SAFETY DATA SHEET

1. Identification

Product identifier **Onyx - R1**

Other means of identification Not available.

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer: Ergon Asphalt & Emulsions, Inc.

Address: 2829 Lakeland Drive
Jackson, MS 39232

Website: www.ergonasphalt.com

Telephone: 1-800-222-7122 (Customer Service)

E-mail: sds@ergon.com

24 hour Emergency (CHEMTREC): North America 1-800-424-9300; International 1-703-527-3887

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

*Hazards not stated here are "Not classified", "Not applicable" or "Classification not possible".

Label elements

Hazard symbol None.

Signal word Not available.

Hazard statement Not available.

Prevention Not available.

Response If exposed or concerned: Get medical advice/attention.

Storage Store locked up.

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 or fatal if inhaled.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ASPHALT		8052-42-4	10 - 25
KAOLIN		1332-58-7	10 - 25
Amorphous Silica		61790-53-2	<=10
Alumina Silicate		1302-93-8	<=5
CALCIUM OXIDE		1305-78-8	< 3
Silica		112945-52-5	<=3

Composition comments Components not listed are either non-hazardous or below the required disclosure threshold.

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.

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. This may result in frothing of the mixture causing hot asphalt to overflow the container.
Conditions for safe storage, including any incompatibilities	Prevent 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	Type	Value	Form
CALCIUM OXIDE (CAS 1305-78-8)	PEL	5 mg/m3	
KAOLIN (CAS 1332-58-7)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
HYDROGEN SULFIDE (CAS 7783-06-4)	Ceiling	20 ppm

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
Amorphous Silica (CAS 61790-53-2)	TWA	0.8 mg/m3
		20 mppcf
Silica (CAS 112945-52-5)	TWA	0.8 mg/m3
		20 mppcf

US. ACGIH Threshold Limit Values

Material	Type	Value	Form
Onyx - R1 (CAS Mixture)	TWA	0.5 mg/m3	Inhalable fraction.

Components	Type	Value	Form
Alumina Silicate (CAS 1302-93-8)	TWA	1 mg/m3	Respirable fraction.
ASPHALT (CAS 8052-42-4)	TWA	0.5 mg/m3	Inhalable fraction.
CALCIUM OXIDE (CAS 1305-78-8)	TWA	2 mg/m3	
HYDROGEN SULFIDE (CAS 7783-06-4)	STEL	5 ppm	
	TWA	1 ppm	
KAOLIN (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value	Form
Onyx - R1 (CAS Mixture)	Ceiling	5 mg/m3	Fume.

Components	Type	Value	Form
Amorphous Silica (CAS 61790-53-2)	TWA	6 mg/m3	
ASPHALT (CAS 8052-42-4)	Ceiling	5 mg/m3	Fume.
CALCIUM OXIDE (CAS 1305-78-8)	TWA	2 mg/m3	
HYDROGEN SULFIDE (CAS 7783-06-4)	Ceiling	15 mg/m3	
		10 ppm	
KAOLIN (CAS 1332-58-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Silica (CAS 112945-52-5)	TWA	6 mg/m3	

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses. Wear face shield if there is risk of splashes.

Hand protection Thermally protective, chemical resistant gloves are recommended. If contact with forearms is likely, 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.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Brown to black in color.

Physical state Liquid.

Form Not available.

Color Black.

Odor Tar-like

Odor threshold Not available.

pH 6 - 7

Melting point/freezing point Not available.

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 explosive 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.

