

ASPHALT EMULSION, INC

Material Safety Data Sheet Cutback Asphalt, Rapid Cure (RC)-All Grades

Emergency Overview

Physical State : Liquid above 140°F. Viscous liquid at 70°F
Color : Dark brown to black
Odor : Strong petroleum odor at use temperatures above 140°F
Caution : **FLAMMABLE LIQUID. VAPORS MAY EXPLODE**
Product may contain or release Hydrogen Sulfide (H₂S) which can be fatal if inhaled at high concentrations
Do not mix hot asphalt with water
Harmful or fatal if swallowed
Causes burns and skin irritation
Causes damage to eyes and respiratory tract
Avoid breathing vapors or mists or contact with liquid

1. Product and Company Identification

Product Name : **CUTBACK ASPHALT, RAPID CURE (RC)**
Product Family : Asphalt Mixture
CAS Number : Mixture
Synonyms : Rapid Cure Asphalt, RC Asphalt, Cutback Asphalt, RC-70, RC-250, RC-800, RC-8000, Road Asphalt, Road Oil, Bitumen
Manufacturer : **Asphalt Emulsion, Inc.**
1524 Valley Road
Richmond, VA 23222
804-321-5912
Technical Contact : 804-264-0707
Emergency Contact : 1-800-424-9300 (ChemTrec – 24 hour)
Email : www.asphalt-emulsion.com

2. Composition

Component Name	CAS Number	Concentration (%)
Petroleum Asphalt	8052-42-4	70-90
Naphtha	8052-41-3	10-30
Hydrogen Sulfide	7783-06-4	<0.1
Polycyclic Aromatic Hydrocarbons	130498-28-2	<0.1

3. Hazards Identification

Major Route(s) of Entry	: Skin Contact, Eye Contact, Inhalation
Potential Acute Health Effects	
Skin	: Product is stored and used at elevated (140°F-290°F) and thermal burns up to 3 rd degree are possible. Prolonged/repeated contact may cause irritation, defatting (cracking), redness, itching, dermatitis or possible secondary infection.
Eye	: At ambient temperature may cause severe irritation, redness, tearing, blurred vision and conjunctivitis. At elevated temperatures product will cause thermal burns.
Inhalation	: May cause nasal and respiratory tract irritation. Possible central nervous system effects include excitation, euphoria, dizziness, blurred vision, fatigue, headache. Long-term and/or high concentration exposure to vapors may result in tremors, convulsions, seizures, loss of consciousness, coma, respiratory arrest, cardiac arrhythmia or death.
Ingestion	: Product may be harmful or fatal if swallowed. May cause nausea, diarrhea, or restlessness. Aspiration into lungs may cause chemical pneumonitis or pulmonary edema which can be fatal. May cause central nervous system effects similar to those listed under "inhalation".
Potential Chronic Health Effects	
Carcinogenic Effects	: This material or a component of this material has been shown to cause cancer in laboratory animals. Certain components of this material are classified as carcinogenic by OSHA, NTP or IARC (Section 11).
Mutagenic Effects	: Unknown
Teratogenic Effects	: Unknown
Target Organ Effects	: Can cause damage to skin, eyes (lens, cornea), upper respiratory tract
OSHA/HSC Status	: Health Hazard: Irritant, Carcinogen Physical Hazard: Flammable

4. First Aid Measures

Skin Contact	: For skin contact with hot product, immediately immerse or drench the affected area with water for cooling and seek immediate medical attention. For skin contact with material at ambient temperature clean with a cleaner approved for cleaning oil, grease and petroleum from skin. If irritation persists/develops or other symptoms described under Potential Acute Health Effects develop seek medical attention. Remove contaminated clothing and clean before reuse. Discard contaminated leather goods.
Eye	: Flush with cold water or saline solution for at least 15 minutes. Seek immediate medical attention.
Inhalation	: Remove to fresh air. If breathing is difficult or has stopped, clear the airway and administer oxygen, apply artificial respiration or cardiopulmonary resuscitation.
Ingestion	: Do not induce vomiting. If victim is conscious vegetable oil or charcoal slurry may be administered to retard absorption. Do not give anything by mouth if the person is unconscious. Seek immediate medical attention.

