



# MATERIAL SAFETY DATA SHEET

## Asphalt Emulsions

MSDS: 951

REVISION: 1

REVISION DATE: 09/03/09

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Asphalt Emulsions, All Grades**

SYNONYMS: Asphalt Emulsions (all grades), Emulsified Asphalts (all grades), Cationic Emulsified Asphalt (all grades)

PRODUCT CODE:

CMS-2P	(N/AV)	CMS-2S	(N/AV)	STE-1	(534110)
CSS-1	(533110)	CSS-1H	(533210)	CMS-2	(531110)
CRS-2	(532110)	CRS-2P	(532420)		

This Material Safety Data Sheet applies to the listed products and synonym descriptions for Hazard Communication purposes only. Technical specifications vary greatly depending on the product and are not reflected in this document. Consult specification sheets for technical information. This product contains ingredients that are considered to be hazardous as defined by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**IMPORTANT:** Read this MSDS before handling or disposing of this product. Pass this information on to employees, customers and product users.

MANUFACTURER: U. S. OIL & REFINING CO.  
ADDRESS: 3001 Marshall Ave., Tacoma, WA 98421

EMERGENCY PHONE: (253)-383-1651  
FAX PHONE: (253)-272-2495  
CHEMTREC PHONE: (800) 424-9300  
NATIONAL RESPONSE: (800) 424-8802

CHEMICAL FAMILY: Asphalt Mixture

PREPARED BY: U.S. OIL & REFINING CO.

CAS #: Mixture

### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

NAME	CAS NUMBER	CONCENTRATION %
Petroleum Asphalt	8052-42-4	57 - 75%
Water	7732-18-5	55 - 75%
Naphtha	64741-46-4	0 - 10%
Polymer Additive	Mixture	0 - 5%
Organic Amine Emulsifier	Mixture	0 - 6%
Hydrochloric Acid	7647-01-0	0 - 5%
Hydrogen Sulfide	7783-06-4	Trace

## SECTION 3: HAZARDS IDENTIFICATION

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**Warning!** Can cause eye and skin irritation. Hot product can cause burns. Fumes from product can cause irritation to the eyes, skin and respiratory system.

**PHYSICAL STATE:** Liquid  
**Color:** Brown-Black  
**Odor:** Asphaltic, Sweet Odor

**ROUTES OF ENTRY:** Dermal Contact. Eye Contact. Inhalation. Ingestion.

### POTENTIAL HEALTH EFFECTS

**EYES:** Eye contact may result in eye irritation or burns.

**SKIN:** Skin contact with hot product can cause thermal burns. Skin contact with product at warm or ambient temperatures may cause skin irritation. Prolonged or frequent contact with product at warm or ambient temperatures may cause more serious skin disorders.

**INGESTION:** This material can irritate the mouth, throat, stomach, and cause nausea, vomiting, diarrhea. Ingestion of hot product can cause thermal burns.

**INHALATION:** No significant health effects are expected to occur from short-term exposures to this product at ambient temperatures. If handled at elevated temperatures, vapors and mists can irritate the eyes, nose, throat and/or lungs.

### **MEDICAL CONDITIONS GENERALLY AGGRAVATED**

**BY EXPOSURE:** Skin, eye and respiratory disorders may be aggravated by exposure to this product.

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## SECTION 4: FIRST AID MEASURES

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**EYES:** For contact with molten material, flush eyes with clean low-pressure water for a minimum of 15 minutes. Seek immediate medical care.

**SKIN:** Remove contaminated clothing. Wipe excess product off with a dry cloth. Wash affected area well with a waterless cleanser followed by soap and water. Thoroughly clean contaminated clothing. Seek medical attention if pain or irritation persists.

**INGESTION:** Do not induce vomiting. Seek prompt medical attention if significant amounts are swallowed or irritation/discomfort occurs.

**INHALATION:** If affected, move person to fresh air. Administer oxygen or administer CPR (cardiopulmonary resuscitation) for respiratory distress and seek prompt medical attention. If symptoms or irritation occur, seek prompt medical attention.