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

Ingestion	Causes digestive tract burns.
Inhalation	May cause irritation to the respiratory system.
Skin contact	Molten material will produce thermal burns.
Eye contact	Molten material will produce thermal burns.
Symptoms related to the physical, chemical and toxicological characteristics	Not available.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
Onyx - R1 (CAS Mixture)		
Acute		
Dermal		
LD50	Rat	29411.7656 mg/kg estimated
Inhalation		
LC50	Monkey	70 mg/l, 35 Minutes estimated
	Mouse	150 mg/l, 18 Minutes estimated
		38 mg/l, 410 Minutes estimated
		9.6 mg/l, 804 Minutes estimated
		2.4001 mg/l, 960 Minutes estimated
	Rat	150 mg/l, 14 Minutes estimated
		38.0001 mg/l, 960 Minutes estimated

Product	Species	Test Results
Oral		
LD50	Rat	26011.5605 mg/kg estimated

Components	Species	Test Results
Amorphous Silica (CAS 61790-53-2)		
Acute		
Oral		
LD50	Mouse	> 15000 mg/kg
	Rat	> 22500 mg/kg
KAOLIN (CAS 1332-58-7)		
Acute		
Dermal		
LD50	Rat	> 5000 mg/kg
Oral		
LD50	Rat	> 5000 mg/kg
Silica (CAS 112945-52-5)		
Acute		
Oral		
LD50	Mouse	> 15000 mg/kg
	Rat	> 22500 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Not available.

Serious eye damage/eye irritation Not available.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization Not available.

Germ cell mutagenicity Not available.

Carcinogenicity IARC: occupational exposures to straight-run bitumens and their emissions during road paving are "possibly carcinogenic to humans" (Group 2B). This product contains crystalline silica. Silica is a known carcinogen; however in this encapsulated form the normal routes of exposure are unavailable.

IARC Monographs. Overall Evaluation of Carcinogenicity

Amorphous Silica (CAS 61790-53-2)	3 Not classifiable as to carcinogenicity to humans.
ASPHALT (CAS 8052-42-4)	2B Possibly carcinogenic to humans.
Silica (CAS 112945-52-5)	3 Not classifiable as to carcinogenicity to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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 harmful.

12. Ecological information

Ecotoxicity This product has no known eco-toxicological effects.

Product		Species	Test Results
Onyx - R1 (CAS Mixture)			
Fish	LC50	Fish	5.8589 mg/l, 96 hours estimated

Components		Species	Test Results
HYDROGEN SULFIDE (CAS 7783-06-4)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	0.009 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

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.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

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.
HYDROGEN SULFIDE (CAS 7783-06-4)	Listed.

US EPCRA Section 304 Extremely Haz. Subs. & CERCLA Haz. Subs.: Section 304 EHS reportable quantity

HYDROGEN SULFIDE (CAS 7783-06-4)	100 LBS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
HYDROGEN SULFIDE	7783-06-4	100	500 lbs		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
HYDROGEN SULFIDE	7783-06-4	1 - < 3

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)

HYDROGEN SULFIDE (CAS 7783-06-4)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US. Massachusetts RTK - Substance List

Amorphous Silica (CAS 61790-53-2)
ASPHALT (CAS 8052-42-4)
CALCIUM OXIDE (CAS 1305-78-8)
HYDROGEN SULFIDE (CAS 7783-06-4)
KAOLIN (CAS 1332-58-7)
Silica (CAS 112945-52-5)

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

HYDROGEN SULFIDE (CAS 7783-06-4) 500 LBS

US. Pennsylvania RTK - Hazardous Substances

Amorphous Silica (CAS 61790-53-2)
ASPHALT (CAS 8052-42-4)
CALCIUM OXIDE (CAS 1305-78-8)
HYDROGEN SULFIDE (CAS 7783-06-4)
KAOLIN (CAS 1332-58-7)
Silica (CAS 112945-52-5)

US. Rhode Island RTK

HYDROGEN SULFIDE (CAS 7783-06-4)

US. California Proposition 65

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

ASPHALT (CAS 8052-42-4) Listed: January 1, 1990

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	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 08-31-2016

Version # 01

Further information HMIS® is a registered trade and service mark of the NPCA.

NFPA ratings Health: 1
Flammability: 1
Instability: 0

Disclaimer

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