are necessary.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

| | |
|--------------------------------------|-------------------------------------|
| Appearance: | Black |
| Odour: | Little to no odour |
| Odour Threshold: | Not available |
| pH: | Not applicable |
| Melting Point/Freezing Point: | Not available |
| Initial Boiling Point: | Not available |
| Pour Point: | Not available |
| Flash Point: | 199°C (390°F) Method not stipulated |
| Evaporation Rate: | Not available |
| Flammability: | Not flammable |
| Upper Explosion Limit: | Not available |
| Lower Explosion Limit: | Not available |
| Vapour Pressure: | Not available |
| Vapour Density: | Not available |
| Relative Density: | 0.905 (water = 1) |
| Solubility: | Insoluble in water |
| Partition Coefficient: | Not available |
| Autoignition Temperature: | 257°C (495°F) (binder) |
| Decomposition Temperature: | Not available |
| Explosive Properties: | None |
| Oxidizing Properties: | None |
| Percent Volatiles: | Not available |
| Viscosity, cSt@40°C: | Not applicable |
| Viscosity, cSt@100°C: | Not applicable |
| Viscosity Index: | Not available |

9.2 **Other safety information:** None

10. Stability and Reactivity

- 10.1 Reactivity**
Not reactive. Hazardous polymerization will not occur.
- 10.2 Chemical Stability**
Stable under recommended storage conditions. Moisture may deteriorate stored product.
- 10.3 Possibility of hazardous reactions**
Under normal conditions of use and storage, hazardous reactions will not occur.
- 10.4 Conditions to avoid**
Do not heat. Store away from strong oxidizers.
- 10.5 Incompatible materials**
Strong oxidizing agents
- 10.6 Hazardous decomposition products**
Fumes, carbon dioxide, unidentified hydrocarbons in smoke.

11. Toxicological Information

- 11.1 Information on toxicological effects**
- Acute toxicity**
No GHS classification.
- Skin corrosion/irritation**
No GHS classification.
- Serious eye damage/eye irritation**
No GHS classification.
- Respiratory or skin sensitization**
No GHS classification.
- Germ Cell Mutagenicity**
No GHS classification
- Carcinogenicity**
No GHS classification
- Reproductive toxicity**
No GHS classification.
- Specific Target Organ Toxicity – Single exposure**
No GHS classification.
- Specific Target Organ Toxicity – Repeated exposure**
No GHS classification.
- Aspiration Hazard**
No GHS classification
- Aquatic Toxicity**
No GHS classification.

Additional information

| Component | LD ₅₀ | LC ₅₀ |
|--|--|--|
| Asphalt CAS No 8052-42-4 | >2000 mg/kg (dermal/rabbit) >5000 mg/kg (oral/ rat) | >94.4 mg/m ³ (Inhalation/rat 4 hour) |
| Mixture of resin and fatty acids CAS No Mixture | >2000 mg/kg (dermal/albino rabbit) >10000 mg/kg (oral/albino rat) No death occurred after to 14 days | Not available |
| Styrene-butadiene Co-polymer CAS No 9003-55-8 | Not available | Not available |
| Carbon Black CAS No 1333-86-4 | >8000 mg/kg (oral/rat) >3000 mg/kg (dermal/rabbit) | Not available |
| Limestone CAS No 1317-65-3 | Not available | Not available |
| Quartz (total in product) as sand CAS No 14808-60-7 | Not available | Not available |

12. Ecological Information

12.1 Toxicity

Asphalt:

| | | |
|---------------------|----------|--|
| Sulphur Fraction, | Fish: | LC ₅₀ >866 mg/l Brachydanio rerio, static test, 96hr LC ₅₀ 14 mg/l Lepomis macrochirus, static test, 96hr |
| | Daphnia: | EC ₅₀ 736 mg/l Daphnia magna, time not specified |
| Petroleum Fraction, | Fish: | LC ₅₀ >5000 mg/l Oncorhynchus mykiss, 96 hr |
| | Daphnia: | EC ₅₀ >1000 mg/l Daphnia magna, 48 hr |

Carbon:

| | |
|----------|--|
| Fish: | LC ₅₀ >1000 mg/l Danio Rerio, 96 hr |
| Daphnia: | EC ₅₀ >5600 mg/l Daphnia magna, 24 hr |

Mixture of resin and fatty acids:

| | |
|-----------|---|
| Fish: | LL ₅₀ >10000 mg/l Danio Rerio, 96 hr |
| Algae: | EL ₅₀ >1000 mg/l Green Algae, Growth rate, 72 hr |
| Crustacea | EL ₅₀ >1000 mg/l, 48 hr |

12.2 Persistence and degradability

Not established

12.3 Bioaccumulative potential

Bioaccumulation not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not conducted

12.6 Other adverse effects

No data available

13. Disposal Considerations

13.1 Waste treatment methods

Product: Review federal, provincial or state, and local government requirements prior to disposal. Store material for disposal as indicated in Storage Conditions. Disposal by controlled incineration may be acceptable.

Contaminated Packaging:

Contaminated packagings should be emptied as much as possible before disposal.

14. Transport Information

Transport of Dangerous Goods (TDG and CLR): Not regulated

United States Department of Transport (49CFR): Not regulated

Mexico (NOM-004-SCT2-1994, Land Transport of Hazardous Materials): Not regulated

International Air Transport Association (IATA): Not regulated

International Maritime Organization (IMO): Not regulated

15. Regulatory Information

US Federal Regulations: This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200 (HCS 2012). All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

US State Regulations:

State of California: This product contains chemicals which are known by the State of California to cause cancer.
Carbon Black, CAS No 1333-86-4

US. Massachusetts RTK - Substance List:

Asphalt, CAS No 8052-42-4
Sulphur, CAS No 7704-34-9
Carbon Black, CAS No 1333-86-4
Quartz, CAS No 14808-60-7
Limestone, CAS No 1317-65-3
Magnesium Oxide, CAS No 1309-48-4

US. New Jersey Worker and Community Right-to-Know Act:

Carbon Black, CAS No 1333-86-4
Sulphur, CAS No 7704-34-9
Carbon Black, CAS No 1333-86-4
Quartz, CAS No 14808-60-7
Limestone, CAS No 1317-65-3
Magnesium Oxide, CAS No 1309-48-4

US. Pennsylvania RTK - Hazardous Substances:

Carbon Black, CAS No 1333-86-4
Sulphur, CAS No 7704-34-9
Carbon Black, CAS No 1333-86-4
Quartz, CAS No 14808-60-7
Limestone, CAS No 1317-65-3
Magnesium Oxide, CAS No 1309-48-4

16. Other Information

Original Preparation Date: January 28, 2019

Prepared by: K.J. Pearson, BC Hazmat Management Ltd., 6 – 10114 McDonald Park Road, Sidney, B.C., V8L 5X8

Disclaimer: This Safety Data Sheet (SDS) was prepared using information provided by CCINFO, ingredient supplier SDS and other relevant sources. This product has been classified using weight of evidence, expert judgment and previous testing as per Part 1.3 of the Seventh Edition of The Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The information in this SDS is offered for your consideration and guidance when exposed to this product. *Aqua Patch Road Materials, LLC* expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of Aqua Patch Road Materials, LLC

Revisions: None