



MATERIAL SAFETY DATA SHEET
Cationic Asphalt Emulsion
CRS-1, CRS-2, CMS-2, CSS-1, C60 B3, C65 B3, C65 B5, C55 B6

Product Name: CRS-1, CRS-2, CMS-2, CSS-1, C 60 B 3, C 65 B 3, C 65 B 5, C 55 B 6

CAS Number: Mixture

Chemical Family: Emulsified complex petroleum hydrocarbon and water **MSDS**

Number: 102

Synonyms

CATIONIC ASPHALT EMULSION – CATIONIC BITUMEN EMULSION EMULSIFIED
ASPHALT– BITUMEN EMULSION

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
HYDROCHLORIDE SALT, Proprietary	Mixture	<	3
PETROLEUM SOLVENT	68476-30-2	<	25
DISTILLATES(PETROLEUM)	68955-27-1	<	25
PETROLEUM ASPHALT (BITUMEN)	8052-42-4		50 - 75
WATER	7732-18-5		25 - 50

Asphalt: Asphalt is a complex mixture of high molecular weight hydrocarbons produced from crude petroleum. Composition varies depending on the source of crude and the specifications of the final product.

3. Hazards Identification

Eye Hazards

Contact with hot emulsified asphalt can cause thermal burns to the eyes. Prolonged exposure to vapors, fumes, or mists may cause eye irritation, redness, and tearing.

Skin Hazards

Skin contact with hot emulsified asphalt can cause minor thermal burns. Prolonged exposure to vapors, fumes, or mists may cause irritation and redness.

Ingestion Hazards

Ingestion is not likely. Ingestion may cause thermal burns. If ingestion of emulsified material occurs, keep victim's head below the hips to prevent asphalt from reaching the lungs. Take the victim to obtain medical assistance immediately.

Inhalation Hazards

Breathing vapors, fumes, or mists may cause irritation to nasal and respiratory tract and central nervous system effects. Symptoms may include labored breathing, sore throat, coughing, wheezing, dizziness, headache, and nausea.



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4. First Aid Measures
<u>Eye</u> Gently flush immediately with cold water for 15 minutes. Do not attempt to remove solidified material from the eye, as this may further injury. Take the victim to obtain medical assistance.
<u>Skin</u> Hot Emulsified Material - Cool the affected body parts immediately by submerging in cold water until the material has cooled. Do not attempt to remove solidified material from the burn area as this may further tissue damage. Take the victim to obtain medical assistance immediately. Cold Emulsified Material - Remove emulsified asphalt by soaking dressing in mineral oil and place over affected area for 2-3 hours. If irritation occurs, call a physician. Never try to remove the material with solvents.
<u>Ingestion</u> Ingestion is not likely. If large amounts are swallowed, do not induce vomiting and immediately call a physician.
<u>Inhalation</u> If irritation occurs from inhalation overexposure, immediately remove victim from source to fresh air and seek medical attention.
5. Fire Fighting Measures
Flash Point: N.A. °F Auto ignition Point: >204 °C Lower Explosive Limit: N.A. Upper Explosive Limit: N.A.
<u>Extinguishing Media</u> Foam, Carbon Dioxide, Dry Chemical, and Water Spray may all be suitable in extinguishing fires involving this product. Avoid using water streams to prevent frothing. Use water spray to cool exposed surfaces.
6. Accidental Release Measures
Stop source of leak. Eliminate sources of ignition. Contain by diking or impounding. Absorbents can be used to contain
Spill. After containment, emulsified asphalt can be collected for disposal. Advise authorities if product has entered a sewer or water source. Assure conformity with local, state, and federal governmental regulations for disposal.
7. Handling and Storage
<u>Handling and Storage Precautions</u> When opening covers and outlet cap on storage tanks, use face shield and gloves to avoid possible injury from pressurized asphalt. Hydrogen sulfide can be generated and accumulated in storage tanks and bulk transport compartments. Stay upwind and vent storage hatches before unloading. Keep heating units and flues in storage tanks covered with at least 12 inches of asphalt. Do not overheat.



