

CRS-2

CATIONIC RAPID SETTING ASPHALT EMULSION

PRODUCT DESCRIPTION

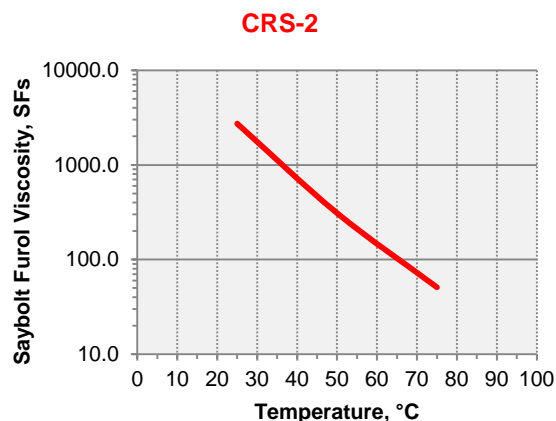
CRS-2 is a rapid setting cationic asphalt emulsion that reacts quickly with the aggregate to revert from emulsion to asphalt.

Asphalt emulsions are classified according to the electric charge that surrounds the asphalt particles (i.e. cationic, anionic emulsions) and how quickly the suspended asphalt particles break. A rapid setting emulsion is one that will destabilize quickly when in contact with aggregate. The setting speed is relative because it is affected by atmospheric conditions at time of construction.

GENERAL PRODUCT FEATURES

- Due to the higher viscosity than CRS-1, this product may be sprayed in thicker films
- Thicker coatings on aggregates - increased durability
- Traffic can be restored very shortly after application
- Ideal for use in hot temperatures
- No run-off
- Seals narrow cracks against moisture penetration
- Prevents slippage plane between layers

TEMPERATURE-VISCOSITY CHART



RECOMMENDED USE

CRS-2 cures quickly and produces heavy asphalt films. Its relatively high viscosity permits a higher spray rate without danger of run-off as compared to the CRS-1 grade. **CRS-2** is ideal for spray applications such as spray patching, sand seals, chip seals and double surface treatments.

SPECIFICATIONS AND TYPICAL RESULTS

TEST	TYPICAL DATA	SPEC RANGE	
		Min	Max
Tests on Emulsion			
SF Viscosity, 50°C, SFs	230	100	400
Sieve Test, 850 µm, %	0.04	...	0.1
Settlement, 5 days, %	2.1	...	5.0
Demuls., DOSS 0.8%, %	67	40	...
Dist. Residue, 260°C, %	68.8	67	...
Oil Portion of Dist., %	trace	...	3
Particle Charge	(+)	(+)	
Tests on Residue			
Penetration, 25°C, dmm	125	100	250
Solubility in TCE, %	99.91	97.5	...
Ductility, 25°C, cm	68	60	...

APPLICATION GUIDELINES

- Clean/prime/tack pavement surface prior to application
- Do Not apply if precipitation is anticipated
- Contact your local **MCA** Marketing representative for guideline application temperatures



McASPHALT INDUSTRIES LIMITED

8800 Sheppard Ave East T 416.281.8181 TF 1.800.268.4238
 Toronto, ON M1B 5R4 F 416.281.8842 E info@mcasphalt.com

mcasphalt.com
 ISO 9001/14001/45001

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DESIGN GUIDELINES

Designs should be formulated prior to initial production, and each time aggregate sources are changed. Testing of final product is highly recommended to ensure a quality seal. **MCA**

Technical Services offers complete design services and product quality analysis.

POTHOLE PATCHING

When repairing potholes in pavement, the edges surrounding the pothole being patched should be tack coated to ensure a bond between the asphalt edge and the patching material. Apply an even coating of **CRS-2** to all the sides of the hole (approx. 0.20 - 0.25 L/m²).

SPRAY PATCHING

Spray patching consists of alternate applications of **CRS-2** and aggregate to repair deteriorated areas in the pavement surface. Alternate layers of **CRS-2** and aggregate may also be used to repair depressions in the road due to rutting or ravelling.

SINGLE AND MULTIPLE CHIP SEALS

A uniform application of **CRS-2** asphalt emulsion to a prepared surface followed by a uniform application of cover aggregate (per lift). Aggregates used should be one sized, washed chip whose size ranges from 6 mm (¼"), 9.5 mm (3/8") to 19 mm (¾").



PACKAGING, STORAGE AND HANDLING

- **CRS-2** should be stored in bulk tanks, vertical if possible to minimize surface area
- Do not allow **CRS-2** to either freeze or boil – it will break. Storage temperature should not be allowed to fall below 10°C or exceed 85°C
- In all bulk storage, mix the **CRS-2** every 1–2 weeks (more frequently in cold weather). Mixing may be by paddle agitator (slow), loose gear pump, slow centrifugal pump, or other suitable low shear pump
- Do not bubble air through **CRS-2** to agitate it, this creates excessive foam and may cause the emulsion to break
- Always use clean containers. Make sure prior contents are compatible with **CRS-2** or the emulsion may break

CERTIFICATION OF QUALITY

McAsphalt Industries Limited is accredited to the quality standard **ISO 9001** and to the environmental standard **ISO 14001**.

Each lot of **CRS-2** is produced using the strictest quality, safety and environmental guidelines. Each production lot is tested to ensure it meets or exceeds all performance requirements, and it is delivered with a Certificate of Analysis.

PRODUCT SUPPORT

With the **MCA Advantage**, you get a partner and advisor who will consult with you about designs, specifications, technical services, processes and material selection. By developing innovative, custom-designed products that offer additional benefits, such as peak performance in unique conditions, improved field performance, greater environmental and health benefits, the **MCA Advantage** provides significant long-term cost savings, resulting in lower “total cost of ownership.”



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