

RS-1

ANIONIC RAPID SETTING ASPHALT EMULSION

PRODUCT DESCRIPTION

RS-1 is a rapid setting anionic asphalt emulsion designed to break and cure quickly and destabilize instantly on contact with aggregate surfaces.

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 (i.e. the water will evaporate, leaving the asphalt cement) . A rapid setting emulsion is one that will break quickly when in contact with aggregate. The setting speed will be affected by atmospheric conditions at time of construction.

RECOMMENDED USE

RS-1 cures quickly and produces dry asphalt films making it ideal for spray applications such as tack coats, spray patching, sand seals, fog seals and shoulder maintenance.

GENERAL PRODUCT FEATURES

- Traffic can be restored very shortly after application
- Excellent for use in the early spring and cooler fall
- Seals narrow cracks against moisture penetration
- Effective bond/tack prevents slippage planes between pavement layers
- Ideal for use with small portable spray units

SPECIFICATIONS AND TYPICAL RESULTS

TEST	TYPICAL DATA	SPEC RANGE	
		Min	Max
Tests on Emulsion			
SF Viscosity, 25°C, SFs	24	20	100
Sieve Test, 850 µm, %	0.03	...	0.1
Settlement, 5 days, %	1.6	...	3.0
Demul. 35ml .2N CaCl ₂ , %	74	60	...
Dist. Residue, 260°C, %	60.5	55	...
Oil Portion of Dist., %	trace
Particle Charge	(-)	(-)	
Tests on Residue			
Penetration, 25°C, dmm	110	100	200
Solubility in TCE, %	99.73	97.5	...
Ductility, 25°C, cm	86	60	...

APPLICATION GUIDELINES

- Clean pavement surface prior to application
- Do not apply if precipitation is anticipated
- Do not dilute product with any cutter stock or water
- Spray rate is dependent on the application type
- Contact your local **MCA Marketing** representative for guideline application temperatures

DESIGN GUIDELINES

Process designs should be done prior to initial construction of any type and each time sand 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.



McASPALT 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 (CONT'D)

TACK COAT

RS-1 is applied to an existing surface to eliminate slippage planes and to provide a bond between the new surfacing and the existing surface. Generally, a spray rate of 0.25 L/m² (0.05 gal/yd²) is considered satisfactory.

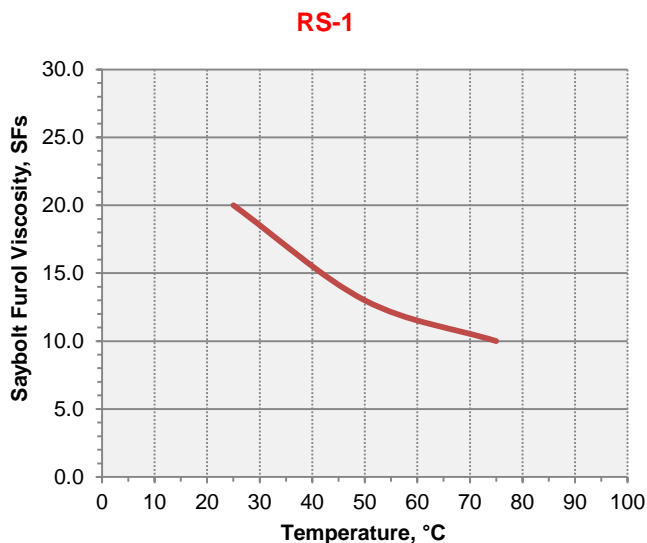
POTHOLE PATCHING

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 **RS-1** to all the sides of the hole (approx. 0.20 - 0.25 L/m²).

SPRAY PATCHING

Spray patching consists of alternate applications of **RS-1** and aggregate to repair deteriorated areas in the pavement surface. Alternate layers of **RS-1** and aggregate may also be used to repair depressions in the road due to rutting or ravelling.

TEMPERATURE-VISCOSITY CHART



PACKAGING, STORAGE AND HANDLING

- **RS-1** should be stored in bulk tanks, vertical if possible to minimize surface area.
- Do not allow **RS-1** 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 **RS-1** 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 **RS-1** 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 **RS-1** 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 **RS-1** 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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