

RS-1

ANIONIC RAPID-SETTING ASPHALT EMULSION

PRODUCT DESCRIPTION

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

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

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

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.

CERTIFICATION OF QUALITY

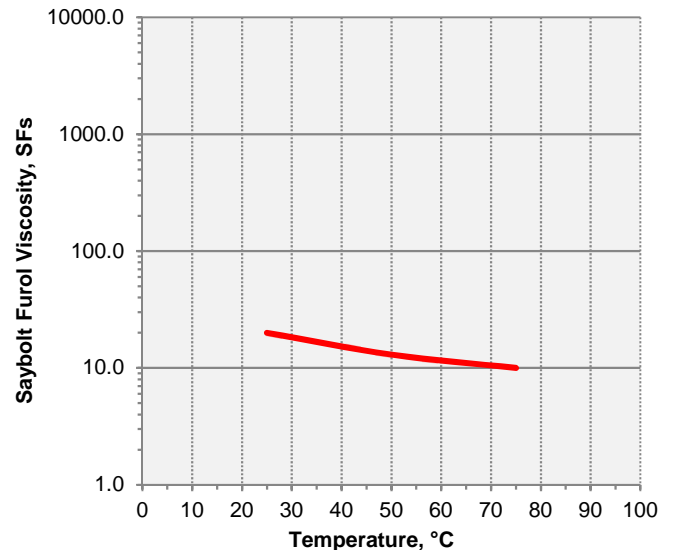
McAsphalt Industries Limited is accredited to the quality management standard **ISO 9001**, the environmental management standard **ISO 14001**, and the occupational health and safety standard **ISO 45001**.

Each lot of **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 is delivered with a Certificate of Analysis.

SPECIFICATIONS AND TYPICAL RESULTS

TEST	TYPICAL DATA	SPEC.	
		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
Demulsibility, 35 ml 0.2 N CaCl ₂ , %	74	60	-
Distillation Residue, 260°C, %	60.5	55	-
Oil Portion of Distillation, %	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	-

TEMPERATURE VISCOSITY CHART



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 ISO 9001/14001/45001

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APPLICATION GUIDELINES

- Clean asphalt surface and treat oil spots prior to application to ensure proper adhesion.
- 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 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.

TACK COAT

RS-1 applied to an existing pavement surface will eliminate slippage planes and provide a bond with the new asphalt lift. It will deliver a strong bond and it will not track under construction traffic. 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 coated with tack to ensure a bond between the asphalt edge and the patching material. Apply an even coating of **RS-1** to all sides of the hole (approximately 0.20 to 0.25 L/m² (0.04 to 0.05 gal/yd²)).

SPRAY PATCHING

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

PACKAGING, STORAGE AND HANDLING

- **RS-1** should be stored in bulk tanks, ideally vertical to minimize surface area.
- Do not allow **RS-1** 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 **RS-1** 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 **RS-1** to agitate it: this creates excessive foam and may cause the **RS-1** to break.
- Always use clean storage containers. Make sure prior contents are compatible with **RS-1** or the emulsion may break.
- Only use approved and sealed containers for sampling the emulsion.

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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