

# Lucolast 7010

Ethylene Butyl Acrylate Copolymer

Lucobit AG

## Message:

### Product description

Lucolast 7010 is a polar copolymer consisting of ethylene and butyl acrylate with low crystallinity.

### Product properties

Addition of Lucolast 7010 to bitumen increases its viscosity and broadens the range of plasticity. Although the minimum value of the Fraass breaking point of Lucolast 7010 is as low as for unmodified standard bitumen, the ring and ball softening point increases considerably, depending on the proportion of Lucolast 7010 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 favourable than those for standard bitumen without addition of Lucolast 7010.

### Product advantages

Compared with other standard binder Lucolast 7010 displays significant advantages in improving resistance to deformation. Rut formation tests at high temperatures demonstrated that asphalt can bear a two- to three-fold load when modifying it with thermoplastics or altering binder viscosity by adding Lucolast 7010. This does not impair the low-temperature performance of Lucolast 7010, but rather improves it.

### Applications

Even relatively small amounts of PmB based on Lucolast 7010 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
- ageing behaviour

### Examples for application:

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

### Processing into PmB

Bitumen is mixed homogeneously with Lucolast 7010 at the temperatures range 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 mixture.

In order to avoid a possible phase separation a continuous mixing process is required.

### Environmental compatibility

Lucolast 7010 is environmentally sound in manufacture and processing, free of plasticizers and chlorine, and not harmful to health, water, soils, or plants.

### Packaging

Granules: 25 kg bags

### Storage

Store cool and dry protected from direct sunlight.

Other storage conditions can influence the quality of the product and the packaging.

It is recommended to use the product within 2 years.

General Information		
Features	Copolymer	
	Environmentally Sound	
	Good Stability	
	Low Temperature Flexibility	
	Medium Rigidity	
Uses	Asphalt Modification	
Physical	Nominal Value	Unit
Density		

-- 1	0.924	g/cm <sup>3</sup>
-- 2	1.00 to 1.10	g/cm <sup>3</sup>
Apparent Density	0.50	g/cm <sup>3</sup>
Mechanical	Nominal Value	Unit
Tensile Elongation (Break, 23°C)	860	%
Modulus of Elasticity	62.0	MPa
Softening Point - R&B; <sup>3</sup>	> 55	°C
Ductility <sup>4</sup>	> 150	mm
Embrittlement Range	< -30	°C
FraaB Breaking Point <sup>5</sup> (25°C)	< -10	°C
Penetration Depth <sup>6</sup>	2.50 to 5.50	cm
Softening Range	80 to 100	°C

#### NOTE

- |    |                                                                 |
|----|-----------------------------------------------------------------|
| 1. | 23°C                                                            |
| 2. | 23°C; Mixture of Bitumen B50/70 and 2,4%; Lucolast 7010-Bitumen |
| 3. | Mixture of Bitumen B50/70 and 2,4%; Lucolast 7010-Bitumen       |
| 4. | Mixture of Bitumen B50/70 and 2,4%; Lucolast 7010-Bitumen       |
| 5. | Mixture of Bitumen B50/70 and 2,4%; Lucolast 7010-Bitumen       |
| 6. | Mixture of Bitumen B50/70 and 2,4%; Lucolast 7010-Bitumen       |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT