

SAFETY DATA SHEET

1. Identification

| Product identifier | Onyx R1PNA |
|---------------------------------------|---|
| Other means of identification | None. |
| Recommended use | Not available. |
| Recommended restrictions | None known. |
| Manufacturer/Importer/Suppl | ier/Distributor information |
| Company Name | ErgonArmor, a division of Ergon Asphalt & Emulsions, Inc. |
| Address | 2829 Lakeland Drive |
| | Jackson, MS 39232 |
| | USA |
| After hours telephone number | 1-800-222-7122 |
| Normal work hours telephone number | 1-877-982-7667 |
| Website | www.ergonarmor.com |
| E-mail | sds@ergon.com |
| Emergency 24-hour telephone number | CHEMTREC: North America 1-800-424-9300 International 1-800-527-3887 |
| Information on operation hours | 8:00 a.m. to 5:00 p.m. |

2. Hazard(s) identification

| Physical hazards | Not classified. |
|--|--|
| Health hazards | Not classified. |
| Environmental hazards | Not classified. |
| OSHA defined hazards | Not classified. |
| Label elements | |
| Hazard symbol | None. |
| Signal word | None. |
| Hazard statement | The mixture does not meet the criteria for classification. |
| Precautionary statement | |
| Prevention | Observe good industrial hygiene practices. |
| Response | Wash hands after handling. |
| Storage | Store away from incompatible materials. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Hazard(s) not otherwise classified (HNOC) | Molten asphalt presents a thermal hazard. |
| Supplemental information | Vapors containing hydrogen sulfide may accumulate during storage or transport. HYDROGEN SULFIDE (H2S) can be harmful if inhaled. |

3. Composition/information on ingredients

| lixtures | | | |
|---------------------------|--------------------------|------------|---------|
| Chemical name | Common name and synonyms | CAS number | % |
| ASPHALT | | 8052-42-4 | 15 - 25 |
| QUARTZ | | 14808-60-7 | 1 - 10 |
| TITANIUM DIOXIDE | | 13463-67-7 | < 1 |
| Other components below re | portable levels | | 76.99 |

4. First-aid measures

| Inhalation | If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist. |
|--|--|
| Skin contact | Immediately place the affected skin under running water for at least 20 minutes - DO NOT DELAY. Prolonged flushing/cooling is necessary. Ice (or "cold packs") may be used in the event that water is unavailable. Do not attempt to remove the asphalt. Do not place any sheets or towels on top of the asphalt due to the risk of adhesion. Get immediate medical attention. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention or advice. |
| Ingestion | Rinse mouth. DO NOT induce vomiting. Get medical attention immediately. If ingestion of a large amount does occur, call a poison control center immediately. |
| Most important symptoms/effects, acute and delayed | Potential for severe thermal burns. |

5. Fire-fighting measures

| Suitable extinguishing media | Extinguish with foam, carbon dioxide, dry powder or water fog. |
|---|--|
| Unsuitable extinguishing media | Do not use a solid water stream as it may scatter and spread fire. |
| Specific hazards arising from the chemical | Irritating and toxic gases or fumes may be released during a fire. |
| Special protective equipment and precautions for firefighters | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. |
| Fire fighting equipment/instructions | ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray. Use of foam or water may cause frothing. |
| Specific methods | In the event of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. |

6. Accidental release measures

| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. |
|---|---|
| Methods and materials for containment and cleaning up | Dike far ahead of spill for later disposal. Ventilate area and avoid breathing vapors or mist. For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways. Allow spilled material to solidify and scrape up with shovels into a suitable container for recycle or disposal. |
| Environmental precautions | Not available. |
| 7. Handling and storage | |
| Precautions for safe handling | Avoid contact with molten material. Hydrogen sulfide, a very highly toxic gas, may be present with this material. Keep face clear of tank and/or tank car openings. Do not add water to hot product. |

Conditions for safe storage,
including any
incompatibilitiesThis may result in frothing of the mixture causing hot asphalt to overflow the containerPrevent electrostatic charge build-up by using common bonding and grounding techniques. Store in
a well-ventilated place. It is recommended that the storage temperature never exceed 350°F.

