



# emulflex™ CL

## latex



## A synthetic SBR latex emulsion for the modification and enhancement of cationic bitumen emulsions

A versatile synthetic SBR latex that can be used to enhance the performance of surface treatments such as: surface dressing, micro surfacing and bond coats.

The improvement in binder properties means that any surface treatments applied with **Emulflex™ CL** have greater durability and will deliver premium performance for longer.

### Emulflex™ CL product applications

**Emulflex™ CL** can be used in slurry seal & micro surfacing emulsions to build up cohesion quickly, retain aggregate, improve low temperature flexibility, increase high temperature stiffness and prevent cracking.

**Emulflex™ CL** enhances chip seal/surface dressing binders by increasing chipping retention, binder cohesion, elasticity and high temperature stiffness whilst reducing low temperature brittleness and cracking of the base binder.

**Emulflex™ CL** can be added to the bitumen emulsion either before or after the milling process. It is compatible with most emulsifier systems commonly in use and it produces a residual binder with far superior in-situ performance compared to that of a standard emulsion.

Note: Raw material selection and the formulation of bitumen emulsions are both crucial in obtaining optimum performance of modified emulsions.

Contact Macismo's technical department for assistance.  
Email enquiries to [Team@macismo.com](mailto:Team@macismo.com)

### Emulflex™ CL product benefits

- Improved cohesion across a larger temperature range
- Enhanced binder rheology; higher stiffness and improved elastic recovery
- Improved adhesion and chipping retention
- Enhanced low temperature flexibility and reduced tendency for cracking



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# emulflex™ CL Technical data

Table 1: Typical properties of recovered emulsions (EN 13074-1)

Property	Method	Units	Standard emulsion	Emulflex™ modified
Penetration	EN 1426	0.1mm	239	154
Softening Point	EN 1427	°C	34.4	44
Maximum Cohesion	EN 13588	J/cm <sup>2</sup>	0.635	1.35
Temperature of Max Cohesion	EN 13588	°C	35.8	34.8
Temperature range for cohesion (>0.4 J/cm <sup>2</sup> )	EN 13588	°C	13	41
DSR Elastic Recovery: 0.1kPa @ 52°C 3.2kPa @ 52°C	AASHTO TP70	%	6 1	46 11



Graph 1: Vialit Pendulum Cohesion (EN 13588) on recovered emulsion (EN 13074-1)

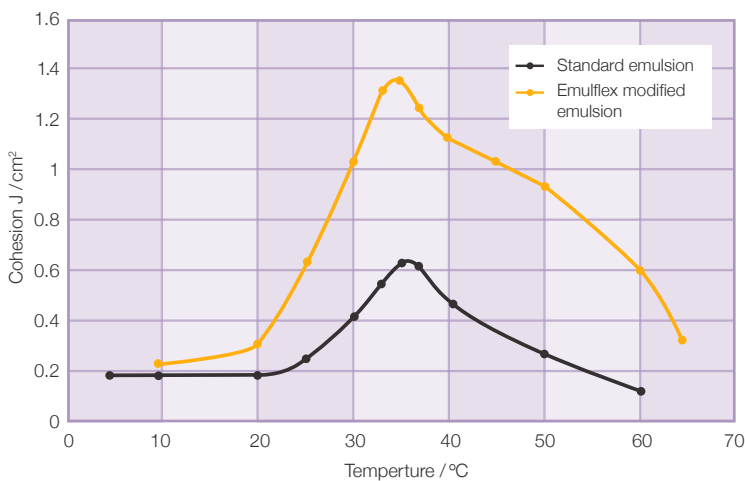
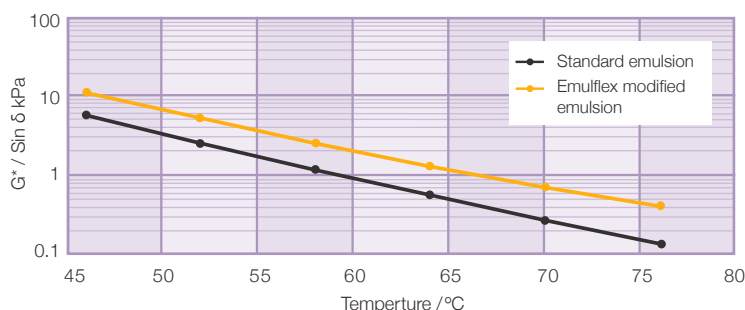


Table 1 & Graph 1 show the enhancement in cohesion, measured by the Vialit Pendulum cohesion test. Compared to a standard emulsion, Emulflex™CL considerably enhances the cohesive strength and the effective cohesive temperature range of the residual binder.

Graph 2: DSR (ASTM D7175) on recovered emulsion (EN 13074-1)



Graph 2: shows the increased stiffness obtained from emulsions modified with Emulflex™CL latex. This modification helps reduce binder softening at high road temperatures.

## ✓ AVAILABILITY

- Emulflex™CL is available in:
  - 1,000 litre IBC
  - 200 litre drums

## ✓ DOSAGE

- Typical dosage is 3-5% dry polymer in the residual bitumen.

## ✓ STORAGE AND HANDLING

- Emulflex™CL should be stored and used within the temperature range 5-35°C, in sealed containers. Protect from frost.
- Low shear pumps such as mono pumps or “Wilden” type diaphragm pumps should be used. Do not use gear pumps.
- The product may require stirring before use, some separation occurs on long term standing which is normal. The use of a low shear mechanical stirrer at slow speed to avoid the inclusion of air is recommended.
- Under the above storage recommendations, Emulflex™CL should remain in good condition in sealed containers for up to 12 months.

## ✓ HEALTH, SAFETY AND ENVIRONMENT

- Emulflex™CL should be used in accordance with the relevant Safety Data Sheet (SDS).

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