SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier	Cationic Asphalt Emulsion
Other means of identification:	Asphalt Emulsion
SDS Number:	20-006
Synonyms	CRS-2, CRS-2M, CRS-2P, CSS-1H, CSS-1H DIL, CAE-NT, CAE-NT DIL, CATIONIC CHIPLOCK
Recommended Uses	CHIPSEAL, BOND COAT BETWEEN ALL ASPHALT PAVEMENT SURFACES, FOGSEAL OVER CHIPSEAL SURFACE
Recommended Restrictions	NONE
Manufacturer/Importer/Supplier/ Distributor	K-TECH SPECIALTY COATINGS
Address	111 West Garfield St. Ashley, IN. 46705 Office: 260-587-3888 Fax: 260-587-3889
General Information	Office: 260-587-3888
24 hr Emergency Assistance	1-574-383-7061

2. HAZARD(S) IDENTIFICATION

GHS Classification(s)

Acute Toxicity (oral) Category 5
Skin corrosion/irritation Category 3
Serious eye damage/eye irritation Category 2B
Respiratory sensitizer Category 1B
Skin sensitizer Category 1B
Carcinogenicity Category 2
Aspiration hazard Category 2

Label Elements

Signal Word DANGER

Pictogram:

Hazard Statement	May be harmful if swallowed (oral). Causes mild skin irritation. Causes eye irritation. May cause allergy or asthma symptoms or breathing May cause an allergic skin reaction. Suspected of causing cancer. May be harmful if swallowed and enters airways.
Precautionary Statement	
Prevention	
	Wash any exposed skin that may have come in contact with product thoroughly after handling. To avoid getting product in eyes, wash any exposed skin that may have come in contact with product thoroughly after handling. Avoid breathing dust/fume/gas/mist/spray. Avoid breathing dust/fume/gas/mist/spray. Obtain special instructions before use. Use only in well ventilated space, if ventilation is not available, use a self contained breathing apparatus. Contaminated work clothes should not be allowed out of workplace. Wear protective gloves/protective clothing/eye protection/face protection.
Response	
	IF SKIN IRRITATION OCCURS: Wash any exposed skin that may have been in contact with product thoroughly. IF IN EYES: 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. IF INHALED: Immediately remove victim from source to fresh air, if irritation occurs from over exposure, seek medical attention. IF ON SKIN: Wash any exposed skin that may have been in contact with product thoroughly after handling. IF EXPOSED OR CONCERNED: Seek medical attention/advice. Do NOT induce vomiting. IF SKIN IRRITATION OR RASH OCCURS: Get medical advice/attention.

Response Continued	IF EYE IRRITATION OCCURS: Get medical advice/attention. Asphalt Cement at elevated temperatures may produce Hydrogen Sulfide Gas. Inhalation of vapors, mist or fumes containing Hydrogen Sulfide(generated at high temperatures) may cause irritation to nose, throat and respiratory system. IF SKIN IRRITATION OR RASH OCCURS: Get medical advice/attention. Immediately call a physician if you believe victim has swallowed product and may have breathed it into lungs. Do not induce vomiting.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with relevant regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS:

Chemical Identity	CAS Number	%
Asphalt Cement	8052-42-4	25-70%
Polymer	Proprietary	0-3%
Water	7732-18-5	30-75%
Emulsifier	Proprietary	0-3%
No. 2 FUEL OIL	68334-30-5	0-3%

4. FIRST AID MEASURES

Eye	**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.**
Skin	**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. Once product has cooled, 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.**
Ingestion	**Ingestion is not likely. If large amounts are swallowed, do not induce vomiting and immediately call the Poison Information Center or a physician and seek medical attention.**
Inhalation	**If irritation occurs from inhalation overexposure, immediately remove victim from source to fresh air and seek medical attention**
First Aid Facilities:	**Eye wash facilities and safety showers are recommended.**

5. FIREFIGHTING MEASURES

Flash Point: N.A. °F

Boiling Point: >200°F

Lower Explosive Limit: N.A.

Upper Explosive Limit: N.A.

Suitable Extinguishing Media	**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

Precautions for Safe Handling

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.

Conditions for Safe Storage, Including any Incompatibilities

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

Occupational Exposure Limits

US.OSHA Table Z-2 (29 CFR 1910.1000)

Components	OSHA	ACGIH	NIOSH
ASPHALT (CAS 8052-42-4)	PEL- Not established for this material.	TWA-0.5 mg/m3 Inhalable Particulate	CEILING-5.0 mg/m3
EMULSIFIER, Proprietary	PEL- Not established for this material.	-	-
No. 2 FUEL OIL	PEL- Not established for this material.	-	-
POLYMER	PEL- Not established for this material.	TWA, STEL- Not established for this material	Exposure limits not established for this material
WATER	PEL- Not established for this material.	TWA, STEL- Not established for this material	Exposure limits not established for this material

PERSONAL PROTECTION MEASURES

Eye/Face Protection

Safety goggles or chemical splash goggles if splashing is anticipated.

Skin Protection

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

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION CONTINUED

Respiratory Protection

Respiratory protection is not normally required under normal conditions and adequate ventilation. If high vapors are expected, use respirator approved for organic vapors. Observe respirator protection factor criteria cited in ANSI Z88.2 (1980) and other OSHA requirements found in 29 CFR 1910.134. Use air-supplied respirators or self-contained breathing apparatus for firefighting and in confined spaces when asphalt vapor or Hydrogen Sulfide gas exceeds permissible limits.

Other/General Protection

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

ENGINEERING CONTROLS

Local or general exhaust required if in an enclosed area to remain below the TLV. If work place exposure limits are exceeded, a NIOSH/MSHA approved air supplied respirator is advised in the absence of proper environmental engineering controls.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	**-Brown**
PHYSICAL STATE:	**-Liquid**
ODOR:	**-Characteristic Asphalt Odor**
ODOR THRESHOLD:	**-N/A**
PH:	**2-7**
FREEZE POINT:	**32°F (0°C)**
BOILING POINT/RANGE	**212 °F (100°C)**
FLASH POINT	**N/A**
EVAPORATION RATE	**N/A**
FLAMMABILITY(SOLID, GAS)	**N/A**
UPPER/LOWER FLAMMABILITY/EXPLOSIVE LIMITS	**N/A**
VAPOR PRESSURE	**Vapor Pressure: <1mm-10mm Hg @ 77 F**

9. PHYSICAL AND CHEMICAL PROPERTIES-Continued

VAPOR DENSITY	**Vapor Density: >1.0**
RELATIVE DENSITY	**1-1.15**
SOLUBILITY WITH WATER	**Completely**
PARTITION COEFFICIENT: N-OCTANE/WATER	**N/A**
AUTO-IGNITION TEMPERATURE	**N/A**
DECOMPOSITION TEMPERATURE	**N/A**
SPECIFIC GRAVITY:	**0.92-1.05**

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY	**This Product is stable at ambient temperatures.**
POSSIBILITY OF HAZARDOUS REACTIONS	**Low**
CONDITIONS TO AVOID	**Avoid extreme temperatures**
INCOMPATIBLE MATERIALS	**Avoid contact with strong bases.**
HAZARDOUS DECOMPOSITION PRODUCTS	**-Fumes, Smoke, Carbon Monoxide, Hydrogen Sulfide, Sulfur Dioxide, Aldehydes, and Hydrocarbons**

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Ingestion	May be harmful if swallowed (oral).
Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Contact	May cause mild skin irritation.
Eye Contact	Causes eye irritation

Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects:

Vapor may contain Hydrogen Sulfide (H2S) Gas. Exposure to lower concentrations of H2S can result in eye irritation, sore throat and cough, nausea, shortness of breath, and fluid in the lungs. Long term exposure may result in fatigue, loss of appetite, headaches, irritability, poor memory, and dizziness.

Numerical measures of toxicity:

.02 ppm Odor threshold.

10 ppm 8-hour per day exposure limit to Hydrogen Sulfide.

10-20 ppm Borderline concentration for eye irritation.

10-100 ppm Leads to eye damage.

100-150 ppm Olfactory nerve paralyzed after a few minutes, sense of smell disappears, and often unawareness of danger.

320-530 ppm Leads to pulmonary edema with possibility of death.

530-1,000 ppm Causes strong stimulation of the central nervous system and rapid breathing.

800 ppm Lethal concentration of 50% of humans for 5-minute exposure (LC50).

>1,000 ppm Immediate collapse with loss of breathing, even after inhalation of a single breath.

12. ECOLOGICAL INFORMATION

Ecotoxicity-Aquatic and Terrestrial: Not listed as a marine pollutant on HMT 172.101

Persistence and Degradability: No testing has been performed by the manufacturer.

Bioaccumulative potential: No testing has been performed by the manufacturer.

Mobility in soil: No testing has been performed by the manufacturer.

Other adverse effects: N/A

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

UN Number:	**NON HAZARDOUS**
Proper Shipping Name:	**NON-REGULATED**
Hazardous Classification:	**NON-REGULATED**
Packing Group:	**NON-REGULATED**
Environmental Hazards:	**N/A**
Transport in Bulk:	**N/A**
Special Provisions:	**N/A**
Special Precautions:	**N/A**
Packaging Exceptions:	**N/A**
Packaging Non-Bulk:	**N/A**

15. REGULATORY INFORMATION

U.S. Regulatory Information

Toxic Substances Control Act: This product is listed on the US TSCA Chemical Inventory Section 8(b).

Clean Water Act: Petroleum hydrocarbons are considered hazardous if released into navigable waters.

OSHA Hazard Communication: See individual state requirements for Right-To-Know lists.

SARA Hazard Classes

-Acute Health Hazard

NFPA RATING:

HEALTH: 1

FLAMABILITY:0

REACTIVITY:0

16. OTHER INFORMATION

When in storage, avoid freezing temperatures or heating in excess of 212°F. Both extremes will cause separation of the water from the asphalt, and will render the product unusable and result in a disposal situation. Do not contaminate with cationic emulsions or other asphalt materials such as asphalt cement or cutback asphalts. All of these materials are incompatible and will result in an unusable material that will require waste disposal processing.

This material safety data sheet and the information herein is offered in good faith as accurate. The information has been compiled from sources considered to be reliable and accurate to the best of our knowledge, but is not guaranteed to be so. Health and safety precautions in this data sheet may not be adequate for all individuals under all circumstances. It is the users obligation to evaluate and use this product safely and to comply with all applicable laws and regulations whether they be federal, state, or local. No warranty is made, either expressed or implied through the issuance of this MSDS.

SDS PREPARED:	**3/2/2020**
REVISION DATE:	**9/30/2021**