SDS

SAFETY DATA SHEET

BI-STATE EMULSIONS, LLC

CATIONIC EMULSIFIED ASPHALTS

SECTION 1- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	CHFRS-2P, CRS-2, CRS-2P, CSS-1H, CSS-1HP, CPEM-1, CQS-1HP, MSE-1, RSP
RECOMMENDED USE:	ROAD CONSTRUCTION EMULSIONS
MANUFACTURER'S NAME:	BI-STATE EMULSIONS, LLC
ADDRESS:	3714 Big Bend Industrial Ct. Maplewood, MO 63143
BUSINESS PHONE:	314-645-1818
EMERGENCY PHONE:	800-633-8253
WEB SITE:	www.missouripetroleum.com
DATE OF PREPARATION:	February 11, 2014
DATE OF LAST REVISION:	August 26, 2019

SECTION 2- HAZARDS IDENTIFICATION

Warning

Hot product can cause burns.
Irritant: causes eye, skin and respiratory irritation
Hot product can release Hydrogen Sulfide Gas
Read SDS for further details

Gloves

Eye Protection

EMERGENCY OVERVIEW:

Cationic asphalt emulsions are a dark brown to black viscous liquid, emitting a subtle petroleum odor.

HEALTH HAZARDS:

Exposure to these products can irritate the eyes, respiratory system and skin. Hot products can cause severe thermal burns. If burned, cool the affected area immediately with cool running water. Always seek medical attention in the case of severe thermal burns. Prolonged or repeated skin contact can cause drying of the skin which may produce irritation or dermatitis. When heated, these products may release toxic hydrogen sulfide. Long-term exposure to high concentrations of asphalt vapors have been known to cause chronic bronchitis and pneumonitis.

FLAMMABILITY:

These products are not classified as flammable or combustible material.

ENVIRONMENTAL EFFECTS:

The environmental effects of these products have not been investigated, but are not expected to be toxic to aquatic organisms.

SECTION 2: HAZARD IDENTIFICATION (CONTINUED)

Transportation Identification

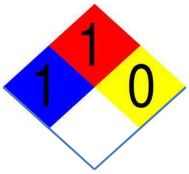
US DOT Symbols	Canada (WHMIS) Symbols	European and (GHS) Hazard Symbols
Non-Regulated		 Signal Word: Warning

EU LABELING AND CLASSIFICATION:

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE ACCORDING TO REGULATION (EC) No1272/2008 annex I.
EC# 231-977-3 Index# 016-001-00-4
EC# 232-490-9 This substance is not classified in the Annex I of Directive 67/548/EEC

COMPONANTS CONTRIBUTING TO HAZARD:	All Components
GHS HAZARD CLASSIFICATIONS:	Acute Toxicity Inhalation Category 4
HAZARD STATEMENTS:	H315: Causes skin irritation H319: Causes serious eye irritation H332: Harmful if inhaled
PRECAUTIONARY STATEMENTS:	P260: Do not breath dust/fume/gas/mist/vapors/spray P264: Wash hands thoroughly after handling P271: Use only in well ventilated area. P280: Wear protective gloves, protective clothing, eye protection and/or face protection
HAZARD SYMBOLS:	[Xn] Harmful
RISK PHRASES:	R26: Very toxic by inhalation R36/37/38: Irritating to eyes, respiratory system and skin
SAFETY PHRASES:	S24/25: Avoid contact with skin and eyes S36: Wear suitable gloves and eye/face protection S37/39: Wear suitable gloves and eye/face protection S45: In case of accident or if you feel unwell, seek medical advice immediately.

NFPA HAZARD IDENTIFICATION

NFPA HAZARD IDENTIFICATION	DEGREE OF HAZARD	HAZARD RATINGS
	HEALTH: 1 FIRE: 1 REACTIVITY: 0	0 = LEAST 1 = SLIGHT 2 = MODERATE 3 = HIGH 4 = EXTREME

SECTION 2: HAZARD IDENTIFICATION (CONTINUED)

Acute

EYE CONTACT: Contact from emulsions and/or fumes directly to and around the eye can cause irritation including, but not limited to; stinging, watering and redness. Hot product can cause thermal burns to the eyes. In any case, immediate medical treatment should be sought to protect the eye from damages.

