

Technical Data Sheet

Viva Bitumen S35E

Polymer modified Bitumen

Description

Viva Bitumen S35E is a high performance modified sealing grade bitumen. The binder has been designed to be used in high stress seals over moderately distressed pavements which are subjected to heavy traffic loadings. Viva Bitumen S35E can be used as a high stress seal (HSS) and extremely stressed seals (XSS) on steep gradients or tight curves with heavy load intensities and can also be used in conjunction with geotextiles.

Because of the elasticity of the binder, Viva Bitumen S35E is also suitable bitumen for sites where there exists a low level of cracking severity where crack movement is observed to be less than 0.5mm.

Performance Features

The performance characteristics of bitumen can be significantly improved through the addition of appropriate polymers. Modifications to the rheology of the base binder confer beneficial properties to the seal resulting in the following:

- Reduced temperature susceptibility
- Increased stiffness modulus
- Substantially increased elasticity
- Improved adhesion

Viva Bitumen S35E utilises carefully selected polymers to modify the bitumen rheology to produce a specific binder aimed at sealing rapid moving cracks and delaying the onset of crack propagation through the seal.

This ensures the formation of a stable, three dimensional network within the bitumen, giving Viva Bitumen S35E substantially improved properties when compared with conventional bitumen and other PMB's.

Summary of benefits

Advantages of Viva Bitumen S35E over conventional binders are as follows:

- Improved aggregate adhesion in highly stressed areas.
- Superior rheology for seals subject to traffic induced cracks.
- Higher cohesive strength to withstand stripping action of high speed traffic.
- Higher viscosity at elevated temperatures combats bleeding of binder.

Applications

Viva Bitumen S35E is a bitumen with an intermediate level of polymer modification which can be used for sealing applications where conditions require the use of a more robust and elastic seal than offered by conventional binders. The binder should be used principally as a high stress seal (HSS) on heavily trafficked sites where conventional materials are not considered suitable.

Lightly fatigued bases which exhibit slow moving cracks, expanding and contracting with environmental changes as well as fast moving traffic generated cracks also provide ideal sites for treatment with Viva Bitumen S35E. Preferably, a program of crack sealing treatment should be carried out prior to seal application in order to minimise the potential for the crack pattern to reflect through the seal.

Viva Bitumen S35E can be used in conjunction with geotextiles to counteract significant crack movements, i.e. > 0.5mm, which cannot be accommodated by the bitumen seal itself.

Cutting Practice

Recommended cutting practice for Viva Bitumen S35E using Shell Mexcut H is as follows:

Pavement Temp (°C)	Parts cutter (vol) per 100 parts binder @ 15°C	
	Traffic Conditions	Rate
20 - 25	<1000 >1000	6 4-6
26 - 32	<1000 >1000	4 2-4
33 - 38	<1000 >1000	2 2
>45	<1000 >1000	0-2 0-2

Health and Safety

Cariphalte S35E is unlikely to present any significant health or safety hazard when properly used in the recommended application where good standards of industrial practice are maintained.

Further guidance on Product Health and Safety is available on the relevant Material Safety Data Sheet

Specifications/Approvals

Specifications/approvals	
AGPT T190	S35E

Typical characteristics

Description	Units	Methods	Typical
Consistency at 60°C	Pa.s	AGPT/T121	300 min
Stiffness at 15°C	kPa	AGPT/T121	160 max
Torsional recovery at 25°C	%	AGPT/T122	16 min