



Helps to resolve these problems:





Enviro Patch Bitumen Emulsion for use as a safe chipsealing Binder

Enviro Patch is a 65% bitumen chipsealing emulsion for use as binder in all chipsealing applications. Enviro Patch can deliver most grades of bitumen i.e. 80/100, 130/150, 180/200 at a safe 80°C application temperature and can replace the use of hot applied chipsealing binders in all chipsealing techniques.

Where to use Enviro Patch

Recommended for use as a bituminous binder for all chipsealing techniques.

Delivered at an application temperature of 75°C in ready-to-use form.

Provides the safest method by which to deliver chipsealing bitumen, with a much reduced risk of hot bitumen burns.

Benefits:

Enviro Patch offers the benefit of a warm delivered bitumen product with the following improved features:

Low application temperature compared with hotdelivered product

Excellent chip adhesion

Extended sealing season

Lower emissions

Enviro Patch provides the most practical and safe method by which to apply most bitumen binders in a chipseal application.

Enviro Patch can be used for all sealing techniques including; two coat seals, rack-in seals, sandwich seals and first coat seals.

Habitat







Specification

Typical properties of Enviro Patch

Property	Method	Specification
Binder Residue (%)	In-house	>70%

Health & Safety

Enviro Patch is handled at elevated temperatures (~80 $^{\circ}$ C) and all precautions should be taken to prevent burns. Full personal protective equipment must be used at all times when pumping, transferring or sampling Enviro Patch. Any spills on the skin should be washed off immediately with appropriate hand cleaners, do not use solvents.

A safety data sheet for Enviro Patch is freely available on the Road Science website and must be read and understood prior to handling the Enviro Patch binder.

Properties:





Handling

Enviro Patch			
Maximum safe handling temperature	90°C		
The Enviro Patch Bitumen Emulsion should be circulated for at least 1 hour prior to commencing spraying.			
Normal Spray Temperature	70°C - 90°C		
Normal Pumping Bitumen Emulsion Temperature	70°C		

Storage

Enviro Patch	
Medium term storage temperature (up to 5 days)	20°C - 50°C
Long term storage temperature (beyond 5 days)	20°C - 50°C

Critical: Long Term Storage

If there is a need to postpone spraying beyond 5 days, the storage temperatures of Enviro Patch should be dropped to <50°C.

Gentle stirring /circulation is required to prevent long term settling of the bitumen phase.

Never allow Enviro Patch to freeze, as due to the presence of water in the emulsion, the emulsion will break.

Critical: Rate of heating

The reheating of Enviro Patch Bitumen Emulsion needs to be undertaken slowly with the rate of heating not exceeding 10°C per hour.

Never heat beyond 90°C.

Sampling

Samples should be taken following transfer from storage or transport.

PPE as defined in the Material Safety Data Sheet should be worn when sampling Enviro Patch including face shield as the product is transferred at slightly elevated temperatures and splashes are always a risk.

Testing should only be carried out by an IANZ registered laboratory that is experienced in handling and testing bitumen emulsions.

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