



Emulsiphalt Bitumen Emulsions

Higgins Bitumen manufactures and supplies an extensive range of cationic bitumen emulsions for use in road construction.

Bitumen emulsions are used as an energy efficient, safer alternative to cutback bitumen and find application where the use of hot applied binders may not be the most suitable. For example, emulsions can be used for chip sealing in cooler weather, or with damp aggregate where they are more likely to achieve good adhesion. They also find novel uses in fog seals, rejuvenation, slurry surfacing and cold-in-place recycling techniques.

Emulsion

	Cat-60	Cat-65	CRS-2 and CRS-2K	Primer Emulsion	Emulsiphalt 373	Emulsiphalt 374	Emulsiphalt 375	Microsurfacing Emulsion	CSS-1	Revive
Resealing										
Texturising and Void Fill										
Membrane Seals										
First Coat										
Primer										
High Stress Seals										
SAM/SAMI										
Tack Coat										
Enrichment and Fog Seal										
Precoat										
Slurry										
Open graded Cold Mix										
Dense Graded Cold Mix										
Stabilisation and Recycling										
Dust Palliative										
Rejuvenation										



HANDLING AND STORAGE

By their very nature, bitumen emulsions have a limited storage life and must be handled with care to ensure their ongoing conformance to quality. The specific handling and storage requirements vary depending upon the grade of emulsion. However, as a general rule the following conditions apply.

- Emulsions should be stored between 10–90°C
- Do not store cationic emulsions in tanks that have previously held anionic emulsion and visa versa
- Avoid excessive pumping or shearing of the emulsion as this may cause the emulsion to break
- Heat gently at a uniform rate not exceeding 10 °C/hr while gently agitating
- Agitate by gentle circulation or stirring. Do not use forced air or high speed pumps or stirrers to agitate the emulsion as this may cause it to break
- Use potable water for dilution. Not all emulsions are stable to dilution—consult the manufacturer if more guidance is required. Always add water to the emulsion, not emulsion to the water!



Emulsion

	Storage Life	Storage Temperature (°C)	Pumping Temperature (°C)	Application Temperature (°C)	Application Rate (L/m ²)
Cat-60	60 days	10-50	40-90	40-90	0.1-1.2
Cat-65	14 days	50-70	50-90	50-90	0.1-1.5
CRS-2	14 days	50-70	70-90	70-90	1.0-3.0
Primer Emulsion	60 days	10-50	20-90	20-90	0.1-1.2
Primerseal Emulsion	60 days	10-50	20-90	20-90	0.1-1.2
Emulsiphalt 373	14 days	50-70	70-90	70-90	1.0-3.0
Emulsiphalt 374	14 days	50-70	70-90	70-90	1.0-3.0
Emulsiphalt 375	14 days	50-70	70-90	70-90	1.0-3.0
Slurry Emulsion	60 days	10-50	40-90	10-40	–
CSS-1	60 days	10-50	40-90	10-40	–

HEALTH AND SAFETY

Bitumen emulsions should only be handled by suitably trained personnel in accordance with BPG01 Best practice guideline: Safe handling of bituminous materials used for roading. The risk of injury from handling bitumen emulsions is minimal provided that adequate safety precautions are taken. Appropriate protective clothing should be worn at all times.

Avoid ingestion or splashing in the eyes. If hot emulsion comes into contact with the skin and causes scolding, flush with cold water immediately. Do not attempt to remove any bitumen emulsion from scolded areas that cannot be washed off with water as this may cause more serious harm. Seek medical advice as necessary. Cold emulsion that has not caused scolding can be removed with soap and water or industrial hand cleaners.

Emulsions contain water and are not compatible with hot bitumen. Vessels, associated pipework and pumps that have been used for handling or transporting bitumen emulsion must be purged (de-gassed) prior to loading with hot bitumen to prevent steam explosions. Bituminous emulsions are a Class 9.1 (Ecotoxic) Hazardous Substance. For more detailed product health and safety information please refer to the Safety Data Sheet (SDS).

For more information please contact:

Higgins Bitumen, 26 Waitangi Road,
PO Box 421, Napier. E: HBM@higgins.co.nz

To the best of our knowledge the information contained in this document is correct. Since the products described herein are being continuously improved, the specified properties may vary as improvements are made to production processes and product quality. This document may be revised at any time.

