

The Flexiphalt range of polymer modified bitumens has 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 under a wide range of traffic conditions and temperatures. They are ideal for reducing the rate of pavement deterioration, extending pavement life, and reducing the overall life cycle cost of the pavement.

> PERFORMANCE

- Flexiphalt binders improve the surfacing's resistance to rutting, bleeding and cracking.
- Flexiphalt polymer modified bitumen possesses improved elasticity, toughness and consistency.
- Flexiphalt binders allow the construction of thinner structural AC pavements that possess higher fatigue endurance limits.
- Binder drainage during construction of porous asphalt and SMA is reduced.
- The cohesive nature of these premium binders improves aggregate retention in high stress environments.

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.

> ASPHALT BINDERS

	Traffic Category	Flexiphalt 330A	Flexiphalt 340A	Flexiphalt 350A	Flexiphalt HiFLEX	Flexiphalt HiMOD	Flexiphalt 160A	Flexiphalt FR
Deformation	Standard	✓						
	Heavy		✓					
	Very Heavy			✓	✓	✓	✓	
Cracking	Standard	✓						
	Heavy		✓					
	Very Heavy			✓	✓			
Raveling	All	✓	✓	✓				
Structural Asphalt	All					✓		
Porous Asphalt	All		✓	✓	✓			
SMA	All	✓	✓	✓				
Fuel Resistance	All							✓
Ports & Airports	All		✓	✓	✓	✓		
Racetracks	All				✓	✓	✓	





> CHIP SEAL BINDERS

	Site Severity	Traffic Category	Flexiphalt 330S	Flexiphalt 340S	Flexiphalt 350S
High Stress Seals (HSS)	Moderate	Heavy	✓	✓	
	Extreme	Very Heavy			✓
Pavement Deflections or Traffic Induced Cracking	Moderate	Heavy	✓	✓	
	Extreme	Very Heavy			✓
Age or Environmental Cracking	All	All	✓	✓	
SAMI	All	All			✓
Climate	Cold	All	✓	✓	✓
	Hot	All		✓	✓

> 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 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

Store Flexiphalt polymer modified bitumen at the minimum practical temperature to reduce the risk of binder degradation. The minimum recommended pumping temperature is 150°C. Heat polymer modified bitumen slowly, at a rate not exceeding 10°C/hr. Maintain circulation whilst heating. 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 only be handled by suitably trained personnel 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 a 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. Full body, protective equipment should be worn at all times. Fuming may occur at 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 Flexiphalt Polymer Modified Bitumen please contact:

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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.

