

LUCOCELL®

THE STABILIZER FOR STONE MASTIC ASPHALT



... make better roads

QUALITY SMA MIXTURE

USING LUCOCELL®



THE PRODUCT

Lucocell® are micro grains of cellulose fibers designed to be used for the modification of SMA- Stone Mastic Asphalt.

LUCOCELL® AND STONE MASTIC ASPHALT (SMA)

During the production of stone mastic asphalt as much bitumen as possible is mixed into a mixture very rich on aggregates. This asphalt mixture shall be produced, transported and paved. However, any form of separation also known as binder run-off is to be avoided. This is where Lucocell® comes into the game. Dosing 0,3 % - 0,4 % Lucocell® the mixture becomes highly stabilized and the homogeneity is maintained.

ADVANTAGES OF LUCOCELL® IN SMA

- preventing separation
- no mastic build-up
- no grease spots
- high viscosity of bitumen

LUCOCELL® FITS IN ALL ROAD TYPES WHERE SMA IS USED

- track moving heavy traffic
- slowly moving heavy traffic
- standing traffic
- frequent braking and acceleration processes
- high temperatures over longer periods of time

TECHNICAL DATA

Character	Value FG3000	Value PE3700	Unit
Appearance	Micro grain	Grey granule	-
Bulk density	Approx. 450	Approx. 370	g/l
Basic fibre	Value FG3000	Value PE3700	Unit
Average fibre length	Approx. 1100	Approx. 1100	µm
Average fibre diameter	Approx. 45	Approx. 45	µm
Typical screen analysis	Value FG3000	Value PE3700	Unit
Less than 2500µ	100	100	%
Less than 800µ	Min. 55	Min. 55	%
Less than 200µ	Min. 30	Min. 30	%
Polymer	Value FG3000	Value PE3700	Unit
Ethylene Copolymer (EBA)	not available	37	%

These standard values are typical values and should not be regarded as specifications.

LUCOCELL® FG3000 MICRO GRAINS OF CELLULOSE FIBRES AND LUCOCELL® PE3700 GRANULES POWERED WITH SPECIAL POLYMERS.



NEW STANDARD IN STABILIZING SMA

Lucocell® – cellulose additives for SMA – Stone Mastic Asphalt. Due to their 3D structure, cellulose fibres maintain a comparatively high viscosity of bitumen, thus preventing its seepage and formation of asphalt mix segregation at high temperatures during storage, transport and SMA placing. At the same time they enable creation of a thicker bitumen layer around each rock particle, thus preventing oxidation, moisture penetration and lifting or cracking of the aggregate.

Lucocell® made of cellulose fibre is very safe and easy in handling. We strongly recommend to pay attention to the below mentioned aspects of use. The advantage of microgranules is the quicker distribution in the mineral mass during dry mixing. Microgranules release Lucocell® fibres easily and safely for increased efficiency and improved production quality. Lucocell® is ideal for use in automated batching.

DOSAGE AND MIXING

For dosage of Lucocell® shall be introduced centrally into the mixer. The standard dosage rate of cellulose fibre is 3 to 4 kg of 1 ton mass of asphalt. To achieve this result batch-sized bags, gravimetric or volumetric fibre blowing systems can be used. A gravimetric system is preferred for receiving the records about the accurate quantity of fibres in the mix. If a volumetric system is used, it should be calibrated frequently.

Lucocell® shall be added centrally into the mixer approx. 5-15 seconds prior to the addition of bitumen and even distribution of the fibres in the mix. In case the fibres are pre-dispersed by means of a automatic fibre blowing device the dry mixing of the fibres might not be necessary. The total mixing time for SMA according to the German recommendations (Leitfaden Splittmastixasphalt, Dezember 2000) should be minimum 53 seconds. This time includes 8 seconds for discharging the mixer.



LOCATIONS



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