Epoxy Bind is used in the manufacture of Epoxy Modified Open Graded Porous Asphalt (EMOGPA) offering improved durability.

Epoxy bind is a two part epoxy modified binder used in the manufacture of Epoxy Modified OGPAs in order to improve its resistance to oxidation.

Where to use Epoxy Bind:

• Recommended for use in Open Graded Porous Asphalt mixes where increased life is desired. The presence of the Epoxy Bind binder imparts excellent oxidation resistance to the OGPAs, so that ravelling, the normal failure mode for OGPAs, is greatly reduced.

• Can be used in design of EMOGPA conforming to the requirements of NZTA P/11E.

Benefits:

Epoxy Bind offers the benefit of a polymer modified binder with improved features as follows:

• Domestically manufactured and supplied
• Superior ravelling resistance
• Much improved service life
• Easy workability
• Greatly improved performance and life over all conventional bitumen based binders.

The formulation of the Epoxy Bind binder has balanced the superior long term performance properties with enhanced constructability.
Specification

Epoxy Bind meets the requirements of NZTA P/11E.

<table>
<thead>
<tr>
<th>Property</th>
<th>Method</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Softening Point</td>
<td>ASTM D39</td>
<td>60 – 80ºC</td>
</tr>
<tr>
<td>Viscosity @ 165ºC, 20rpm</td>
<td>AGPT/T132</td>
<td>&lt;200 MPas</td>
</tr>
</tbody>
</table>

Health & Safety

Epoxy Bind is handled at elevated temperatures and all precautions should be taken, as for handling hot bitumen. Please refer to the Roading New Zealand “The Bitumen Safety Book” for advice on how to handle hot bitumen binders and to understand the risks involved in handling these types of materials. Full personal protective equipment must be used at all times when pumping, transferring or sampling of Epoxy Bind. A safety data sheet for Epoxy Bind is freely available on the Road Science website and must be read and understood prior to handling the Epoxy Bind binder.

Properties:

Handling & Mixing Information

Open Graded Porous Asphalt Mixes

Maximum safe handling temperature for Epoxy Bind binder: 150ºC

The Epoxy Bind binder should be circulated for at least 2 hours prior to commencing mixing.

- Pumping Binder Temperature Part A: >40ºC
- Pumping Binder Temperature Part B: 125ºC – 130ºC
- Mixing Binder Temperature: 125ºC – 130ºC

Epoxy Bind 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.

Sampling

Samples should be taken following transfer from storage or transport.

Full PPE should be worn including face shield as the product is transferred at elevated temperatures and poses a major burns risk. It is important to ensure that the sample is representative and that any residual conventional bitumen is flushed out of the sample cock prior to collecting the Epoxy Bind sample.

Testing should only be carried out by an IANZ registered laboratory that is experienced in handling and testing polymer modified binders.

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