

Cationic Rapid Setting Emulsion

SECTION 1. IDENTIFICATION

Product Identifier	Cationic Rapid Setting Emulsion
Other Means of Identification	CRS-1 (H) (P); CRS -2 (S) (P); RS-1K; RS-2K; Supercol S, H
Recommended Use	Tack Coating, Surface Treatment.
Restrictions on Use	None known.
Manufacturer/Supplier Identifier	McAsphalt Industries Ltd, 8800 Sheppard Ave East, Toronto, Ontario, M1B 5R4, 416-281-8181
Emergency Phone No.	CANUTEC, (613) 996 - 6666, 24 hours McAsphalt Industries Ltd., 1 - (800) - 268 - 4238, 8AM-5PM Monday to Friday

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015).

Classification

Acute toxicity (Inhalation) - Category 4; Skin irritation - Category 3; Eye irritation - Category 2B; Carcinogenicity - Category 2

Label Elements



Warning

Causes skin and eye irritation.

Harmful if swallowed, in contact with skin or if inhaled.

IF exposed or concerned, get medical advice/attention.

Other Hazards

Contact with eyes, skin:

At higher temperatures, may cause thermal burns.

Inhalation:

Hot emulsion may release irritating fumes or vapours such as smoke, carbon dioxide, carbon monoxide and hydrocarbons. Exposure to the fumes or vapours may cause nose and throat irritation, as well as symptoms such as headache, dizziness, loss of coordination, drowsiness, or nausea. When heated above its boiling point, this product may release toxic hydrogen sulfide (H₂S).

Ingestion:

In its hot state, the product inflicts burns. Ingestion may cause nausea, vomiting or diarrhea.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Asphalt (Bitumen)	8052-42-4	55-75		

Water	7732-18-5	25-45		
Styrene-butadiene copolymers	9003-55-8	0-3		
FUEL OIL NO. 2	68476-30-2	0-3		
Emulsifier	61790-85-0, 111-46-6, 61791-44-4,	0.1-0.5		
Hydrochloric Acid	7647-01-0	0-0.2		

Notes

The composition varies according to the source of the crude oil and the characteristics of the final product. It may contain sulfur, nitrogen and oxygen compounds, as well as traces of heavy metals.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

If exposed to high concentrations of vapours or fumes, remove to fresh air and restore breathing if necessary. Get medical attention if you feel unwell, or if coughing or other symptoms do not resolve.

Skin Contact

Wash with cool water and a pH-neutral soap or mild skin cleanser. Do not use strong solvents or thinners to remove the product from the skin. A skin-friendly oil may remove more emulsion. Get medical attention for rash, irritation and dermatitis.

Eye Contact

In case of contact, flush with plenty of cool water for at least 15 minutes. Get medical attention for burns, do not attempt to remove product from eyes.

Ingestion

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

First-aid Comments

If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed

Hot emulsion or asphalt burnss: Immediately and quickly cool the affected area with plenty of water. Remove any soiled or splashed clothing provided it does not adhere to the skin. Never attempt to remove adhering material from the skin and seek emergency medical attention.

Immediate Medical Attention and Special Treatment

Special Instructions

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Large Fire: Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

Water spray may promote fire spread.

Specific Hazards Arising from the Product

Flammability of the product: Will burn on prolonged exposure to flame or high temperature.

Hydrogen sulphide may be released if the product is overheated and may accumulate in the tank headspace or any other confined space.

Carbon oxides (CO, CO₂), smoke and irritating vapours as products of incomplete combustion.

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Special Protective Equipment and Precautions for Fire-fighters

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

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn. See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Do not touch or walk through spilled material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and Materials for Containment and Cleaning Up

Note: see section 1 for emergency contact information.

Other Information

Contact supplier, local fire and emergency services for help. Report spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear appropriate protective equipment (section 8). Handle with care and use appropriate control measures. Avoid contact with skin, eyes and clothing. Use extra precautions when handling hot product. Skin should not be in contact with hot product. Ensure that the environment is well ventilated. Use all appropriate control devices and personal protective equipment (PPE) described in Section 8.

Conditions for Safe Storage

Store in an area that is: cool, well-ventilated. Store away from sources of ignition and open flame. If the product is overheated, the aqueous portion may boil and cause the product to overflow. Do not mix two types of emulsions without checking with the manufacturer first. Never mix an anionic emulsion and a cationic emulsion. Bitumen emulsion can leave a layer of bitumen on the walls of the tank, it must then be considered as bitumen. Keep the container tightly sealed in a dry place. In the laboratory, plastic or glass containers can be used. Steel or plastic packaging materials are recommended for other uses.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Asphalt (Bitumen)	0.5 mg/m ³ (I) A4 BEI		Not established			
Styrene-butadiene copolymers	3 mg/m ³ (R)					
FUEL OIL NO. 2	100 mg/m ³					

Appropriate Engineering Controls

If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Individual Protection Measures

Eye/Face Protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

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Skin Protection

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Chemical-resistant, imperious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Suitable materials are: nitrile rubber. Leather or Aluminize Gloves.

Respiratory Protection

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. Recommended: organic vapour filter cartridge or canister with a dust, fume or mist filter (R, or P series) may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Dark black - brown oily liquid. Particle Size: Not available
Odour	Characteristic asphaltic odour or "rotten egg" odour if H ₂ S present, but odour is an unreliable warning, since it may deaden the sense of smell. (Asphalt (Bitumen))
Odour Threshold	Not available
pH	3 (estimated)
Melting Point/Freezing Point	Not available (freezing)
Initial Boiling Point/Range	100 °C (212 °F) (estimated)
Flash Point	> 100 °C (212 °F) (closed cup) (calculated)
Evaporation Rate	Not available
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.01
Solubility	Insoluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log K_{ow})	Not available
Auto-ignition Temperature	Not available
Viscosity	Not available (kinematic)
Other Information	
Physical State	Liquid
Surface Tension	Not available
Electrical Conductivity	Not available
Vapour Pressure at 50 deg C	Not available
Saturated Vapour Concentration	Not available

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability

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Stable under normal storage conditions.