SKIN CONTACT: Contact to the skin can cause mild irritation. Prolonged exposure with asphalt can cause discoloration and heighten the skin sensitivity to the sun. Over time irritation can worsen causing dry skin, cracking and even dermatitis. Heated asphalt and the fumes produced from the process can cause thermal burns. No harmful effects from skin absorption are to be expected. In the case of thermal burn, DO NOT attempt to remove the emulsion and/or clothing as it may have adhered to the skin.

INHALATION: Hot asphalt emulsions release fumes and/or vapors. These fumes and/or vapors can be smoke, carbon dioxide, carbon monoxide and unburned hydrocarbons. Exposure to these fumes and/or vapors can cause irritation of the nose and throat, with symptoms of dizziness, headache, loss of coordination and/or drowsiness. These materials contain sulfur compounds which may form hydrogen sulfide. Hydrogen sulfide can be noticed by its rotten-egg odor. Continued exposure to hydrogen sulfide(H_2S) can deaden a person's sense of smell. At low levels of exposure, H_2S causes eye irritation and/or nose and throat irritation. Moderate levels of H_2S can cause headache, dizziness, nausea and vomiting, as well as coughing and difficulty breathing. Higher levels can cause shock, convulsions, coma and eventually death. When dealing with serious exposure, symptoms usually begin immediately.

INGESTION: DO NOT ingest asphalt emulsions. Ingestion may cause thermal burns. Ingestion will result in irritation to the digestive tract, nausea, vomiting and diarrhea. DO NOT induce vomiting. Rinse mouth. If a large amount has been ingested, call the Poison Control Center and seek medical attention immediately.

Chronic

Breathing vapors or fumes from heated material may cause headaches, dizziness and lung irritation. Long-term exposure to high concentrations of asphalt fumes may cause chronic bronchitis and pneumonitis.

TARGET ORGANS: Acute: Eye, Respiratory System, Skin

Chronic: Respiratory System

SECTION 3: COMPOSITION and INFORMATION on INGREDIENTS

HAZARDOUS INGREDIENTS	CAS#	EINECS#	ICSC#	WT%	HAZARD CLASSIFICATION RISK PHRASES
ASPHALT	8052-42-4	232-490-9	0612	25-75%	HAZARD CLASSIFICATION: [Xn] HARMFUL, [Xi] IRRITANT RISK PHRASES: R26,R36/37/38
WATER	7732-18-5	231-791-2	NOT LISTED	25-75%	HAZARD CLASSIFICATION: NONE RISK PHRASES: NONE
EMULSIFIERS	TRADE SECRET	TRADE SECRET	NOT LISTED	0.1-6%	HAZARD CLASSIFICATION: NONE RISK PHRASES: NONE
MAY CONTAIN ONE OR MORE OF THE FOLLOWING					
POLYMERS OR LATEX	TRADE SECRET	NOT LISTED	NOT LISTED	0-5%	HAZARD CLASSIFICATION: NONE RISK PHRASES: NONE
DILUENT	TRADE SECRET	TRADE SECRET	NOT LISTED	0-10%	HAZARD CLASSIFICATION: NONE RISK PHRASES: NONE
HYDROGEN SULFIDE	7783-06-4	231-977-3	0165	<0.1%	HAZARD CLASSIFICATION: [T]TOXIC RISK PHRASES: R26

SECTION 4- FIRST-AID MEASURES

EYE CONTACT: In the event of a thermal burn to the eyes, remove contact lenses, rinse eyes with cool water (not iced) for at least 20 minutes and immediately seek medical attention. In the case of irritated eyes from fumes, flush with cool water. If the irritation persists, seek medical assistance.

SKIN CONTACT: Wash with cool water for mild irritation. If there is a thermal burn, soak area in cool water for at least 20 minutes. In the case of a thermal burn, DO NOT attempt to remove the emulsion and/or clothing as it may be adhered to the skin. Immediately seek medical assistance. Do not place any sheets or towels on top of the asphalt.

