



Asphalt Emulsion

Material Safety Data Sheet

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Emergency Overview

Appearance: Black color, semi-solid when cold, viscous fluid when hot

Odor: Asphalt/Petroleum odor

WARNING:

Can cause eye and skin irritation. Avoid prolonged contact with eyes, skin, and clothing. Hot product can cause burns. If burned by hot product, cool affected area immediately with cool water. Seek medical attention if redness or irritation persists. Fumes from hot product can cause irritation to the eyes, skin, and respiratory system.

Hazard Rankings

	HMIS	NFPA
Health Hazard	* 1	1
Fire Hazard	1	1
Reactivity	0	0

*= Chronic Health Hazard

Protective Equipment

Minimum Recommended
See Section 8 for Details



SECTION 1. PRODUCT IDENTIFICATION

Trade Name: Asphalt Emulsion **Technical Contact:** (914) 949-2000

Medical Emergency: (800) 424-9300

CAS Number: Mixture **CHEMTREC Emergency:** (800) 424-9300
(United States Only)

Synonyms: Asphalt Emulsion CRS-2, MS-2, PMC 30, HF RS-2, CMS-2, RS-1, RS-2, SS-1, CSS-1, CRS-2P, SS-1H, CSS-1H, HFMS-2H, RS-1H, Tack Coat

SECTION 2. COMPOSITION

Component Name(s)	CAS Registry No.	Concentration (%)
Asphalt	8052-42-4	38-72
Light Distillate	8008-30-6	0-12
Water & Emulsifier	Mixture	18-37

SECTION 3. HAZARDS IDENTIFICATION

Major Route(s) of Entry: Inhalation, Skin, Eyes, Ingestion.

Signs and Symptoms of Acute Exposure

Eye Contact: Hot material can cause burns to the eye. This material can cause eye irritation with tearing, redness, or a stinging or burning feeling. Effects may become more serious with repeated or prolonged contact.

Skin Contact: Hot material can cause burns to the skin. May cause skin irritation with redness, an itching or burning feeling, and swelling of the skin. Effects may become more serious with repeated or prolonged contact. Skin contact may cause harmful effects in other parts of the body.

Inhalation: No significant adverse health effects are expected to occur upon short-term exposure to this product at ambient temperatures. Breathing fumes from heating of the cured product can irritate the mucous membranes of the nose, throat, bronchi, and lungs.

Ingestion: Contact with hot material may cause thermal burns. Swallowing large amounts of this material may cause stomach or intestinal upset with pain, nausea, vomiting, and/or diarrhea.

Medical Conditions Aggravated By Exposure:

Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Eyes

Other Health Warnings

Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid.

Eye Contact: If hot product enters the eyes, irrigate with large amounts of room-temperature water. Seek medical attention immediately. If product at ambient temperatures enters eyes, check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness or pain persists.

Skin Contact: If burned by hot material, cool skin by quenching with large amounts of cool water. Seek medical attention if tissue appears damaged or if pain or irritation persists. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with soap and water. Thoroughly clean contaminated clothing before reuse. Discard contaminated leather goods.

Inhalation: Move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately. Keep the affected individual warm and at rest.

Ingestion: Do not induce vomiting unless directed to by a physician. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. If significant amounts are swallowed or irritation or discomfort occurs, seek medical attention immediately.

Note to Physicians: Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

NFPA Flammability Classification NFPA Class-IIIB combustible material.

Flash Point 450°F minimum

Lower Flammable Limit NA **Upper Flammable Limit** NA

Autoignition Temperature NA

Special Fire Fighting Procedures Do not enter any enclosed or confined fire space without proper protection equipment. This may include SCBA. Cool tanks and containers exposed to fire with water. Improper use of water and extinguishing media containing water may cause frothing which can spread the fire over a larger area.

Extinguishing Media	Use dry chemical and carbon dioxide. Foam and water are effective, but may cause frothing.
Unusual Fire Fighting Procedures	The flash point displayed above refers to only the petroleum components of this product. When heated above its flash point or when held in storage at elevated temperatures, this material can release flammable vapors which can burn in the open or be explosive in confined spaces if exposed to an ignition source. Studies have shown that relatively low flash point substances, such as hydrogen sulfide and low-boiling hydrocarbons, may accumulate in the vapor space of hot asphalt tanks and bulk transport compartments. As a precaution, keep ignition sources away from vents and openings.
Hazardous Combustion Products	Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and/or nitrogen. Hydrogen sulfide and other sulfur-containing gases can evolve from this product particularly at elevated temperatures.
Special Properties	At elevated temperatures, asphalt emulsions may separate, forming a layer of asphalt and a layer of water in the storage tank. Fire impinging upon storage tanks may cause a boiling liquid-expanding vapor explosion (BLEVE). Asphalt emulsions normally will not ignite. Asphalt residues will burn if heated. Always check for flammable vapors and ignitable residues before commencing hot work on storage tanks.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls / Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage.

