

CCM-5

CATIONIC COLD MIX ASPHALT EMULSION

PRODUCT DESCRIPTION

CCM-5 is a low viscosity, high residue cationic asphalt emulsion specifically designed and formulated for use in the production of plant mixed **CCM-5 COLD PATCH**.

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"). **CCM-5** emulsion is designed to produce mixes that remain workable for extended periods. The setting speed of any emulsion is relative to atmospheric conditions at the time of construction.

GENERAL PRODUCT FEATURES

- To be mixed in hot mix plants (drums, batch, or pugmill)
- Unique formulation resists stripping and bleeding
- High residual binder content
- Remains workable in stockpiles for up to one year
- Excellent workability and cohesion at low temperatures

RECOMMENDED USE

CCM-5 emulsion is used to make **CCM-5 COLD PATCH**, used for repairing asphalt pavement, driveways, and parking lots.

APPLICATION GUIDELINES

DESIGN CRITERIA

A coating test should be run on job aggregate to determine compatibility and, in the case of cold mixing, to determine mixing ability.

Contact your local **MCA Marketing** representative for application temperature guideline.

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.

MIXING PROCEDURES

Please refer to **McAsphalt Industries Limited's "CCM-5 COLD PATCH** Technical Bulletin" in regards to mixing procedures for drum, batch, and pugmill plants.

TYPICAL AGGREGATE GRADATION

Mineral aggregates used should consist of clean, hard, durable particles conforming to the following physical requirements:

SIEVE SIZE	% PASSING (BY WEIGHT)
16.0 mm (5/8")	100
13.2 mm (1/2")	98 - 100
9.5 mm (3/8")	85 - 98
4.75 mm (#4)	50 - 85
2.36 mm (#8)	35 - 65
1.18 mm (#16)	25 - 50
600 µm (#30)	15 - 40
300 µm (#50)	7 - 25
150 µm (#100)	2 - 13
75 µm (#200)	0 - 7

SPECIFICATIONS AND TYPICAL RESULTS

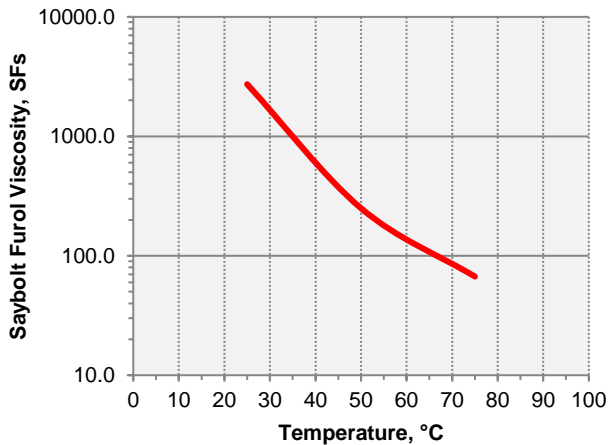
TEST	TYPICAL DATA	SPEC.	
		Min	Max
Tests on Emulsion			
SF Viscosity, 50°C, SFs	140	100	300
Sieve Test, 850 µm, %	0.04	-	0.1
Settlement, 5 days, %	0.6	-	3.0
Distillation Residue, 260°C, %	89.0	85	-
Oil Portion of Distillation, %	3.8	2	7
Particle Charge	(+)	(+) (+)	
Tests on Residue			
Penetration, 25°C, dmm	500+	500	-



MCASPALT INDUSTRIES LIMITED

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 ISO 9001/14001/45001

CCM-5**CATIONIC COLD MIX ASPHALT EMULSION****TEMPERATURE VISCOSITY CHART****PACKAGING, STORAGE AND HANDLING**

- **CCM-5** should be stored in bulk tanks, ideally vertical to minimize surface area
- Do not allow **CCM-5** 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 **CCM-5** 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 **CCM-5** to agitate it: this creates excessive foam and may cause the **CCM-5** to break
- Always use clean storage containers. Make sure prior contents are compatible with **CCM-5** 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 **CCM-5** 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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