5. Fire Fighting Measures

NFPA Classification	: Class II Combustible
Flash Point	: min. 105°F
Lower Flammable Limit in Air, % by Volume	: 1.0
Upper Flammable Limit in Air, % by Volume	: 7.5
Autoignition Temperature	: Unknown
Hazardous Combustion Products	: Carbon dioxide, carbon monoxide, oxides of sulfur and/or nitrogen, unburned hydrocarbons and smoke/fumes. At elevated temperatures hydrogen sulfide and other sulfur-containing gases may be produced
Special Properties	: Flammable Liquid. In a fire or if heated a pressure increase will occur and the container may burst with risk of explosion. Vapors are heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel to a source of ignition and flash back. Runoff to sewer may create a fire or explosion hazard.
Extinguishing Media	: Dry chemical foam, carbon dioxide or water fog. Use of directly applied water is not recommended
Personal Protection	: MSHA/NIOSH approved positive-pressure breathing apparatus with full face mask and full protective equipment.

6. Accidental Release Measures

Precautions	: Immediately contact emergency personnel. Take proper precautions to insure the health and safety of all personnel (Sections 8 and 13).
Small Spills	: Remove all potential sources of ignition. Absorb or cover with earth, sand or other inert non-combustible absorbent material. Use spark-proof tools and explosion-proof equipment. Scrape up and place into containers for disposal.
Large Spills	: Remove all potential sources of ignition. For spills on land contain with dikes of earth or sand and do not allow to enter waterways or sewer. For spills on water contain as much as possible with booms. Use spark-proof tools and explosion-proof equipment. In all cases stop the leak only when it is safe to do so. Notify local and state authorities and the National Response Center if required (Section 15).

7. Handling and Storage

Handling	: Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors. Wash thoroughly after handling. Use only in well-ventilated locations. Keep away from any sources of ignition. Ground lines, containers and other equipment used during product transfer to reduce risk of a static-induced spark. Empty containers will contain product residue and vapors and may explode if heated or exposed to an ignition source. Do not cut, grind, weld, braze, solder or drill on containers until properly ventilated and free of all flammable vapors and residues.
Storage	: Keep away from sources of ignition and incompatible materials.

8. Exposure Controls and Personal Protection

- Substance** : Asphalt
- Workplace Exposure Levels** : ACGIH TLV (United States), TWA: 0.5 mg/m³ (8 hours)
- Substance** : Hydrogen Sulfide
- Workplace Exposure Levels** : ACGIH TLV (United States), TWA: 10ppm/8 hrs, STEL: 15ppm/15 min
- Substance** : Naphtha
- Workplace Exposure Levels** : OSHA PEL: 500ppm, TWA ACGIH TLV: 100ppm, TWA
- Engineering Controls** : Use only with adequate ventilation. Exhaust ventilation/engineering controls need to keep vapor and gas concentrations below recommended limits and below any lower explosive limits.

- Personal Protective Equipment** : The PPE should be selected based upon the conditions under which the material is used and a hazard assessment of the work area. The minimum PPE recommended is safety glasses, gloves and work clothing. Under certain conditions or at the direction of the user, additional PPE may be required.

- Eye Protection** : The minimum recommended PPE is safety glasses. A suitable eye wash station should be located in the vicinity of the work area.

- Hand Protection** : Impervious chemical-resistant gloves should be worn when handling this product

- Body Protection** : Standard work clothing is recommended under normal working conditions.
- Respiratory Protection** : With adequate ventilation a respirator is usually not required. The contaminant air concentrations determine the level of respiratory protection involved. In those cases where exposure exceeds the occupational limits, NIOSH.MSHA approved respiratory equipment for the hazard should be used. The respiratory equipment should comply with 29 CFR 1910.134.

- Personal Protective Equipment for Large Spills** : Splash goggles, full suit, vapor respirator or air supplied respirator, boots, chemical-resistant gloves, hard hat should be used. Protective clothing to be used is dependent upon the size of the spill and the temperature of the product and will be determined by on-site personnel.