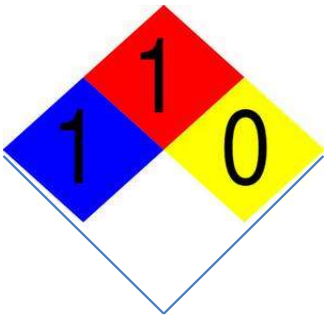
INHALATION: Move the infected person to fresh air. If symptoms do not subside, seek medical assistance. If a person is not breathing, clear the airway and begin artificial respiration. Seek medical assistance immediately.

INGESTION:

DO NOT ingest asphalt emulsions. Ingestion may cause thermal burns. Ingestion will result in irritation to the digestive tract, nausea, vomiting and diarrhea. DO NOT induce vomiting. Rinse mouth. If a large amount has been ingested, call the Poison Control Center and seek medical attention immediately.

Section 5- Fire-Fighting Measures

FLASH POINT:	Not classified as a flammable or combustible material
AUTOIGNITION TEMPERATURE:	Not applicable
Flammable limits (in air by column, %):	Lower (LEL): NA Upper (UEL): NA
OSHA FLAMMABILITY CLASS:	Not classified as flammable or combustible material
FIRE EXTINGUISHING MATERIALS:	Dry chemical, water mist and carbon dioxide (CO_2) are recommended.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Although these products will burn, they will not readily ignite. Flammable and toxic hydrogen sulfide gases may form in the headspaces of tankers. The flammability of these spaces are contingent upon the values given for asphalts.
Explosion Sensitivity to Mechanical Impact:	Not Sensitive
Explosion Sensitivity to Static Discharge:	Not Sensitive
SPECIAL FIRE-FIGHTING PROCEDURES:	Cool burning areas with selected fire extinguishing materials. If at all possible, keep run-off water out of storm drains and bodies of water. Use eye protection and in the case of structural fires, firefighters must wear self-contained breathing apparatuses with full protective equipment.



SECTION 6: ACCIDENTAL RELEASE MEASURES

GENERAL:	Before any action takes place, make sure the area is safe and clear. Clear the area of all igniters and contain the spill if applicable. For small spills, mix in an absorbing agent and shovel into a container for disposal. For larger spills, contain and mix with only inert materials. Avoid using combustive absorbers such as sawdust. Contain spills and/or run-offs from entering drainage ditches, sewers or water. If the spill has reached navigable waters, contiguous zones or adjoining shorelines, notify the national response center. Phone Number 800-424-8802
WASTE DISPOSAL METHOD:	Dispose of asphalt emulsions according to Federal, State, provincial and local regulations.

SECTION 7: HANDLING and STORAGE

WORK AND HYGIENE PRACTICES:

These products can impose serious threats. To prevent any harmful measures, avoid contact with skin, mouth, eyes and clothing. Wash hands thoroughly after handling these products. Do not eat, drink, smoke or apply cosmetics while working with this product. Always use in a well ventilated area. Avoid breathing the vapors. Remove or change clothing that have been soiled by these products immediately.

STORAGE AND HANDLING PRACTICES:

Always take the proper precautions to ensure you and the people around are safe. Use proper control measures while working with these products. Store in properly closed containers that are correctly labeled and located in a well-ventilated area. Normal storage temperatures for these products are anywhere between 50° and 150°F. If these products are stored above or below these temperatures, it can cause degradation to the product. These products can produce harmful hydrogen sulfide (H_2S) gases that can become trapped in the open cavities of the tanks/vessels used to hold the product. Before entering any tank/vessel carrying these products it should first be determined if there is a presence of (H_2S). When opening tanks/vessels carrying these products, always use eye (face shield) protection and heat resistant gloves. Tanks/Vessels can become pressurized, so take precautions opening man ways covers, valves and lids.

When storing these products in tanks that have heating options, make sure that all flues and/or heating coils are covered with at least 8" of asphalt emulsion. Do not overheat these products, doing so can be hazardous. The distributor shall have the full circulating and heating capabilities in the tank. If the particle charge of the emulsion is different from the particle charge of the emulsion that was previously used, then the tank shall be thoroughly cleaned prior to use since some products are not compatible. Do not apply heat while distributor is transporting emulsion.

