

Product Data Sheet

Lucolast® 9300

1. Product description

Lucolast®9300 is a blend of various ethylene copolymers exhibiting low crystallinity and improved elastomeric behavior.

2. Product properties

Addition of Lucolast®9300 to bitumen increases its viscosity and broadens the range of plasticity with elevated levels of elastic recovery. Although the minimum value of the Fraass breaking point of Lucolast®9300 is as low as for unmodified standard bitumen, the ring and ball softening point increases considerably depending on the grade and proportion of Lucolast®9300 that was added.

Penetration values decline accordingly. Ductility determined according to DIN EN 12591 decreases. However, the values ascertained for the so-called ductility at low temperatures are usually more favorable than those for standard bitumen without addition of Lucolast® 9300.

3. Applications

Even relatively small amounts of PmB based on Lucolast®9300 in asphalt mixtures improve:

- resistance to mechanical stress, in particular deformation and wear
- stability / rigidity and reduce the tendency to flow when hot and under load
- low temperature flexibility
- aging behavior

Addition of 3% Lucolast® 9300 to a 50/70 bitumen-polymer blend (PmB = Polymer modified Bitumen), approx.. a 35% elastic recovery ca be obtained.

Examples for application:

- poured asphalt, also on sloping surfaces (ramps)
- stone mastic asphalt (SMA)
- special asphalt surfaces, e.g. porous asphalt
- thin bituminous wearing courses (hot laying)

4. Processing into PmB

Bitumen is mixed homogeneously with Lucolast®9300 at temperatures ranges between 165 °C to 195 °C and is then ready for use. Depending on mixing intensity, the time required to mix large quantities (approx. 20 t) is 1 - 3 h. The usage of a high-speed shear mixing unit leads to a higher quantity of product. In order to avoid a possible phase separation, a continuous mixing process is required.

5. Environmental compatibility

Lucolast®9300 is environmentally friendly in manufacture and processing, free of plasticizers and chlorine, and not harmful to health, water, soils, or plants.

6. Packaging and storage

Granules in 25 kg bags, pallet standard 1375 kg and 1000 kg big bags. Other packaging upon request.

Lucolast®9300 should be stored under dry conditions at a temperature below 40 °C and protected from UV-light, otherwise the packaging should be damaged.

Storage time in excess of 6 months may have a negative influence on the process ability of the product. We strongly recommend to use the material within 6 months after delivery.

Use beyond the recommended shelf-life, the product should be inspected prior to use according to quality assurance measures to ensure product performance.

Typical Properties	Standard	Unit	Lucolast®9300
Specific gravity (23 °C)	ISO 2781	g/cm ³	0,94
Apparent Density	ISO 60	kg/l	0,5
Melt Flow Rate 200°C / 5 kg	ISO 1133	g /10min	approx. 4
E-Modulus	ISO 527	MPa	61
Elongation at break	ISO 527	%	750
Shore A – Hardness	ISO 868	-	90

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