- General Comments** : Follow good personal hygiene practices. Wash hands and other exposed skin areas with soap and water before eating, drinking, smoking, using toilet facilities and leaving work. Use only cleaning soaps/agents approved for human use. Do not use gasoline, kerosene, solvents or harsh abrasives. Remove any contaminated clothing and launder before reuse.

9. Physical and Chemical Properties (Typical)

Physical State	: Free-flowing liquid at 140°F, Viscous liquid at 70°F
Color	: Dark brown to black
Odor	: Strong petroleum odor at temperatures above 100°F
Specific Gravity	: 0.93 – 0.96 (Water=1.00)
pH	: NA
Boiling Point	: >300°F (150°C)
Freezing Point	: NA
Vapor Density	: >1.6 (Air=1)
Vapor Pressure	: approx. 0.62 mm Hg at 68°F (20°C)
Volatility	: Negligible
Solubility in Water	: Insoluble
Viscosity	: 70 – 6000 mm ² /sec at 140°F (60°C) [Kinematic]
Additional Properties	: No additional information

10. Stability and Reactivity

Chemical Stability	: Stable
Hazardous Polymerization	: Not expected to occur
Conditions To Avoid	: Keep away from all possible sources of ignition. Keep away from extreme heat, strong acids and strong oxidizers.
Material Incompatibility	: Strong oxidizers
Hazardous Decomposition Products	: Combustion may produce CO _x , NO _x , SO _x , unburned hydrocarbons, smoke, fumes, hydrogen sulfide

11. Toxicological Information

LD ₅₀ Dermal	: >5000 mg/kg (rat, asphalt)
LD ₅₀ Subcutaneous	: 50 mg/kg (rat, polycyclic aromatic hydrocarbons)
LD ₅₀ Oral	: >2000 mg/kg (rabbit, asphalt), >2000 mg/kg (rat, naphtha)
Other	: <u>Asphalt</u> : Fumes have been associated with eye, skin and respiratory tract irritation. Repeated or prolonged contact with asphalt at ambient temperatures can result in skin irritation. Long-term exposure can cause dermatitis, acne, photosensitization and, more rarely, pigmentation of the skin. Acute or chronic overexposure may cause systemic toxicity including adverse effects to the liver, kidney, skin, respiratory and nervous systems. The IARC has determined that there is sufficient evidence for the carcinogenicity of extracts of stream- and air-refined bitumens and pooled mixtures of both based on animal tests. There is limited evidence for the carcinogenicity of undiluted stream-refined bitumens based on animal tests. The IARC has also determined that there is inadequate evidence the bitumens alone are carcinogenic to humans. <u>Hydrogen Sulfide</u> : Exposure to concentrations below 50ppm may cause headache, fatigue, irritability, gastrointestinal disturbances and/or central nervous system disturbances. Exposure to concentrations of 500-1000ppm will cause respiratory paralysis with consequent asphyxia. Exposure to high concentrations (>1000ppm) may cause coma and be fatal after a single breath. <u>Naphtha</u> : May cause skin irritation. May cause eye irritation; standard Draize Test (Rabbit-50 mg/24 hrs) reaction: moderate. Inhalation may cause mild irritation of the respiratory tract. Ingestions may cause irritation of the mouth, throat and stomach (nausea, diarrhea). May cause skin sensitization in susceptible persons.

12. Ecological Information

- Ecotoxicity** : Analysis for ecological effects has not been conducted on this product. This product is insoluble in water and insoluble hydrocarbons will float on the water. This product and any contaminated soil or water may be harmful to human, animal and aquatic life. The coating action associated with petroleum and petroleum-based products may be harmful or fatal to aquatic life and waterfowl.
- Environmental Fate** : The biodegradation of this product is expected to be slow. This product is not expected to bioaccumulate through food chains in the environment.

13. Disposal Considerations

- RCRA Classification** : Hazard characteristic and regulatory waste stream classification can change with product use. Under RCRA it is the responsibility of the user to determine at the time of disposal whether the material is a hazardous waste subject to RCRA or not.
- Waste Disposal** : Disposal of this product, solutions and any by-products should at all times comply with Local, State and Federal Regulations.

