

ASPHALT EMULSION, INC

Material Safety Data Sheet Emulsified Asphalt, Cationic, All Grades

Emergency Overview

Physical State : Liquid
Color : Dark brown to black
Odor : Mild petroleum odor
Caution : Can cause eye and skin irritation
Avoid prolonged contact with eyes, skin and clothing
Hot product can cause burns
Fumes from hot product can cause irritation to eyes, skin and respiratory system

1. Product and Company Identification

Product Name : **EMULSIFIED ASPHALT, CATIONIC, ALL GRADES**
Product Family : Asphalt Mixture
CAS Number : Mixture
Synonyms : Emulsified Asphalt, CRS-1, CRS-2, CRS-2h, CRS-2L, CRS-2P, CMS, CSS-1h, CSS-RP, CQS-1h, CQS-1hLM, EAP, Novabond, Tack Coat, Tack Coat (50% dilution with water), Non-tracking Tack, Cold In-Place Recycling Emulsion, IPR Emulsion

Manufacturer : **Asphalt Emulsion, Inc.**
1524 Valley Road 8730 Vulcan Lane 151 Emmett Road
Richmond, VA 23222 Manassas, VA 20109 Dunn, NC 28334
804-321-5912 703-369-1326 910-230-3764

801 Terminal Avenue 18000 Cockpit Point Road
Newport News, VA 23607 Dumfries, VA 22026
757-244-6545 703-221-1171

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	38-72
Water	7732-18-5	62-28
Fuel Oil Flux	68334-30-5	0-6
Oil Flux	64742-04-7	0-6
Hydrochloric Acid	7647-01-0	0.1-2.5
Latex Compound	Mixture	2.5-4.5
Fatty Polyamine Emulsifier	Mixture	0.1-2.5

3. Hazards Identification

Major Route(s) of Entry : Skin Contact

Potential Acute Health Effects

Skin : May cause skin irritation with reddening, itching, burning feeling and/or swelling. Contains component(s) that may cause allergic skin reactions in some individuals. Effects may become more serious with prolonged or repeated contact. Skin contact may cause harmful effects to other parts of the body. Hot material may cause thermal burns.

Eye : Exposure to vapors, fumes or mists can cause eye irritation. Direct contact may cause eye irritation with tearing, redness and/or a stinging/burning feeling. Effects may become more serious with prolonged or repeated exposure. Hot material can cause thermal burns to the eye with eye tissue destruction and possible permanent injury.

Inhalation : No significant adverse health effects are expected during short-term exposure to the product at ambient temperature. Fumes or vapors from heated material may be irritating to the respiratory tract.

Ingestion : Ingestion of this product at ambient temperature may be irritating with stomach and/or intestinal pain, nausea, vomiting and/or diarrhea. Ingestion of heated material may cause thermal burns.

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 (cornea, lens) and upper respiratory tract

OSHA/HSC Status : Health Hazard: Irritant Physical Hazard: None known

4. First Aid Measures

Skin Contact : Flush with cold water. Remove contaminated clothing and shoes and wash exposed skin with soap and water. Clean contaminated clothing before reuse. Seek medical attention if skin is reddened or blistered.

Eye : Flush with cold water or saline solution. Seek immediate medical attention.

Inhalation : Move victim to fresh air. If victim is not breathing begin CPR and seek immediate medical attention

Ingestion : Do not induce vomiting. Seek immediate medical attention.

5. Fire Fighting Measures

- NFPA Classification** : Class III-B combustible material
- Flash Point** : Not Applicable
- Lower Flammable Limit in Air, % by Volume** : Not Applicable
- Upper Flammable Limit in Air, % by Volume** : Not Applicable
- Autoignition Temperature** : Not Applicable
- 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** : Asphalt emulsions normally will not ignite. Asphalt residues will burn if heated. At elevated temperatures asphalt emulsions may separate to form a layer of asphalt and a layer of water. Fire in the vicinity of storage tanks may cause a boiling liquid-expanding vapor explosion (BLEVE).
- Extinguishing Media** : Dry chemical foam, carbon dioxide or water fog
- Personal Protection** : MSHA/NIOSH approved positive-pressure breathing apparatus with full face mask and full protective equipment.

6. Accidental Release Measures

- Precautions** : Take proper precautions to insure the health and safety of all personnel (Sections 8 and 13)
- Small Spills** : Absorb or cover with earth, sand or other inert non-combustible absorbent material. Scrape up and place into containers for disposal.
- Large Spills** : For spills on land contain with dikes of earth or sand. Do not allow to enter waterways or sewer. Recover as much liquid material as possible for re-use/reclamation. Scrape up residual product and diking material and either reclaim or dispose of. For spills on water contain as much as possible with booms and begin recovery as soon as possible. In all cases stop the leak 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 contamination and extreme temperature to minimize product degradation. Empty containers may contain product residues. Do not cut, grind, weld or expose containers to potential ignition sources unless precautions are taken against these hazards. Consult applicable local, state and federal regulations before reusing, reconditioning, recycling or disposing of empty containers and/or waste residues.
- Storage** : Protect product from freezing. Do not heat product above 200°F

8. Exposure Controls and Personal Protection

- Substance** : Asphalt
- Workplace Exposure Levels** : ACGIH TLV (United States), TWA: 0.5 mg/m³ (8 hours)
- Engineering Controls** : Exhaust ventilation or other engineering controls should be used to control exposure to mists and fumes in enclosed areas. All engineering controls should be NIOSH-approved
- 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** : Work gloves, disposable nitrile, neoprene or butyl gloves are recommended with repeated and prolonged use.
- Body Protection** : Standard work is recommended
- Respiratory Protection** : With adequate ventilation a respirator is usually not required. In those cases where exposure exceeds the occupational control limits a NIOSH/MSA approved air-purifying-particulate filter respirator suitable for dusts, fumes, and mists is recommended. Respirators should be used in accordance with 29 CFR 1910.134.
- 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.

9. Physical and Chemical Properties (Typical)

Physical State	: Liquid
Color	: Dark brown to black
Odor	: Mild petroleum odor
Specific Gravity	: 1.00 – 1.04 (Water=1.00)
pH	: 1.0 – 4.0
Boiling Point	: approx. 212°F (100°C)
Freezing Point	: <32°F (<0°C)
Vapor Density	: >1 (Air=1)
Vapor Pressure	: approx. 23 mm Hg at 77°F (25°C)
Volatility	: Negligible
Solubility in Water	: Dispersible
Viscosity	: 20-900 SFS at 77°F (25°C)
Additional Properties	: No additional information

10. Stability and Reactivity

Chemical Stability	: Stable
Hazardous Polymerization	: Not expected to occur
Conditions To Avoid	: 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

LD₅₀ Dermal (Rat)	: >5000 mg/kg
LD₅₀ Oral (Rabbit)	: >2000 mg/kg
Other	: Asphalt 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.

12. Ecological Information

- Ecotoxicity** : Analysis for ecological effects has not been conducted on this product. This product is soluble in water and can be expected to readily disperse in in aquatic environments. As this product mixes with water, water insoluble hydrocarbons may separate and float on the water layer. 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** : Non-hazardous waste.
NOTE: 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)			Not Regulated			
USDOT (Bulk)			Not Regulated			
IATA-DGR			Not Regulated			
IMDG			Not Regulated			

*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

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	: This product, as supplied, is not considered a hazardous waste subject to reporting under 40 CFR 261. However, 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=1, Fire=1, Reactivity=0
HMIS Rating : Health-1 (Chronic), Fire=1, 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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