8. Exposure controls/personal protection

Occupational exposure limits

| US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) | | | | |
|---|---------|------------|------------------|--|
| Components | Туре | Value | Form | |
| QUARTZ (CAS 14808-60-7) | PEL | 0.05 mg/m3 | Respirable dust. | |
| TITANIUM DIOXIDE (CAS 13463-67-7) | PEL | 15 mg/m3 | Total dust. | |
| US. OSHA Table Z-3 (29 CFR 191 | 0.1000) | | | |
| Components | Туре | Value | Form | |
| QUARTZ (CAS 14808-60-7) | TWA | 0.1 mg/m3 | Respirable. | |

| US. OSHA Table Z-3 (29 C Components | Туре | Value | Form |
|--|---|--------------------------|----------------------|
| | | 2.4 mppcf | Respirable. |
| TITANIUM DIOXIDE (CAS 13463-67-7) | TWA | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| | | 50 mppcf | Total dust. |
| | | 15 mppcf | Respirable fraction. |
| US. ACGIH Threshold Lim | | | - |
| Material | Туре | Value | Form |
| Onyx R1PNA | TWA | 0.5 mg/m3 | Inhalable fraction. |
| Components | Туре | Value | Form |
| ASPHALT (CAS 8052-42-4) | TWA | 0.5 mg/m3 | Inhalable fume. |
| QUARTZ (CAS 14808-60-7) | TWA | 0.025 mg/m3 | Respirable fraction. |
| TITANIUM DIOXIDE (CAS 13463-67-7) | TWA | 10 mg/m3 | |
| US. NIOSH: Pocket Guide Material | to Chemical Hazards Type | Value | Form |
| Onyx R1PNA | Ceiling | 5 mg/m3 | Fume. |
| Components | Туре | Value | Form |
| ASPHALT (CAS 8052-42-4) | Ceiling | 5 mg/m3 | Fume. |
| QUARTZ (CAS 14808-60-7) | TWA | 0.05 mg/m3 | Respirable dust. |
| ogical limit values | No biological exposure limits noted for | or the ingredient(s). | |
| ropriate engineering trols | Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. | | |
| ividual protection measure | es, such as personal protective equi | ipment | |
| Eye/face protection | Safety glasses. Wear face shield if the | ere is risk of splashes. | |
| Skin protection | | | |
| Hand protection | Thermally protective, chemical resistant gloves are recommended. If contact with forearms is like wear gauntlet style gloves. | | |
| Other | Normal work clothing (long sleeved shirts and long pants) is recommended. Wear 100% cotton clothing. | | |
| Respiratory protection | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. | | |
| Thermal hazards | During product use, there is a risk of | thermal burns. | |
| eral hygiene siderations | Always observe good personal hygiene measures, such as washing after handling the material an before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment remove contaminants. | | |
| Physical and chemica | l properties | | |
| | | | |
| earance | Brown to black in color. | | |
| earance Physical state | Brown to black in color. Liquid. | | |
| | | | |

Tar-like

6 - 7

Not available.

Odor

pН

Odor threshold

| Initial boiling point and boiling range | >= 212 °F (>= 100 °C) |
|--|---|
| Flash point | > 212.0 °F (> 100.0 °C) Pensky-Martens Closed Cup |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or e | xplosive limits |
| Flammability limit - lower (%) | Not available. estimated |
| Flammability limit - upper (%) | Not available. estimated |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Relative density | 1.2 |
| Relative density temperature | 77 °F (25 °C) |
| Solubility(ies) | |
| Solubility (water) | Insoluble |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | > 700 °F (> 371.11 °C) |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Specific gravity | 1 |
| | |

10. Stability and reactivity

| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport |
|---------------------------------------|--|
| Chemical stability | Stable under normal temperature conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Conditions to avoid | Do not overheat product. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition products | Upon decomposition, this product may yield sulfur dioxide, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Hydrogen sulfide. |

11. Toxicological information

Information on likely routes of exposure

| Inhalation | May cause irritation to the respiratory system. | |
|--|---|--|
| Skin contact | May be irritating to the skin. | |
| Eye contact | May be irritating to eyes. | |
| Ingestion | Expected to be a low ingestion hazard. | |
| Symptoms related to the physical, chemical and toxicological characteristics | Not available. | |
| Information on toxicological effects | | |

| Acute toxicity | Not available. |
|---------------------------|----------------|
| Skin corrosion/irritation | Not available. |
| Serious eye damage/eye | Not available. |
| irritation | |

Respiratory or skin sensitization Respiratory sensitization Not available.

| Skin sensitization | Not available. | | | |
|--|--|---|--|--|
| Germ cell mutagenicity | No data available to indicate p mutagenic or genotoxic. | product or any components present at greater than 0.1% are | | |
| Carcinogenicity | This product contains crystalli form the normal routes of exp | ne silica. Silica is a known carcinogen; however in this encapsulatec posure are unavailable. | | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | | | |
| ASPHALT (CAS 8052-42-4) | | 2B Possibly carcinogenic to humans. | | |
| QUARTZ (CAS 14808-60-7) | | 1 Carcinogenic to humans. | | |
| TITANIUM DIOXIDE (CAS 13463-67-7) | | 2B Possibly carcinogenic to humans. | | |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052) | | | | |
| QUARTZ (CAS 14808-60-7) | | Cancer | | |
| US. National Toxicology Pr | ogram (NTP) Report on Car | cinogens | | |
| QUARTZ (CAS 14808-60-7) | | Known To Be Human Carcinogen. | | |
| Reproductive toxicity | Not available. | | | |
| Specific target organ toxicity - single exposure | Not available. | | | |
| Specific target organ toxicity - repeated exposure | Not available. | | | |
| Aspiration hazard | Not available. | | | |
| Chronic effects | Prolonged inhalation may be l | narmful. | | |

12. Ecological information

| Ecotoxicity | This product has no known eco-toxicological effects. |
|----------------------------------|--|
| Persistence and degradability | Not available. |
| Bioaccumulative potential | Not available. |
| Mobility in soil | Not available. |
| Other adverse effects | Not available. |

13. Disposal considerations

| Disposal instructions | Allow molten resin to solidify before disposal. Dispose in accordance with all applicable regulations. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261. |
|--|---|
| Hazardous waste code | Not applicable. |
| Waste from residues / unused products | Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | No special precautions. |

14. Transport information

DOT

Not regulated as dangerous goods.

ΙΑΤΑ

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not available. Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated. CERCLA Hazardous Substance List (40 CFR 302.4) ASPHALT (CAS 8052-42-4) Listed. SARA 304 Emergency release notification Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

QUARTZ (CAS 14808-60-7)

Cancer lung effects immune system effects kidney effects

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance Not listed. **Classified hazard** Skin corrosion or irritation categories Serious eye damage or eye irritation Carcinogenicity Specific target organ toxicity (single or repeated exposure) Hazard not otherwise classified (HNOC) SARA 313 (TRI reporting) Not regulated. Other federal regulations Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Safe Drinking Water Act Not regulated. (SDWA) US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer. **California Proposition 65** California Proposition 65 - CRT: Listed date/Carcinogenic substance ASPHALT (CAS 8052-42-4) Listed: January 1, 1990 QUARTZ (CAS 14808-60-7) Listed: October 1, 1988 TITANIUM DIOXIDE (CAS 13463-67-7) Listed: September 2, 2011 US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a)) ASPHALT (CAS 8052-42-4) QUARTZ (CAS 14808-60-7) TITANIUM DIOXIDE (CAS 13463-67-7) **International Inventories** On inventory (yes/no)* Country(s) or region Inventory name Australian Inventory of Chemical Substances (AICS) Australia Yes Canada Domestic Substances List (DSL) Yes Canada Non-Domestic Substances List (NDSL) No China Inventory of Existing Chemical Substances in China (IECSC) Yes European Inventory of Existing Commercial Chemical Substances Yes Europe (EINECS) Europe European List of Notified Chemical Substances (ELINCS) No Inventory of Existing and New Chemical Substances (ENCS) lanan Yes

| Japan | inventory of Existing and New Chemical Substances (ENCS) | 103 |
|-----------------------------|--|-----|
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

| Issue date Version # Further information | 10-24-2019 01 HMIS® is a registered trade and service mark of the NPCA. |
|--|--|
| NFPA ratings | Health: 2 Flammability: 1 Instability: 0 |
| Disclaimer | The information provided in 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 designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific |

materials or in any process, unless specified in the text.

material designated and may not be valid for such material used in combination with any other