Possibility of Hazardous Reactions

Contact between heated Asphalt and water can cause a violent eruption. May release CO_x, NO_x, SO_x, PO_x, H₂S, hydrocarbons, smoke and irritating vapours when heated to decomposition.

Conditions to Avoid

Under normal conditions of storage and use, hazardous polymerization will not occur. Exposure to heat.

Incompatible Materials

Reactive with oxidizing agents i.e. Acids, Bases, Oxidizers. Acides. Bases. Oxidizers.
Not corrosive to metals.

Hazardous Decomposition Products

May release CO_x, NO_x, SO_x, PO_x, H₂S, hydrocarbons, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

No known significant effects or critical hazards. See toxicological information (Section 11).

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Asphalt (Bitumen)	> 94.4 mg/m ³ (rat)	> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)
FUEL OIL NO. 2		~ 12000 mg/kg (rat)	
Emulsifier		> 500 mg/kg (rat)	

Skin Corrosion/Irritation

Irritating to skin. Signs/symptoms may include localized redness, swelling, and itching. Hot liquid product may cause serious thermal burns on direct contact. Asphalt fumes can increase susceptibility to sunburn.

Slightly irritating to the skin. Contact with hot material can cause thermal burns.

Serious Eye Damage/Irritation

Irritating to eyes. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Hot liquid product may cause serious thermal burns on direct contact. Hydrogen sulphide may cause eye irritation at 1 - 20 ppm and acute conjunctivitis at higher concentrations. Above 50 ppm H₂S, eye irritation may include symptoms of redness, sever swelling, tearing, sensitivity to light and the appearance of 'Halos' around lights.

Hot liquid product may cause thermal burns. Slightly irritating to the eyes.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May be harmful based on information for closely related materials.

Yes, caution in confined spaces.

No known significant effects or critical hazards. Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include' weakness, dizziness, slurred speech, drowsiness, unconciosness and in cases of severe overexposure; coma and death. At higher concentrations (above 10 ppm), hydrgen sulphide is extremely toxic by inhalation, may cause respiratory-tract irritation and respiratory failure, coma and death. Pulmonary edema can occur up to 24 hours after hydrogen sulphide exposure. While hydrogen sulphide emits a strong odour of rotten eggs, detection by smell is not sufficient as a warning property for exposure to this substance, as it may deaden the sense of smell quickly.

Skin Absorption

May be harmful based on information for closely related materials.

Skin to darken.

Ingestion

Harmful based on information for closely related materials.

Severe irritation or burns to the mouth, throat and stomach.

Harmful. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

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Harmful based on studies in people and animals.
effects similar to STOT (Specific Target Organ Toxicity) - Single Exposure, as described above.
No known significant effects or critical hazards.

Respiratory and/or Skin Sensitization

Not a respiratory sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Asphalt (Bitumen)	Group 2B	A4		
FUEL OIL NO. 2	Group 3	A3	Not Listed	
Emulsifier	Not Listed	Not Listed	Not Listed	Not Listed

The International Agency for Research on Cancer (IARC) has determined that occupational exposures to oxide asphalt and their emissions during roofing operations are "probably carcinogenic to humans" (Group A). IARC concluded that occupational exposures to hard asphalts and their emissions during mastic asphalt work are "possibly carcinogenic to humans" (Group 2B). IARC concluded that occupational exposure to straight-run asphalts and their emissions during paving operations are "possibly carcinogenic to humans" (Group 2B).
An IARC working group has concluded that occupational exposures to straight-run bitumens and their emissions during road paving are 'possibly carcinogenic to humans' (Group 2B).

Key to Abbreviations

ACGIH® = American Conference of Governmental Industrial Hygienists. A3 = Animal carcinogen. IARC = International Agency for Research on Cancer. Group 2B = Possibly carcinogenic to humans. Group 3 = Not classifiable as to its carcinogenicity to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A4 = Not classifiable as a human carcinogen.

Reproductive Toxicity

Development of Offspring

No information was located.
No known significant effects or critical hazards.

Sexual Function and Fertility

No information was located.
No known significant effects or critical hazards.

Germ Cell Mutagenicity

No information was located.
No known significant effects or critical hazards.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable under Federal and Provincial regulations.

Ecotoxicity

No information was located.

Persistence and Degradability

Not available.

Bioaccumulative Potential

(Asphalt (Bitumen)) this product and its degradation products are not known to bioaccumulate.

Mobility in Soil

Studies are not available.

Other Adverse Effects

There is no information available.

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. Recycle and reuse product, if possible. The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user. Dispose of or recycle empty containers through an approved waste management facility.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations.

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulation under CEPA, 1999. All ingredients are listed on the DSL/NDSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory. The components of this product are in compliance with the chemical notification requirements of TSCA.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 1** **Flammability - 1** **Instability - 0**

SDS Prepared By EPC & Risk Management Department

Phone No. 1-800-268-4238

Date of Preparation January 24, 2018

Date of Last Revision April 28, 2023

Revision Indicators April 28 2023 Supercol added to Product Identifiers

Key to Abbreviations ACGIH® = American Conference of Governmental Industrial Hygienists
AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank
IARC = International Agency for Research on Cancer
NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health
NTP = National Toxicology Program
OSHA = US Occupational Safety and Health Administration
RTECS® = Registry of Toxic Effects of Chemical Substances

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).
HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS).

Disclaimer To the best of our knowledge, the information herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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