SECTION 8: EXPOSURE CONTROLS-PERSONAL PROTECTION

CHEMICAL NAME	CAS#	ACGIH TWA	OASH TWA	NIOSH
ASPHALT	8052-42-4	0.5 mg/m^3	NOT LISTED	0.5 mg/m^3
HYDROGEN SULFIDE	7783-06-4	1 PPM TWA	20 PPM CEILING	10 PPM

The ACGIH TLV is 0.5 mg/m^3 as the benzene extractable portion of the inhalable fraction of asphalt fume. The TLV may also be determined by unspecified "equivalent" methods. Currently, international exposure limits are not established for all of the components of this product. Please check with competent authority in each country for the most recent limits in place.

ENGINEERING CONTROLS FOR VENTILATION: Use local exhaust or general dilution ventilation when using at elevated temperatures or during activities that generate vapors to maintain levels below the aforementioned exposure limits. Eye wash and safety showers should be located near the work areas.

The following information on appropriate personal protective equipment is provided to assist employers in compliance with OSHA regulations found in 29 CFR subpart I (beginning in 1910.132) or equivalent standard of Canada or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection) and those of Japan. Always check with local standards and practices for relevant details before handling this product.

RESPIRATORY PROTECTION: Under normal conditions, respiration is not necessary. If at all possible, keep these products airborne contaminant concentrations below the guidelines listed above. If ventilation fails and respiration protection is needed, only use protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149 or EU member States.

EYE PROTECTION: Wear safety glasses or chemical goggles that will prevent eye contact for the given situation. Wear goggles and a face shield when handling material. Use safety glasses that are accepted by U.S. OSHA 29 CFR 1910.132, Canadian CSA/ANSI codes. Like always, check local safety and practices standards.

HAND AND BODY PROTECTION: Always wear hand protection suitable for the task at hand. When handling this product, use chemical resistant gloves to prevent skin contact. When dealing with these products, it may be necessary to wear body protection such as long sleeve shirt, pants, insulated gloves, aprons, arm covers, face shield and boots. For further safety, refer to U.S. OSHA 29 CFR 1910.138 or appropriate standards of CSA/ANSI. Always work in accordance to local safety standards.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE:	Viscous liquid	BOILING POINT:	>200°F
APPEARANCE:	Tan or Dark liquid	pH:	2-7.0
ODOR:	Mild Odor	SPECIFIC GRAVITY:	.98-1.15
ODOR THRESHOLD:	Mild	SOLUABLITY IN WATER:	Miscible
VAPOR PRESSURE (MMhG):	Not Available	VISCOSITY:	Variable
EVAPORATION RATE (nBuAc=1):	Not Available		
SOFTENING POINT:	Not Applicable		
MELTING POINT:	Not Applicable		

SECTION 10: STABILITY and REACTIVITY

STABILITY: These products are classified as stable under normal conditions.

DECOMPOSITION PRODUCTS: These products can produce hydrogen sulfide if heated.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: These products should not be mixed with anionic asphalt emulsions or asphalt that has not been emulsified. These products could react negatively with strong oxidizing agents, including but not limited to chlorates, nitrates and peroxides.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid heating in excess of 185° F and contact with incompatible materials. Avoid allowing the material to cool below 50 °F.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY DATA: There is no toxicity data available for these mixtures

Cas# 8052-42-4	Asphalt	
Acute Oral Toxicity LD50	5,001 mg/kg	Rat
Acute Dermal Toxicity LD50	2,001 mg/kg	Rat

SUSPECTED CANCER AGENT: These products contain ingredient(s) that have been found in one or more lists to be a suspected cancer-causing agent. Lists including but not limited to; FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC.

IRRITANCY OF PRODUCT: These products can cause irritations of the skin, eyes and respiratory tract. Contact with hot material may cause thermal burns to skin,

SENSITIZATION OF PRODUCT: This product is not know to be a skin sensitizer.

SECTION 11: TOXICOLOGICAL INFORMATION (CONTINUED)

REPRODUCTIVE TOXICITY INFORMATION:	There is no information linking these products to adverse affects to the human reproductive system.
CARCINOGENICITY NOTE:	While studies have shown asphalt fume condensate fractions applied to mice in lab studies cause skin tumors, there is no results that have found asphalt fume breathed for extended periods of time to cause carcinogenic effects.