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## SECTION 5: FIRE-FIGHTING MEASURES

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**FLAMMABILITY OF THE PRODUCT:** NFPA Class IIIB combustible material

**FLAMMABLE LIMITS IN AIR,  
(% BY VOLUME):** Lower: Not Applicable  
Upper: Not Applicable

**FLASH POINT:** Not Applicable

**AUTOIGNITION TEMPERATURE:** Not Determined

**PRODUCTS OF COMBUSTION:** Carbon dioxide, carbon monoxide, sulfur oxides, hydrogen sulfide, smoke, fumes, and unburned hydrocarbons

**FIRE-FIGHTING MEDIA  
AND INSTRUCTIONS:**

Use dry chemical, foam, carbon dioxide or water fog. Use water to keep fire exposed containers cool. Minimize breathing of vapors, fumes or decomposition materials.

Collect contaminated fire-fighting water separately. Do not allow liquid runoff to enter sewers or public waters.

**SPECIAL FIRE FIGHTING  
EQUIPMENT:**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Cool tanks and containers exposed to fire with water.

**UNUSUAL FIRE AND  
EXPLOSION HAZARDS:**

Asphalt emulsions will normally not ignite. However asphalt emulsion may separate forming a layer of asphalt and a layer of water in the storage tank. Asphalt and asphalt residue will burn at elevated temperatures.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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### PERSONAL

#### PRECAUTIONS:

Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Do not touch or walk through spilled material.

### ENVIRONMENTAL

#### PRECAUTIONS:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. If facility or operation has an "*oil or hazardous substance contingency plan*", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Contain spill in smallest possible area.

Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 800-424-8802. For highway or railway spills, contact Chemtrec at 800-424-9300.

### METHODS FOR

#### CLEANING UP:

For small spills, absorb or cover with dry earth, sand or appropriate absorbent material. Dispose of material at an appropriate disposal facility in accordance with local, state and federal regulations.

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## SECTION 7: HANDLING AND STORAGE

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### HANDLING:

Do not breathe fumes or vapor from heated material. Stay upwind when opening hatches and vents. Wear appropriate personal protective equipment to avoid skin, face and eye contact with heated material. Significant concentrations of hydrogen sulfide can be present in vapor space of storage tanks and transport compartments, which may require additional precautions.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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**ENGINEERING CONTROLS:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Special ventilation may be required for handling conditions at elevated temperatures. Ensure that eyewash stations and safety showers are close to the workstation location.

### PERSONAL PROTECTION

**SKIN:** PPE selection should be based on a risk assessment. Heat-resistant gloves, impervious apron, long-sleeved shirts, leather boots, safety glasses, face shield should be worn when indicated by a risk assessment.

**RESPIRATORY:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**EYE:** Eye protection (chemical-type goggles and/or face shield) should be worn whenever there is a likelihood of splashing or spraying liquid. Contact lenses should not be worn. Eye wash water should be provided.

**OTHER:** Use good personal hygiene practices.

### **PERSONAL PROTECTIVE EQUIPMENT IN CASE OF A**

**LARGE SPILL:** Splash goggles. Full suit. Vapor respirator. Boots. Gloves. Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product. Suggested protective clothing might not be adequate. Consult a specialist before handling this product.

### Established Occupational Exposure Limits

SUBSTANCE	VALUE	TIME/TYPE	SOURCE
Asphalt	.5 mg/m <sup>3</sup>	8 hour TWA	ACGIH
Hydrogen Chloride, Anhydrous	5 ppm	Ceiling	OSHA
Hydrogen Sulfide	10 ppm	8 hour PEL	OSHA
Hydrogen Sulfide	15 ppm	15 min STEL	OSHA

**Consult local authorities for acceptable exposure limits.**

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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<b>PHYSICAL STATE:</b>	Liquid
<b>COLOR:</b>	Black-Brown
<b>ODOR:</b>	Asphaltic, Sweet
<b>BOILING POINT:</b>	Approximately 212°F
<b>FLASH POINT:</b>	Not Applicable
<b>FREEZING POINT:</b>	Not Available
<b>SPECIFIC GRAVITY:</b>	1.0 to 1.3 (Water = 1) (@ 60°F)
<b>VISCOSITY:</b>	20-100 SSF (@75°F) or 100 – 400 SSF (@ 122°F)
<b>VAPOR PRESSURE:</b>	Not Determined
<b>VAPOR DENSITY:</b>	>1 (Air = 1)
<b>VOLATILITY:</b>	Negligible
<b>EVAPORATION RATE:</b>	Not Determined

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## SECTION 10: STABILITY AND REACTIVITY

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<b>MATERIALS TO AVOID:</b>	Open flame and extreme heat
<b>STABILITY AND REACTIVITY:</b>	The product is stable
<b>INCOMPATIBILITY WITH VARIOUS SUBSTANCES:</b>	Reacts with strong oxidizers
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	At ambient temperature this product does not decompose. Burning or excessive heating may produce carbon monoxide sulfur oxides, hydrogen sulfide and other harmful vapors and gases.
<b>HAZARDOUS POLYMERIZATION:</b>	Will not occur
<b>CONDITIONS TO AVOID (STABILITY):</b>	Heat, sparks and open flame. Strong oxidizers.