SECTION 7. HANDLING AND STORAGE

Handling	Avoid contamination and extreme temperatures to minimize product degradation. Empty containers may contain product residues that can ignite with explosive force. Do not pressurize, cut, weld, braze solder, drill, grind or expose containers to flames, sparks, heat or other potential ignition sources. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.
Storage	For ease of handling and to avoid breaking the emulsion, store product between 70 and 130 °F.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits (see below). An eye wash station and safety shower should be located near the work-station.

Personal Protective Equipment Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.



Eye Protection Use a full-face shield and chemical safety goggles if handling heated material. With product at ambient temperatures, safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Keep a suitable eye wash station immediately available to the work area.

Hand Protection When handling product at elevated temperatures, use long-cuffed leather or heat-resistant gloves. When product is at ambient temperatures, use gloves constructed of chemical resistant materials such as heavy nitrile rubber if frequent or prolonged contact is expected.

Ventilation Use local exhaust to capture fumes when handling hot product in confined spaces.

Body Protection Prevent skin contact when handling heated material. Use insulated, heat-resistant clothing such as a chemical resistant apron or slicker suit. Use a full-body heat-resistant or internally cooled suit when work conditions dictate.

Respiratory With adequate ventilation, no respirator is needed. If exposure exceeds the occupational control limits, wear a NIOSH-approved, air-purifying, particulate filter respirator suitable for dusts, fumes and mists. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).

General Comments Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents, or harsh abrasive skin cleaners.

Occupational Exposure Guidelines

Substance **Applicable Workplace Exposure Levels**

Asphalt **ACGIH TLV (United States)**
TWA: 0.5 mg/m³ 8 hour (s)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Attention: The data below are typical values and do not constitute a specification.

Appearance: Black color, semi-solid when cold, viscous fluid when hot

pH: 1.2-12.0 **Vapor Pressure:** 60 @ 100°F **Vapor Density (Air = 1):** NA
Boiling Point: 212°F **Solubility:** Readily dispersible **Melting Point:** NA
Specific Gravity: 1.01000 **Viscosity:** NA **Odor:** Asphalt/Petroleum odor

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable. DO NOT heat this material above 200°F. Avoid contact of hot asphalt with water or light hydrocarbons which may create a violent eruption.

Incompatibility With Other Materials: Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite, or calcium hypochlorite. Hot product in contact with water can cause foaming or sudden evolution of steam, which could cause pressure build-up and possibly rupture a tank or a vessel.

Hazardous Decomposition Products: Combustion may produce carbon monoxide, oxides of sulfur, asphyxiants.

Hazardous Polymerization: Hazard polymerization will not occur.

Conditions to Avoid: Keep away from extreme heat, strong acids, and strong oxidizing conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicity Data Asphalt

ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

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. The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence for the carcinogenicity of extracts of steam-refined bitumens, air refined bitumens and pooled mixtures of steam- and air-refined bitumens in experimental animals. Further, IARC has determined that there is limited evidence for the carcinogenicity of undiluted steam-refined bitumens in experimental animals. Also, IARC determined that there is inadequate evidence that bitumens alone are carcinogenic to humans.

Water

ORAL LDLo: Acute: 42900 mg/kg [Human].

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY

This product is soluble in water and is expected to readily disperse in marine environments. As it mixes with water, water insoluble hydrocarbons in this material will separate and float on the water layer. Analysis for ecological effects has not been conducted on this product.

However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

ENVIRONMENTAL FATE

This product is estimated to have a slow rate of biodegradation. This product is not expected to bioaccumulate through food chains in the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Maximize material recovery for reuse or recycling. Conditions of use may cause this material to become a "hazardous waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a "hazardous waste" at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact your regional US EPA office for guidance concerning case specific disposal issues.

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside the United States.

DOT Shipping Name: Not regulated

DOT Hazard Class: Not regulated

DOT Identification Number: Not regulated

Placard: None required

DOT Packing Group: Not applicable

Emergency Response Guide No.: Not applicable

SECTION 15. REGULATORY INFORMATION

TSCA Inventory

All of the components of this material are on the Toxic Substances Control Act (TSCA) Chemical Inventory

SARA 302/304 Emergency Planning and Notification

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355.

SARA 311/312 Hazard Identification

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories:

Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard

CERCLA

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. This product or refinery stream is not known to contain chemical substances subject to this statute. However, it is recommended that you contact state and local authorities to determine if there are any other reporting requirements in the event of a spill.

SECTION 16. ADDITIONAL INFORMATION

Scale For NFPA and HMIS Ratings:

0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:-Personal Protective Equipment Index Recommendation, *-Chronic Effect Indicator. These values are obtained using the guidelines or published evaluations prepared by the National Fire Protections Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value
STEL - Short-term Exposure Limit
NA - Not Applicable
NDA - No Data Available

TWA - Time Weighted Average
REL/PEL - Recommended/Permissible Exposure Limit
CAS - Chemical Abstract Service Number
NE - Not Established

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