Exposure to humans in the community on low levels have not produced data signifying asphalt fumes cause any carcinogenic effects. However, those people working in paving and roofing companies being exposed to asphalt fumes for extended period of times have found asphalt to be carcinogenic, as found by the National Institute of Occupational Safety and Health (NIOSH). Currently the National Toxicology Program (NTP), the Occupational Safety and Health Administration (OSHA) have no evidence supporting asphalt being a carcinogen.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL STABILITY:	These products show no significant signs of adverse effects on the environment.
EFFECTS OF MATERIAL ON PLANTS OR ANIMALS:	At this point in time, there is no evidence that the product effects plants and animals.
EFFECT OF CHEMICAL ON AQUATIC LIFE:	There is no current evidence on these products effect aquatic life. Latex however, found in some of the products listed has been found to be harmful to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL:	These products are not classified as hazardous materials under U.S. DOT, Canadian TDG regulations, EU Member States, Japan or Australia. However, you should only dispose of these products in accordance to federal, state, providential or local standards.

SECTION 14: TRANSPORTATION INFORMATION

These products are non-regulated by the U.S. Department Of Transportation(DOT), Transport Canada, International Air Transport Association (IATA), International Maritime Organization and the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR). They require no DOT labels, packing group or UN Identification Number. These products have not been assigned a Hazard Class Number or North American Emergency Response Guidebook Number. None of these products(s) ingredient(s) have been classified by the DOT as a marine pollutant.

These Products should be transported at ambient temperatures from 50-185°F (10-85°C)

SECTION 15: REGULATORY INFORMATION

UNITED STATES REGULATIONS

TSCA:

All components are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA REPORTING REQUIREMENTS:

These products are not subject to the reporting requirements of section 302, 304 and 313 of Title III of the Superfund Amendments and reauthorization act., as follows: THIS PRODUCT IS SUBJECT TO TIER II REPORTING REQUIREMENTS.

Sara 311/312

Acute Health:	YES	Chronic Health:	YES
Fire:	NO	Reactivity:	NO

U.S. SARA THRESHOLD PLANNING QUANTITY:

There are no known Threshold Planning Quantities for these products. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lbs. may apply, per 40 CFR 370.20

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT

These products contain ingredients found in the California Proposition 65 lists.

U.S. CERCLA REPORTABLE QUANTITY (rq):

None

ATTENTION: THESE PRODUCTS CONTAIN AN INGREDIENT THAT IS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OF REPRODUCTIVE SYSTEMS.

CANADIAN REGULATIONS:

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:

There are no components of these products on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS:

These products are categorized as Class D Division 2B Materials causing other toxic effects as per the Controlled Product Regulations.

CANADIAN DSL/NDSL INVENTORY STATUS:

All products and components of products are found on the DSL inventory list.

SECTION 15: REGULATORY INFORMATION (CONTINUED)

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

Please refer back to section 2 for details

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE INFORMATION FOR PRODUCT: The products and components of the aforementioned products are not listed as Class I specified chemical substances, Class II specified chemical substances or designated chemical substances by the Japanese MITI.

AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: The products and components of the products are listed on the AICS.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable

INTERNATIONAL CHEMICAL INVENTORIES:

ASIA-PAC	LISTED
AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS):	LISTED
KOREAN EXISTING NATIONAL INVENTORY OF CHEMICAL SUBSTANCES (ENCS):	LISTED
PHILIPPINES INVENTORY IF CHEMICALS AND CHEMICALS SUBSTANCES (PICCS):	LISTED
SWISS GIFTLISTE LIST OF TOXIC SUBSTANCES	LISTED
U.S. TSCA	LISTED

SECTION 16: OTHER INFORMATION

PREPARED BY: **RICK HOLESINGER, P.E.** SDS COMPLIANCE PLUS

REVISION DATE: 4/11/2018

The information contained herein is based on the data available to us and is believed to be correct. However, Bi-State Emulsions, LLC makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. This information and product is furnished on the condition that the person receiving it shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of use thereof.