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## **SECTION 11: TOXICOLOGICAL INFORMATION**

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Fumes emitted from heated product are irritating to the eyes and respiratory tract. Dust/particles may be the source of physical irritants. Repeated or prolonged skin contact with asphalt at ambient temperatures can result in skin irritation. Symptoms of overexposure to hydrogen sulfide include insomnia, irritability, headache, fatigue, gastrointestinal problems and loss of sense of smell up to 100 ppm. Exposures to hydrogen sulfide above 100 ppm may cause drowsiness, loss of consciousness, respiratory failure or death.

Certain extracts of asphalt have been shown to produce cancers in laboratory rodents. The carcinogenic potency of asphalt is considered low, provided asphalt is not contaminated with coal tar.

Based on animal and human data, an A4 Not Classifiable as a Human Carcinogen, notation is assigned to asphalt fume.

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## **SECTION 12: ECOLOGICAL INFORMATION**

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**ECOLOGICAL INFORMATION:** Not evaluated at this time. This product is soluble in water and will disperse in water environment. Water insoluble hydrocarbons from this material may separate.

**PRODUCTS OF DEGRADATION:** This product is expected to have a low rate of biodegradation.

**TOXICITY OF THE PRODUCTS OF BIODEGRADATION:** Bioaccumulation of components is not expected.

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## **SECTION 13: DISPOSAL CONSIDERATIONS**

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**WASTE DISPOSAL:** The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

This material, if discarded as produced, is not a RCRA "listed" hazardous waste.

Disposal of empty containers and container rinseate should at all times comply with all applicable federal, state and local environmental regulations.

**Consult your local or regional authorities.**

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## SECTION 14: TRANSPORT INFORMATION

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Not regulated by the U.S. Dept of Transportation as a hazardous material.

REGULATORY INFORMATION	UN NUMBER	EMERGENCY RESPONSE GUIDEBOOK	PROPER SHIPPING NAME	CLASS	PACKING GROUP
DOT Classification	N/A	N/A	N/A	N/A	N/A

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## SECTION 15: REGULATORY INFORMATION

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**U.S. FEDERAL REGULATIONS:**

**Extremely Hazardous Substances for Emergency Response and Planning 40 CFR 355 & 40 CFR 370:**

Hydrogen Sulfide

**EPA SARA Sections 302, 304 & 313 and CERCLA:**

This material does not contain any chemicals subject to the reporting requirements of SARA 302, SARA 304, SARA 313, CERCLA or 40CFR 372

**EPA SARA 311/312 Title III Hazard Categories:**

Acute Health Hazard:	YES
Chronic Health Hazard:	NO
Fire Hazard:	NO
Pressure Hazard:	NO
Reactive Hazard:	NO

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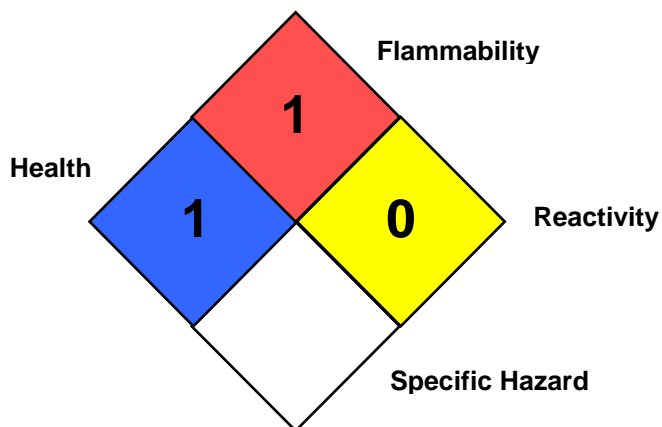
## SECTION 16: OTHER INFORMATION

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### HAZARDOUS MATERIAL INFORMATION SYSTEM

HMIS III	
HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	
PERSONAL PROTECTION	

### NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.)



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