


DuraPact 2.0 KOMPETENZZENTRUM FASERBETON

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TECHNISCHES DATENBLATT

DURA-SIL (G7)

Microsilica- Powder
Color: grey

Application

DURASIL (G7) Microsilica is used as an additive for concrete to improve the strength and performance characteristics. Because of its puzzolanic property Microsilica integrates in large quantities in cement existing calcium in the calcium silicate hydrate (CSH)- phases, which cause the formation strength in the concrete.

Due to the same effect contributes DURA-SIL (G7) for increasing the long term durability of fiber concrete.
But special **mixing ratios** are necessary (patented "DURAPACT - Matrix").

Workability

DURASIL (G7) is a powder. It can be used as powder or as slurry mixed with water.

Material Description

DURASIL (G7) Microsilica consists of amorphous silicon dioxide (SiO2) of very high purity. Because of this fineness of the material and the large specific surface area of > 12 m²/g is DURA-SIL (G7) Microsilica very reactive.

DURA-SIL (G7) Microsilica is a puzzolanic material.

Specific Caracteristics

Due to its high fineness tends uncontacted Microsilica powder to agglomerate. This is evident from a tuber formation up to about 10 mm. This effect is favored by longer storage time, frequent handling processes and compression (lower layers of bags within a range).The agglomerates are destroyed again during the mixing process is usually quick. When using Microsilica powder in dry mortars it is advisable to dry premix the material for about 1 minute with the coarse aggregates. Thus, the agglomerates are ground effectively. Only after the flour fine starting materials should be added. Please note that the nature and frequency of agglomerates in Microsilica powders **not be influenced** by us. If the processors give additional expenses associated with the destruction of Microsilica - related agglomerates, we resulting claims reject in principle!

Technical Data (guiding analysis)

Appearance		grey Powder
Na_2O	% b.w.	ca. 0,5
SiO_2		ca. 90 %
CaO	% b.w.	ca 0,8 %
MgO	% b.w.	max. 1,5
Al_2O_3	% b.w.	max. 1,0
Fe_2O_3	% b.w.	ca 1,0
C_{frei}	% b.w.	ca 2,0
BaO	% b.w.	ca 0,91

Physical properties

Loss on drying (2 hrs. At 105 ° C)	ca. 1 %
Loss on ignition (2 hrs. At 1000 ° C)	ca. 3 %
mineralogic Composition	
XRF-analysis	X-ray <1 % Quarz
Particle diameter (lightoptic)	100 % < 100 µ
Surface BET	22 m²/g
Density	2,2 kg/l
Bulk density	ca. 0,2 kg/l
Softening point	ca. 1.572 °C
Melting point	ca. 1.693 °C

Packaging

Big Bags	ca. 500 kg +/- 10 %
Artikel-No.	MA0161L

Storage

DURA-SIL (G7) Microsilica is to be stored on a dry place.