

# HIGGINS® Emulsiphalt®

BITUMEN EMULSIONS

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Higgins Bitumen manufactures and supplies an extensive range of cationic bitumen emulsions for use in road construction. Bitumen emulsions find application in situations 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. A major advantage of emulsions is that they can be used as an alternative to cutback bitumens. They also find novel uses in slurry surfacing and cold-in-place recycling techniques.

## APPLICATION

Emulsion	Residual Binder (min)	Binder	Chipsealing	Texturising & Void Fill	Tack Coat	Prime Coat	Enrichment & Fog Seal	Precoat	Slurry	Open Graded Cold Mix	Dense Graded Cold Mix	Stabilisation & Recycling	Dust Palliative
Cat-60	60%	Penetration Grade		✓	✓	✓	✓	✓		✓			
Cat-65	65%	Penetration Grade		✓	✓								
CRS-2	70%	Penetration Grade	✓	✓									
Emulsiphalt 372	75%	Flexiphalt 320S	✓										
Emulsiphalt 373	75%	Flexiphalt 330S	✓										
Emulsiphalt 374	75%	Flexiphalt 340S	✓										
Emulsiphalt 375	75%	Flexiphalt 350S	✓										
SMK	60%	Cutback				✓		✓		✓			
Slurry Emulsion	60%	Flexiphalt 330S							✓				
Cold Mix Emulsion	60%	Penetration Grade			✓	✓	✓	✓			✓	✓	✓

## 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 (~10°C per hour) while gently agitating.
- Agitate by gentle circulation or stirring. Do not use forced air to agitate the emulsion as this may cause it to break.
- If diluting the emulsion always add water to the emulsion, not emulsion to the water !



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Emulsion	Storage Life	Storage Temperature (°C)	Pumping Temperature (°C)	Spray Temperature (°C)	Spray Rate (L/m <sup>2</sup> )
Cat-60	60 days max.	10 – 50	20 – 60	40 – 60	0.1 – 1.2
Cat-65	7 days max.	50 – 70	50 – 90	50 – 90	0.1 – 1.5
CRS-2	7 days max.	50 – 70	70 – 90	70 – 90	1.0 – 2.5
Emulsiphalt 372	7 days max.	50 – 70	70 – 90	70 – 90	1.2 – 3.0
Emulsiphalt 373	7 days max.	50 – 70	70 – 90	70 – 90	1.2 – 3.0
Emulsiphalt 374	7 days max.	50 – 70	70 – 90	70 – 90	1.2 – 3.0
Emulsiphalt 375	7 days max.	50 – 70	70 – 90	70 – 90	1.2 – 3.0
SMK	60 days max.	10 – 50	20 – 60	–	–
Slurry Emulsion	60 days max.	10 – 50	20 – 60	–	–
Cold Mix Emulsion	60 days max.	10 – 50	20 – 60	–	–



### HEALTH AND SAFETY

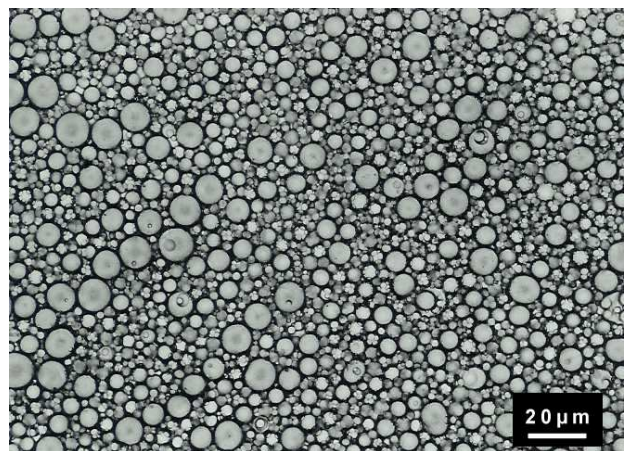
Bitumen emulsions should be handled in accordance with Code of Practice RNZ 9904: The Safe Handling of Bituminous Materials used in Roading. The risk of injury from handling of emulsions is minimal provided that adequate safety precautions are taken. Appropriate protective clothing should be worn at all times. Avoid ingestion or splashing in the eyes. If hot emulsion comes into contact with the skin and causes scolding, do not attempt to remove it as this may cause more serious harm. Flush the affected areas with cold water and seek medical advice. Bituminous emulsions are a Class 9 (Ecotoxic) Hazardous Substance.

Emulsions contain water and are not compatible with hot bitumen. If the vessel used for transporting or holding emulsion is also used to hold hot bitumen, the vessel must be purged. Ensure all pipework and pumps are flushed to prevent subsequent loads of hot bitumen coming into contact with the water in the emulsion. For more detailed product health and safety information please refer to the Material Safety Data Sheet (MSDS).



For more information on the availability of Higgins Bitumen Emulsions please contact:

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*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.*