



Bio Bind

Bio Bind, the sustainable solution for low carbon roads.

Bio Bind is a cutting-edge, low carbon bitumen replacement which is set to transform the road construction industry. As concerns for the environment and climate change continue to grow, the need for sustainable alternatives has never been more urgent. Bio Bind offers a game-changing solution, reducing carbon emissions while delivering uncompromised performance and resilience.

Derived from over 70% renewable resources, Bio Bind represents a significant step forward in eco-friendly road construction. This innovative formulation not only mitigates the environmental impact associated with traditional bitumen, but it is actually carbon negative meaning it can be used to offset other carbon intensive activities.

One ton of Bio Bind can offset the use of 3 tons of bitumen.

Where to use Bio Bind:

- As a replacement binder in all asphalt
- Where a low carbon alternative is required

Benefits:

- Significant carbon savings compared to standard bitumen
- Can meet all NZTA M1 and NZTA M1A grades
- Easily substituted for regular bitumen with no change to processes

Specification:

Bio Bind can be blended to meet your required NZTA M1 or NZTA M1A grade.

Habitat



Roundabouts Intersections



Port



Airport



Industrial

Properties:



HOT

Health and Safety

Bio Bind is handled at elevated temperatures and all precautions should be taken, as for handling hot bitumen. Although not a bitumen product all the safety precautions remain the same. Please refer to Roading New Zealand's 'The Bitumen Safety Book' for advice on how to handle hot binders and to understand the risks involved in handling these types of materials.

Full personal protective equipment (PPE) must be worn when pumping, transferring or sampling Bio Bind.

Handling

Maximum safe handling temperature: 190°C

Pumping binder temperature: (approx) 150°C

Mixing binder temperature:

Varies depending on the binder grade supplied. Refer to the asphalt mix design spreadsheet

The product is prone to some settling when left at heat unstirred. It is important to mix the Bio Bind prior to use, either by agitators or recirculation.

Storage

Medium term storage temperature (up to 5 days) 130°C

Long term storage temperature (beyond 5 days) <130°C

Long Term Storage:

If there is a need to postpone manufacture beyond 5 days the storage temperature should be dropped to <130°C.

If there is considerable delay it may be economical to drop the product temperature to ambient and reheat when the binder is about to be used.

Critical: Rate of Heating

The reheating of Bio Bind, especially from cold, needs to be undertaken slowly with the rate of heating not exceeding 10 degrees and hour.

Pulsed heating cycles are preferred when using burner tubes.

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