USED FOR

Ravelling

Oxidation Resistance

ENVIRONMENTS

Motorway

EpoxyBind

High-performance epoxy modified binder for enhanced durability.

EpoxyBind is a New Zealand-made, two-part epoxy modified binder designed to enhance the performance of Epoxy Modified Open Graded Porous Asphalt (EMOGPA). By improving oxidation resistance, EpoxyBind significantly extends the service life and durability of the asphalt, even under harsh environmental conditions.

This high-quality binder is specifically formulated to improve the long-term performance of EMOGPA, making it an ideal choice for projects requiring superior durability and reduced maintenance.

Treatment areas ideal for EpoxyBind use

- Open Graded Porous Asphalt (OGPA) where increased lifespan is desired
- In the design of epoxy modified OGPA that conforms to the NZTA P/11 specifications

Benefits

- Domestically manufactured + supplied
- Superior ravelling resistance
- Extends service life
- Easy workability
- Superior performance over bitumen-based binders

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EpoxyBind

Specification

EpoxyBind meets the requirements of NZTA P/11 specification.

Properties

Handling

For safe handling of bituminous materials, please refer to Road Science's polymer modified bitumen safety data sheet, the table below, and the Best practice guideline: Safe Handling of bituminous materials used for roading (BPG01)

EpoxyBind	
Normal safe handling temperature	125˚C - 130˚C
Maximum safe handling temperature	150˚C
Pumping binder temperature - Part A	40˚C min
Pumping binder temperature - Part B	125˚C - 130˚C
Mixing binder temperature	125˚C - 130˚C
Mixing	
EpoxyBind is a two part system consisting of Part A and Part B. Modification of the asphalt plant needs to be undertaken in order to allow for both parts to be mixed prior to addition to the asphalt drum. If plant modification is required, please consult the Road Science team to ensure modifications are compatible.	

Circulation

EpoxyBind should be circulated for at least 2 hours prior to commencing mixing.

Heating

The reheating of EpoxyBind, especially from cold, needs to be undertaken slowly with the rate of heating not exceeding 10°C per hour. Pulsed heating cycles are preferred when using burner tubes.

Storage

EpoxyBind	
Medium term storage temperature (0 to 5 days)	120˚C - 130˚C
Long term storage temperature (beyond 5 days)	100˚C max
Critical: Long term storage	
If there is a need to postpone manufacture beyond 5 days, the storage temperatures of EpoxyBind should be dropped immediately to <100°C. If there is considerable delay; it may be economic to drop the product temperature to ambient and reheat when the binder is about to be used.	

Treatment Selection + Mix Design

Prior to undertaking the manufacture of OGPA mixes; the design mix using Epoxy Bind binder should be tested in the laboratory using a drain down test to ensure that the mixing temperature will not cause excessive drain down of the binder during transportation and paving.

If you're unsure which treatment solution is best suited for your project — considering factors such as traffic volumes and asset management — consult a member of the Road Science Product Development Team. They can assist in determining the appropriate treatment selection and guide you through the mix design process.

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 EpoxyBind 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-accredited laboratory that is experienced in handling and testing bitumen emulsions.

For managing bitumen quality, please refer to the Waka Kotahi NZ Transport Agency Q05 specification for managing bitumen quality report

Need more information?

At Road Science, we're committed to providing innovative solutions backed by engineering expertise. If you have any questions about this product, need technical guidance, or want to discuss how it fits your specific project needs, our team is here to help. Contact us today for expert advice and tailored support. Contact us via **0800 180 200** or visit our website at **roadscience.co.nz** to learn more.