

CRS-2P

CATIONIC RAPID-SETTING POLYMER-MODIFIED ASPHALT EMULSION

PRODUCT DESCRIPTION

CRS-2P is a rapid setting, polymer-modified cationic asphalt emulsion that reacts quickly with aggregate to convert from an emulsion to asphalt.

Asphalt emulsions are classified according to the electric charge that surrounds the emulsion’s asphalt particles (i.e. whether it is a cationic or an anionic emulsion) and how quickly the suspended asphalt particles separate from the surrounding water (“breaking”). A rapid-setting emulsion is one that will destabilize quickly when in contact with aggregate. The setting speed of any emulsion is relative to atmospheric conditions at the time of construction.

GENERAL PRODUCT FEATURES

- Less aggregate loss due to greater asphalt adhesion and cohesion of the polymer-modified residue
- Thicker coatings on aggregates due to **CRS-2P**'s high viscosity lead to increased durability.
- Traffic can be restored very shortly after application.
- No runoff
- Seals narrow cracks against moisture penetration
- Able to be made utilizing an SBS-polymer-modified asphalt cement base or a virgin asphalt cement base and a latex SBR

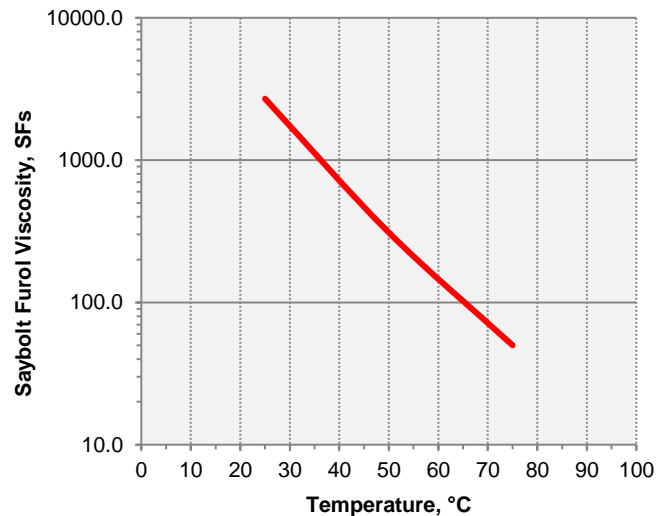
RECOMMENDED USE

CRS-2P cures quickly and produces a heavy asphalt film. Its high viscosity permits higher application rates without the danger of runoff whereas the adhesive-cohesive properties gained from the addition of polymer make this emulsion ideal for spray applications such as single or multiple chip seals.

SPECIFICATIONS AND TYPICAL RESULTS

TEST	TYPICAL DATA	SPEC.	
		Min	Max
Tests on Emulsion			
SF Viscosity, 50°C, SFs	210	75	400
Sieve Test, 850 µm, %	0.06	-	0.2
Storage Stability, 24 h, %	0.8	-	1.0
Demulsibility, 35 ml 0.8% DOSS,%	65	40	-
Distillation Residue, 204.4°C, %	67.5	65	-
Oil Portion of Distillation, %	0.4	-	3
Particle Charge	(+)	(+)	
Tests on Residue			
Penetration, 25°C, dmm	108	100	250
Elastic Recovery, 10°C, %	62	55	-
Force Ductility, 4°C, kg	0.68	0.5	-
Ash Content, 600°C, %	0.15	-	1.0

TEMPERATURE VISCOSITY CHART



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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APPLICATION GUIDELINES

- Clean/prime/tack pavement surface prior to application.
- Do not apply **CRS-2P** if precipitation is anticipated.
- Contact your local **MCA Marketing** representative for application temperature guidelines.

DESIGN GUIDELINES

Designs should be formulated prior to initial production and each time aggregate sources are changed. Testing of the final product is highly recommended to ensure a quality seal. **MCA Technical Services** offers complete design services and product quality analysis.

SPRAY PATCHING

Spray patching consists of alternate applications of **CRS-2P** and aggregate to repair deteriorated areas in the pavement surface. Alternating layers of **CRS-2P** and aggregate may also be used to repair depressions in the road due to rutting or ravelling. Excellent adhesion means longer lasting repairs.

SINGLE AND MULTIPLE CHIP SEALS

A controlled application of **CRS-2P** asphalt emulsion to a prepared surface followed by a controlled application of cover aggregate (per lift). Aggregates should be single-sized, washed chip with sizes ranging from 6 mm (¼ in) to 19 mm (¾ in). **CRS-2P** provides durable, longer-lasting surface treatments with an increased resistance to rutting and low-temperature cracking.

PACKAGING, STORAGE AND HANDLING

- **CRS-2P** should be stored in bulk tanks, ideally vertical to minimize surface area.
- Do not allow **CRS-2P** to either freeze or boil: it will break. Safe storage temperatures range from 10°C (50°F) to 85°C (185°F).
- In bulk storage, mix the **CRS-2P** every 1 to 2 weeks (more frequently in cold weather). Mixing may be done by paddle agitator (slow), loose gear pump, slow centrifugal pump, or other suitable low shear pump.
- Do not bubble air through **CRS-2P** to agitate it: this creates excessive foam and may cause the **CRS-2P** to break.
- Always use clean storage containers. Make sure prior contents are compatible with **CRS-2P** or the emulsion may break.
- Only use approved and sealed containers for sampling the emulsion.

CERTIFICATION OF QUALITY

McAsphalt Industries Limited is accredited to the quality management standard **ISO 9001**, the environmental management standard **ISO 14001**, and the occupational health and safety standard **ISO 45001**.

Each lot of **CRS-2P** 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 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, and 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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