SAFETY DATA SHEET

1. Identification

Product identifier: Asphalt Flux
Other means of identification: Not available.
Recommended use: Asphalt Paving
Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

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: Wear protective gloves/eye protection/face protection.
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

Substances

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td></td>
<td>8052-42-4</td>
<td>100</td>
</tr>
</tbody>
</table>

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.

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

<table>
<thead>
<tr>
<th>US. OSHA Table Z-2 (29 CFR 1910.1000) Components</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROGEN SULFIDE (CAS 7783-06-4)</td>
<td>20 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values Material Components Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Flux</td>
<td>0.5 mg/m³ Inhalable fraction.</td>
</tr>
<tr>
<td>ASPHALT (CAS 8052-42-4)</td>
<td>0.5 mg/m³ Inhalable fraction.</td>
</tr>
<tr>
<td>HYDROGEN SULFIDE (CAS 7783-06-4)</td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. NIOSH: Pocket Guide to Chemical Hazards Material Components Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Flux</td>
<td>5 mg/m³ Fume.</td>
</tr>
<tr>
<td>ASPHALT (CAS 8052-42-4)</td>
<td>5 mg/m³ Fume.</td>
</tr>
<tr>
<td>HYDROGEN SULFIDE (CAS 7783-06-4)</td>
<td>15 mg/m³ Fume.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Biological limit values</th>
<th>Appropriate engineering controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>No biological exposure limits noted for the ingredient(s).</td>
<td>Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.</td>
</tr>
</tbody>
</table>
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**
Semi-solid at ambient temperature

**Color**
Black.

**Odor**
Tar-like

**Odor threshold**
Not available.

**pH**
Not available.

**Melting point/freezing point**
Not available.

**Initial boiling point and boiling range**
> 700 °F (> 371.11 °C)

**Flash point**
> 446.0 °F (> 230.0 °C) Open Cup

**Evaporation rate**
Not available.

**Flammability (solid, gas)**
Not available.

**Upper/lower flammability or explosive limits**
- **Flammability limit - lower (%)**
- **Flammability limit - upper (%)**
- **Explosive limit - lower (%)**
- **Explosive limit - upper (%)**

**Vapor pressure**
< 1 mm Hg at 70°F

**Vapor density**
> 5

**Relative density**
0.96 - 1.06

**Solubility(ies)**
- **Solubility (water)**
- **Partition coefficient (n-octanol/water)**

**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.

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Material name: Asphalt Flux
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
Not available.

Components

<table>
<thead>
<tr>
<th>HYDROGEN SULFIDE (CAS 7783-06-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute</strong></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
</tr>
<tr>
<td>LC50</td>
</tr>
<tr>
<td>Monkey</td>
</tr>
<tr>
<td>Mouse</td>
</tr>
<tr>
<td>1.5 mg/l, 18 Minutes</td>
</tr>
<tr>
<td>0.38 mg/l, 410 Minutes</td>
</tr>
<tr>
<td>0.096 mg/l, 804 Minutes</td>
</tr>
<tr>
<td>Rat</td>
</tr>
<tr>
<td>1.5 mg/l, 14 Minutes</td>
</tr>
</tbody>
</table>

* 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). Contains polycyclic aromatic compounds (PACs). Prolonged and/or repeated skin contact with certain PACs has been shown to cause skin cancer. Prolonged and/or repeated exposures by inhalation of certain PACs may also cause cancer of the lung and of other sites of the body.

IARC Monographs. Overall Evaluation of Carcinogenicity
ASPHALT (CAS 8052-42-4) 2B Possibly carcinogenic 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.
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
UN number UN3257
UN proper shipping name Elevated temperature liquid, n.o.s., at or above 100°C and below its flash point (including molten metals, molten salts, etc.)

Transport hazard class(es)
Class 9
Subsidiary risk -
Label(s) 9
Packing group III
Special precautions for user Not available.
Special provisions IB1, T3, TP3, TP29
Packaging exceptions None
Packaging non bulk None
Packaging bulk 247

IATA
UN number UN3257
UN proper shipping name Elevated temperature liquid, n.o.s. at or above 100°C and below its flash point (including molten metals, molten salts, etc.)

Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group Not applicable.
Environmental hazards No.
ERG Code 9L
Special precautions for user Not available.
Other information Allowed.
Passenger and cargo aircraft Allowed.
Cargo aircraft only

IMDG
UN number UN3257
UN proper shipping name ELEVATED TEMPERATURE LIQUID, N.O.S. at or above 100°C and below its flashpoint (including molten metals, molten salts, etc.)

Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group III
Environmental hazards No.
Marine pollutant EmS F-A, S-P*

Material name: Asphalt Flux
SDS US
5656  Version #: 01  Issue date: 11-11-2015
Special precautions for user
Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
DOT; IATA; IMDG

Further information
Shipping Marking: HOT. Transport by air is forbidden when shipped above 212°F (100°C). If the product is shipped at temperatures below 212°F (100°C), it is not regulated for transport by ground, air or vessel.

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)
Not 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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>Reportable quantity</th>
<th>Threshold planning quantity</th>
<th>Threshold planning quantity, lower value</th>
<th>Threshold planning quantity, upper value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROGEN SULFIDE</td>
<td>7783-06-4</td>
<td>100</td>
<td>500 lbs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SARA 311/312 Hazardous chemical
Yes

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)
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
ASPHALT (CAS 8052-42-4)
HYDROGEN SULFIDE (CAS 7783-06-4)

US. New Jersey Worker and Community Right-to-Know Act
HYDROGEN SULFIDE (CAS 7783-06-4) 500 LBS
US. Pennsylvania RTK - Hazardous Substances
ASPHALT (CAS 8052-42-4)
HYDROGEN SULFIDE (CAS 7783-06-4)

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

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

Issue date 11-11-2015
Version # 01

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

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