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**LUCOCELL®**

**THE STABILIZER FOR STONE MASTIC ASPHALT**

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... 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)

The production of stone mastic asphalt requires the mixing of copious amounts of bitumen compared to other asphalt compositions. The SMA mixture is still very rich in aggregates. However, due to the high binder content, a form of separation - also known as binder run-off - is to be avoided. Here, Lucocell® is the product of choice. Dosing 0,3 % - 0,4 % Lucocell® to the SMA mixture stabilizes prevents binder run-off while SMA 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

- (Slowly) moving heavy traffic
- Pausing traffic
- Frequent braking and acceleration processes
- High temperatures over extended 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, bitumen seepage and asphalt mix segregation at high temperatures is prevented especially during storage, transport and SMA placing. At the same time, Lucocell® Cellulose additives enable the formation of a thicker bitumen layer around each aggregate particle, thus mitigating oxidation, moisture penetration and lifting or cracking of the aggregate.

Lucocell® is very safe and easy in handling. We strongly recommend to pay attention to the below indicated aspects of use: microgranules enable faster distribution of the fibres in the mineral mass during dry mixing. These microgranules release Lucocell® fibres easily and safely and thus guarantee an improved efficiency and production quality. Lucocell® is ideal for use in automated batching.

## DOSAGE AND MIXING

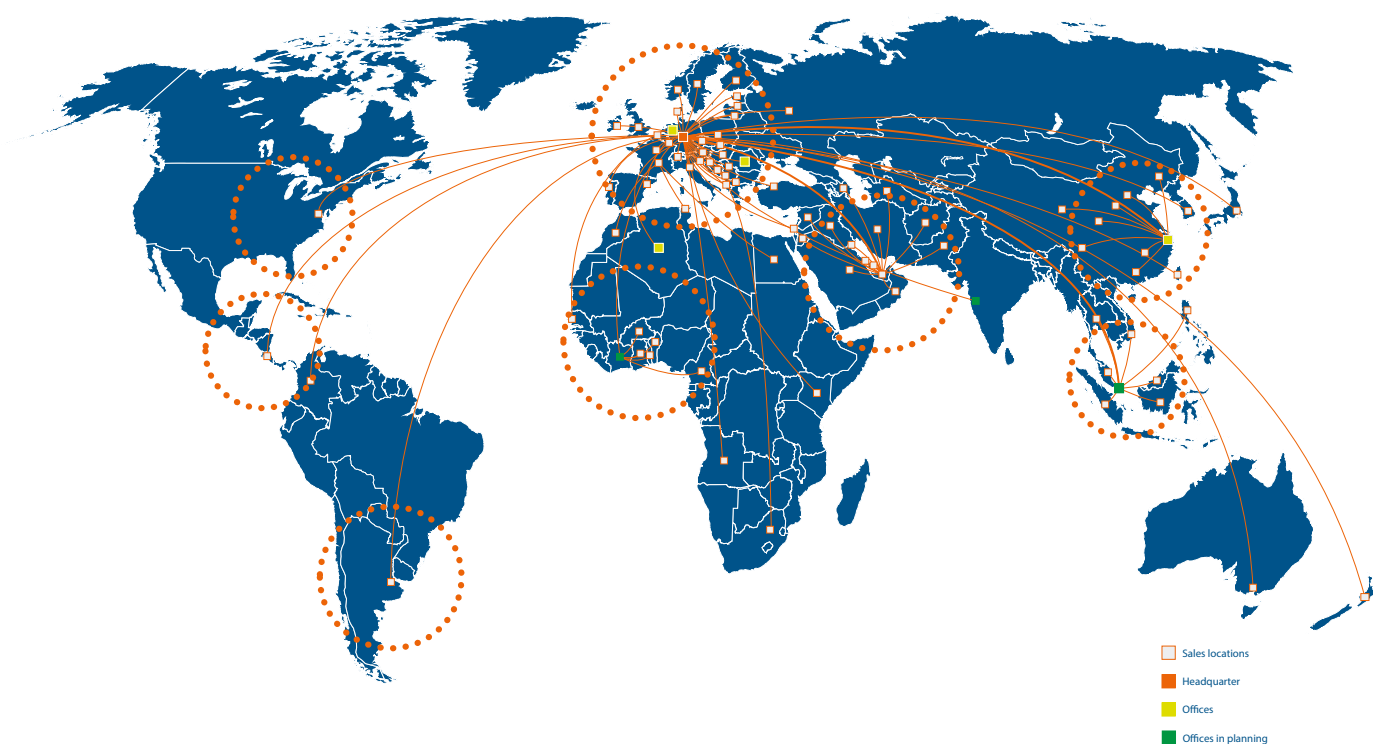
Lucocell® should be added into the centre of the mixer approx. 5-15 seconds prior to the addition of bitumen for even distribution of the fibres in the mix. The standard dosage rate of cellulose fibres is approx.. 3 to 4 kg per 1 ton of asphalt. To achieve this result, batch-sized bags, gravimetric or volumetric fibre blowing systems can be used. For best results, a gravimetric system is preferred. If a volumetric system is used, frequent calibration is required.

In case the fibres are pre-dispersed by means of an automatic fibre blowing device, a dry mixing may not be required. The total mixing time for SMA according to German Standard Recommendations (Leitfaden Splittmastixasphalt, Dezember 2000) should be a minimum of 53 seconds. This time includes 8 seconds for discharging the mixer.



## LOCATIONS

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LUCOBIT Aktiengesellschaft  
Basell Polyolefine GmbH / Brühler Str. 60 • B100  
D-50389 Wesseling  
Phone +49 2236 / 37859-0  
Fax +49 2236 / 37859-99  
[info@lucobit.de](mailto:info@lucobit.de)  
[www.lucobit.com](http://www.lucobit.com)

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