

Technical Data Sheet

Viva Bitumen A20E

Polymer Modified Bitumen

Description

Viva Bitumen A20E is a high performance SBS modified bitumen. This extremely elastic binder greatly enhances the resistance to permanent deformation and resistance to fatigue cracking of asphalt mixtures. Viva Bitumen A20E is designed for applications where extreme axle loading occurs, such as airport use, container terminals and heavily trafficked intersections and inclines.

Performance features

The addition of carefully selected polymers can significantly alter the rheological characteristics of bitumen resulting in greatly enhanced performance of both the binder and the asphalt mixture. These are;

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

Various types of polymers have been used as bitumen modifiers, however tests have shown the most effective to be the thermoplastic rubbers of the SBS type (Styrene - Butadiene - Styrene block co-polymer).

The introduction of the SBS polymer greatly improves binder adhesion and elasticity.

This technology is only available through the integration of these premium SBS polymers with high-grade bitumen and other specially selected materials to give a binder that combines superior performance with safe handling and ease of application.

This ensures the formation of a stable, three dimensional network within the bitumen, giving Viva Bitumen A20E substantially improved properties when compared with conventional bitumen and other PMB's.

Summary of benefits

Advantages of Viva Bitumen A20E over conventional binders are as follows:

- Greater resistance to secondary compaction and deformation.
- Improved long term durability.
- Substantially improved fatigue performance.
- Provides a durable surface of high cohesive strength
- Storage stable
- Improved binder film thickness & reduced binder drainage in open graded asphalt

Applications

Viva Bitumen A20E is a polymer modified binder which can be used in open graded asphalt applications as well as conventional asphalt concrete. In open grade asphalt it is important to achieve a thick binder film on the aggregate to promote material longevity and resist ravelling stresses during service. During production and transportation of the asphalt, the binder must exhibit rheopetric qualities to avoid drainage from the open gradation in order that material integrity can be maintained.

Viva Bitumen A20E is also an extremely effective binder for dense asphalt, particularly in thin surfacing applications. The increased consistency and elasticity of the bitumen are conferred to the mechanical properties of the asphalt resulting in a very flexible material offering enhanced fatigue and deformation resistance

Class	Mixing temperature	Medium term storage temperature	Medium term storage time	Minimum compaction temperature
Cariphalte A20E	165 - 175°C	140 - 160°C	10 -7 days	110°C

Health & Safety

Viva Bitumen A20E 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	
AG :PT/T190	A20E

Typical characteristics

Description	Units	Methods	Typical
Consistency at 60 C	Pa.s	AG:PT/T1 21	2200 min
Stiffness at 25 C	kPa	AG:PT/T1 21	35 max
Torsional recovery at 25 C	%	AG:PT/T1 22	38 min