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7. Handling and Storage - Continued

Handling and Storage Precautions - Continued

Empty Container Warning: Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Work/Hygienic Practices

Skin contact and the breathing of mists, fumes, or vapors should be reduced to a minimum to avoid any ill effects. Thoroughly wash exposed skin areas after work to avoid dermatitis. Consider the use of lanolin skin treatments before handling or working around asphalt mixtures.

8. Exposure Controls/Personal Protection

Eye/Face Protection

Safety goggles or chemical splash goggles if splashing is anticipated.

Skin Protection

Oil impervious gloves, such as Neoprene, if frequent or prolonged contact is expected.

Other/General Protection

Wear body covering clothes to avoid prolonged or repeated exposure. Launder before reuse.

9. Physical and Chemical Properties

Appearance

Brown Liquid

Odor

Characteristic Asphalt Odor

Chemical Type: Mixture

Physical State: Liquid

Boiling Point: 100 °C

Specific Gravity: 0.96-1.05

Molecular Weight: 280

Vapor Pressure: <1mm-10mm Hg @ 77 F

Vapor Density: >1.0

PH Factor: 1-7

Solubility: Completely



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10. Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Incompatible Materials

Strong Oxidizers

Hazardous Decomposition Products

Fumes, Smoke, Carbon Monoxide, Hydrogen Sulfide, Sulfur Dioxide, Aldehydes, and Hydrocarbons

11. Toxicological Information

Health Hazard Characterization:

Uncertainties exist in the hazard characterization of asphalt fumes by many factors including its chemical complexity, limitation of the information, the inclusion of coal tar in asphalts in past decades, other confounders and mixed results of human studies.

- Currently classified as A4 (not classifiable as a human carcinogen). Asphalt Coal Tar Free
- Breathing of mists, fumes, or vapors should be reduced to a minimum to avoid any ill effects.
- Asphalt and asphalt fumes contain trace levels of polynuclear aromatic hydrocarbons that are known carcinogens.
- Chronic health effects would not be expected as long as good hygiene and proper safety precautions are practiced and exposures are less than the TLVs/RELS.
- After using material or being around fumes, wash exposed areas thoroughly with soap and water. Showering immediately after work is a good personal hygiene practice...

PETROLEUM SOLVENT and DISTILLATES (PETROLEUM): Lifetime skin painting studies in animals with similar distillate fuels have produced weak carcinogenic activity following prolonged and repeated exposure. Repeated dermal application has produced severe irritation and systematic toxicity in sub-acute toxicity studies. Some components of distillate fuels, ie., paraffin's and olefins, have been shown to produce a species specific, sex hormonal dependent kidney lesion in male rats from repeated oral or inhalation exposure.

While negative in the majority of others. The exact relationship between these results and human health is not known. Chronic human health effects would not be expected as long as good personal hygiene and proper safety precautions are practiced.



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12. Ecological Information

Liquid asphalt emulsion product may cause fouling of water and/or may be toxic to aquatic animals. Once solidified, this product will no longer exhibit these characteristics.

13. Disposal Considerations

Waste or contaminated asphalt is normally disposed in a special waste or industrial landfill. Consider recycling into pavement mixtures whenever possible.

RCRA Information

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. It is the responsibility of the generator to fully characterize for toxicity and other RCRA parameters prior to disposal (40 CFR 261). Along with properly characterizing all waste materials, consult state and local regulations regarding proper disposal of this material.

14. Transport Information

This product as produced and shipped is not considered a hazardous material



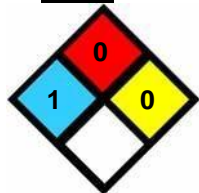
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15. Regulatory Information

NFPA



HMIS

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	B, X

Personal Protection Equipment (PPE):