14. Transport Information

Regulatory Information	UN Number	Proper Shipping Name	Class	PG*	Label	Other
USDOT (Non-bulk)	1999	Tars, liquid (cutback asphalt)	3	III	Class 3 Flammable	
USDOT (Bulk)	1999	Tars, liquid (cutback asphalt)	3	III	Class 3 Flammable	
IATA-DGR	1999	Tars, liquid (cutback asphalt)	3	III	Class 3 Flammable	
IMDG	1999	Tars, liquid (cutback asphalt)	3	III	Class 3 Flammable	

*PG = Packing Group

15. Regulatory Information

- TSCA Inventory** : This product and/or its components are listed on the Toxic Substances Control Act (TSCA) Inventory
- SARA 302/304 Emergency Planning and Notification** : SARA Title III requires facilities subject to Subparts 302 and 304 to submit information for “extremely hazardous substances” as listed in 40 CFR 302.4 and 40 CFR 355. Components in this product identified and subject to reporting: None

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CUTBACK ASPHALT RAPID CURE (RC)-ALL GRADES

SARA 311/312 Hazard Identification	: SARA Title III requires facilities subject to Subparts 311 and 312 to submit information on chemicals by "Hazard Category" as defined in 40 CFR 370.2 Product Hazard Classification: Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard
SARA 313 Toxic Chemical Release Reporting	: Chemicals present in the product which are listed as toxic chemicals in 40 CFR 372 (SARA Section 313) above de minimis levels are required to be reported. Reportable toxic chemicals present: None
CERCLA	: CERCLA requires notification to the National Response Center of the release of "hazardous substances" equal to or greater than RQ's listed in 40 CFR 302.4. This product is known to contain the following components that require reporting under this statute: None
RCRA	: Hazard characteristic and waste stream classification can change with product use. It is the responsibility of the user to determine at the time of disposal whether the material is a hazardous waste subject to regulation under RCRA (40 CFR 260-271) and local and state regulations which may be more restrictive.
Clean Water Act	: This product is classified as an oil under Section 311 of the CWA. Discharges or spills which produce a visible sheen on waters of the United States, adjoining shorelines or conduits leading into surface waters must be reported to the National Response Center at 1-800-424-8802. Local and state regulations may be more restrictive and require additional reporting.
Oil Pollution Act	: This material is classified as an oil under the OPA. Discharges or spills which produce a visible sheen on waters of the United States, adjoining shorelines or conduits leading into surface waters must be reported to the National Response Center at 1-800-424-8802. Local and state regulations may be more restrictive and require additional reporting.
Clean Air Act	: This product contains the following components designated as hazardous, toxic or flammable air pollutants under Section 112 of the CAA: None
California Proposition 65	: This material contains the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm: Polynuclear Aromatic Hydrocarbons (4- to 6- member condensed rings).
New Jersey Right-to-Know	: For New Jersey RTK labeling requirements refer to components listed in Section 2.
Additional Regulatory Remarks	: No additional regulatory remarks

16. Other Information

NFPA Rating : Health=2, Fire=3, Reactivity=0
HMIS Rating : Health-2 (Chronic), Fire=3, Reactivity=0
Abbreviations : approx: approximately
 =, eq: equal to
 >: greater than
 <: less than
 NA: not applicable
 ND: No data
 NE: Not established
 CAA: Clean Air Act
 CERCLA: Comprehensive Environmental Response, Compensation and Liability Act of 1980
 CFR: Code of Federal Regulations
 CWA: Clean Water Act
 OPA: Oil Pollution Act of 1990
 RCRA: Resource Conservation and Recovery Act
 SARA: Superfund Amendments and Reauthorization Act of 1986
 TSCA: Toxic Substances Control Act
 ACGIH: American Conference of Government Industrial Hygienists
 AIHA: American Industrial Hygiene Association
 EPA: U.S. Environmental Protection Agency
 IARC: International Agency for Research on Cancer
 HMIS: Hazardous Materials Identification System
 MSA: Mine Safety Administration
 MSDS: Material Safety Data Sheet
 OSHA: Occupational Safety and Health Administration
 NTP: National Toxicology Program
 NIOSH: National Institute of Occupational Health and Safety
 NFPA: National Fire Protection Association

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