Going further
— for better performing roads

PUMA Bitumen

CARBONBIND® S15E

POLYMER MODIFIED BINDER
Incorporating Biogenic (plant grown) material
Sprayed Seal Applications

Puma CARBONBIND® S15E incorporates sustainably grown biogenic (plant derived) material. CARBONBIND® technology allows atmospheric CO_2 captured by plants to be permanently stored in road pavements. This significantly reduces the carbon footprint of the overall binder and sprayed seal solutions that contain it.

S15E is a polymer modified binder (PMB) designed for use in sprayed seals to minimise the risk of reflection cracking on existing cracked surfaces.

CARBONBIND S15E

Key Benefits

Performance Benefits

- Excellent resistance to reflection cracking.
- Externally verified to reduce carbon footprint by up to 99 kg/t compared to conventional S15E
- Incorporates ISCC+ certified sustainably grown biogenic bitumen component

Application Benefits

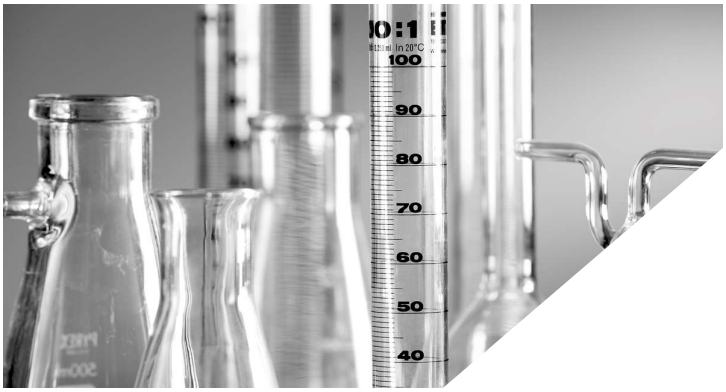
- Same trusted storage and travel stability as Puma OLEXOBIT binders
- Low odour compared to other biogenic binders
- Compatible with conventional spray equipment and cutters

Typical characteristics

Property	Typical Value	Specification Limits	Test Method
Softening Point (°C)	63	55 - 75	AG:PT/T131
Torsional Recovery at 25°C (%)	50	32 - 62	AG:PT/T122
Viscosity at 165°C (Pa.s)	0.4	max. 0.55	AG:PT/T111
Consistency 6% at 60°C (Pa.s)	600	min 500	AG:PT/T121
Stiffness at 25°C (kPa)	85	max. 140	AG:PT/T121
Segregation (%)	0.5	max. 8	AG:PT/T108

Specification

CarbonBind® S15E is manufactured to comply with Austroads ATS-3110 S15E grade.



Storage & Handling

The storage of bituminous binders for prolonged periods at elevated temperatures should be avoided as quality may be adversely affected. Bituminous binders should be stored at the lowest temperature that enables practical use.

Temperature Recommendations	
Storage for up to 7 days	**160 °C – 175 °C**
Storage for up to 14 days	**145 °C – 155 °C**
Minimum pumping temperature	**150 °C**
Temperature for spraying	**180 °C – 190 °C**

Refer to AAPA Advisory Note 7 for further information.

Health & Safety

For a full description of hazards associated with the use of bituminous binders, please refer to the appropriate safety data sheet (SDS) available on the Puma Bitumen website.

Quality assurance

Puma Bitumen is known in the industry for consistently delivering high quality products. Our products can be relied upon to perform under the most diverse and demanding road conditions in Australia. This is possible thanks to our innovative product technology, comprehensive quality assurance programmes, efficient operations and a sophisticated production process unique to Puma – all supported by our highly skilled and experienced staff.

The Puma Energy Global Bitumen Technology Centre based in Altona, Victoria, is where we conduct industry-leading research and development. It is also from here that we provide technical expertise and support to our customers throughout Australia and across the world. Our team of technical specialists is dedicated to ensuring our products are thoroughly tested at every stage – from the selection of crude oil at the start of the production process, right through to customer supply.

Our product stewardship and rigorous quality management practices reflect our commitment to delivering the highest quality products that perform on the road. Our dedication to quality is recognised by our accreditation to Australian Standard AS/NZS 9001.

The information in this guide is of a general nature and should only be used as a guide. Please contact Puma Bitumen staff to ensure you have access to the most current information and for advice relating to any particular circumstances. Puma Energy (Australia) Bitumen Pty Ltd makes no warranty as to the completeness or accuracy of the information provided and, to the fullest extent permitted by applicable law, Puma Energy and its subsidiaries are not liable for any costs, loss or damage incurred in connection with use of the information provided in this guide. The material contained in this guide is protected by copyright. Puma Energy, OLEXOBIT and OLEXOCRUMB are registered trademarks of Puma Energy.

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