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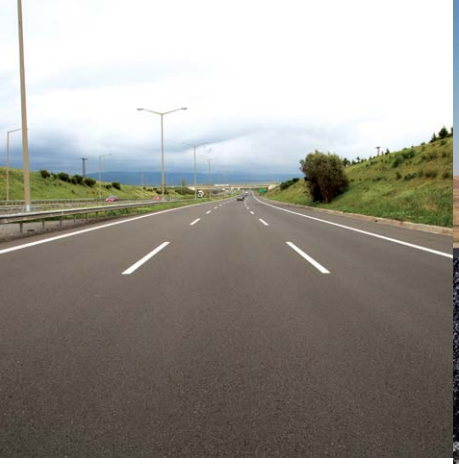
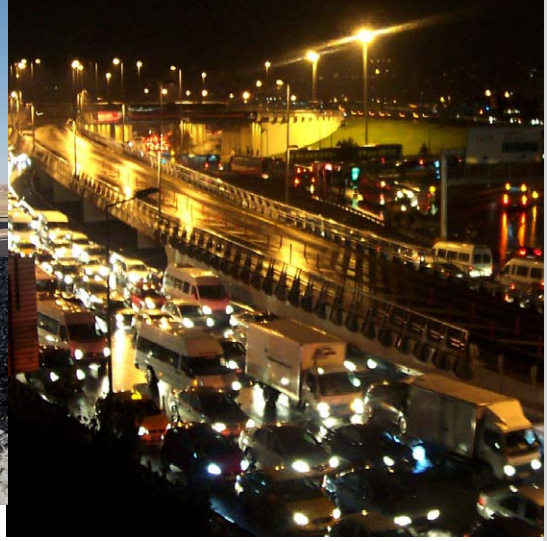
LG Chem

SBS - Bitumen Modifier

Triene – Butadiene – Styrene (SBS) polymer is most widely used in the Polymer Modified Bitumen (PMB). Modifying additives are used to improve behaviors of bitumen binder and mixtures.

LG Chem is a South Korea-based world company manufacturing chemicals. It has a wide range of applications from petrochemical products, special plastics through high quality industrial materials.





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SBS - Bitumen Modifier

ADVANTAGES

Increased traffic load and number of vehicles cause earlier impairment of the asphalt paving materials. Today such impairments are prevented by use of modifying additives, particularly SBS. Bitumen and bituminous hot mixes (BSK) are modified to make them resistant against negative phenomena:

- Rut on the permanent way
- Aggregate stripping
- Corrugation, and
- Low temperature cracks.

APPLICATION

High shear mixer, which grinds and mixes SBS with bitumen, is required for homogenous mixture of bitumen and SB. Bitumen and SBS do not mix homogenously unless they are passed through the mixer. SBS is added to the bitumen previously and mixed in the specifically modified bitumen mixer at high temperatures.

For road applications, SBS may be added to the bitumen by 4-5% (as percentage of bitumen weight).

In fact, this mixture is a physical mixture and no chemical binding occurs between SBS and bitumen. 'Cross binding additives' should be used to form chemical bond.

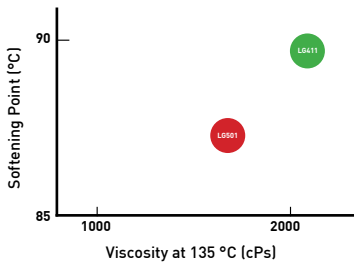
Storage capacity of **LG Chem SBS** product is one of the highest one among the known SBS.

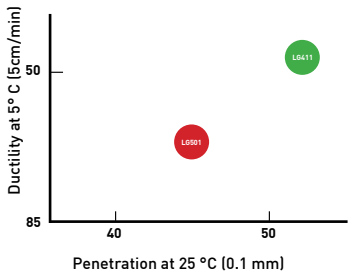
PACKAGING AND STORAGE

It should be stored away from sunlight and moisture.

LG Chem SBS is shipped as packed in 20 kg kraft paper bag or 500 kg big bag.

LG Chem SBS Asphalt Road Applications





TECHNICAL SPECIFICATIONS

LG Chem SBS is divided into two groups according to molecular structure, namely, linear and radial. Luprene LG501 has linear and LG411 radial molecular structure.

Luprene SBS polymers, as LM Chem product, are tested as bitumen modifying additive by the international organizations as well as TR General Directorate of Highways and proved to comply with the applicable specifications.

	LG 501	LG 411
Molecular structure	Linear	Radial
Styrene/Butadiene ratio	31 / 69	31 / 69
Density (g/cm²)	0.94	0.94
Oil content (phr)	None	None
Melting index (g 10 minutes 200 °C / 5 kg)	< 1	< 1
Volatile rate (%)	0.5	0.5
Hardness (Shore A)	79	84
Toluene Solution Viscosity	13.4	28.4

Bag Packing

Big Bag Packing