

HIGGINS® Flexiphalt®

POLYMER MODIFIED BITUMEN

PRODUCT DESCRIPTION

The Flexiphalt range of polymer modified bitumens have been specifically designed to improve binder performance in chip seals and hot mix asphalt (HMA). These premium grade polymer modified bitumens improve the rheological properties of the binder in both hot and cool environments, and under a wide range of traffic conditions. They are ideal for reducing pavement deterioration, extending pavement life, and reducing the overall life cycle cost of the pavement.



PERFORMANCE

- Flexiphalt polymer modified bitumen reduces the temperature susceptibility of the pavement.
- Flexiphalt binders possess improved elasticity, toughness and consistency.
- Flexiphalt binders improve the pavement's resistance to rutting, bleeding and cracking.
- Binder drainage during construction of porous asphalt and SMA is reduced.
- The cohesive nature of these premium binders improves aggregate retention.

APPLICATION

Chip Seal Binders	High Stress Seals (HSS)		Steep Gradients	Cracking		Flushing*	Pavement Deflections		Interlayer	Initial Chip Retention	Climate	
	Moderate Medium	Extreme Heavy		Moderate Medium	Extreme Heavy		Moderate All	Extreme All			Cold All	Hot All
Flexiphalt 320S		Asphalt is recommended								✓		
Flexiphalt 330S	✓		✓	✓		✓					✓	
Flexiphalt 340S	✓		✓	✓			✓				✓	✓
Flexiphalt 350S						✓	✓		✓	✓		

* The use of polymer modified bitumen over flushed pavements should be seen as a holding treatment and not a long-term solution.

Hot Mix Asphalt Binders	Rutting	Cracking		Pavement Deflections		Raveling	High Modulus	Porous Asphalt	SMA
		Moderate Medium	Extreme Heavy	Moderate All	Extreme All				
Flexiphalt 150A	✓						✓		
Flexiphalt 330A		✓		✓		✓			
Flexiphalt 340A	✓	✓		✓				✓	✓
Flexiphalt 350A	✓		✓						

While they can provide advantages over unmodified bitumen, the use of polymer modified bitumen is no substitute for good pavement design. It is recommended that the pavement designer obtain the appropriate technical guidance if more information on the use of polymer modified bitumen in specific applications is required.

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HANDLING AND STORAGE

The same precautions used for handling conventional bitumen apply to the handling of Flexiphalt polymer modified bitumen. Flexiphalt binders have been designed to be stable for several days under hot storage, however, it is still advisable to circulate the binder every 2 – 3 days and immediately prior to use.

Storage Temperature	Storage Duration
180°C	Up to 48 Hours
160°C	Up to 7 Days
140°C	Up to 30 Days

Flexiphalt polymer modified bitumen should be stored at the minimum practical temperature to reduce the risk of binder degradation. The minimum recommended pumping temperature is 150°C. Polymer modified bitumen should be heated slowly at a rate of 10 – 20°C per hour, while circulating. Good circulation is essential since the higher viscosity of polymer modified bitumen inhibits heat transfer, and the risk of localized overheating increases.



HEALTH AND SAFETY

Flexiphalt polymer modified binders should be handled in accordance with Code of Practice RNZ 9904: The Safe Handling of Bituminous Materials used in Roading. Because polymer modified bitumen is handled at elevated temperatures there is an increased risk of severe burns if the product comes into contact with the skin. The risk of injury is minimal provided that adequate safety precautions are taken. Protective equipment should be worn at all times. Fuming may occur at the higher application temperatures, but this is no more than is expected from handling conventional bitumen. For more detailed product health and safety information please refer to the appropriate Material Safety Data Sheet (MSDS).



For more information on the availability of Higgins Flexiphalt Polymer Modified Bitumen please contact:

Higgins Bitumen (a division of Higgins Group)

PO Box 421

Waitangi Rd, Napier

Phone: (06) 834-1589

Fax: (06) 835-1594

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.