



PRODUCT DATA SHEET

Microsit®

Microsit® is an excellent additive to produce high-grade concrete and mortar with utmost reliability.

Microsit® consists primarily of SiO₂ and Al₂O₃, thereby ranking it in the aluminosilicates.

PRINCIPAL CHEMICAL CONSTITUENTS

SiO ₂	avge	54	% by mass
Al ₂ O ₃	avge	25	% by mass
Fe ₂ O ₃	avge	6	% by mass
CaO	avge	4	% by mass

Microsit® is characterised by a very fine and defined particle-size distribution curve. Two types are available with regard to fineness:

- Microsit® H10 or M10 with a particle size of < 10 microns *
- Microsit® H20 or M20 with a particle size of < 20 microns *

The particle size distribution curve of the Microsit® is constant while the particle shape is almost perfectly spherical.

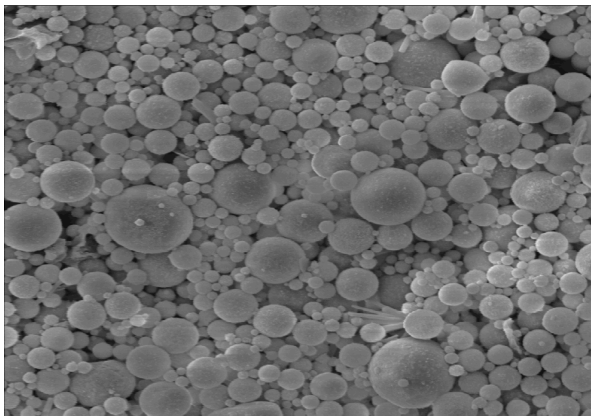
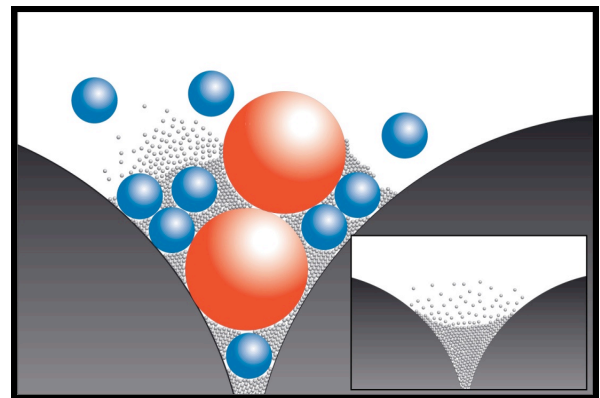


Fig.1: Scanning electron microscope photo of Microsit®

As a result of these properties Microsit® can be used to specifically optimise the particle-size

distribution curve of concrete and mortar in the fine particle area. This will achieve a high packing density and durability of the cement-bonded matrix.

Moreover, Microsit® reduces the amount of required water and improves the rheological properties.



As a result of excellent processing properties and high reactivity, Microsit® is ideally suited for the production of high performance concrete and mortars with special properties such as :

- **high-strength, wear-resistant mortar and concrete**
- **concrete and mortar with a high resistance to chemical and physical attack**
- **highly fluid and self-compacting concrete and mortar**
- **injection building materials, fine binder for compression**

The quality assurance measures enforced during manufacture and application ensure outstanding product properties and unvarying product quality. Microsit® has been granted a Conformity Certificate and it can be used as an additive according to DIN 1045-2.

* Pass D95-Value

TECHNICAL SPECIFICATIONS

Microsit® H10

Material Properties^{*)}

Loss on ignition	2.7 % by mass	(EN 196, Part 2)
Particle shape	spherical	
Specific surface	7,300 cm ² /g	
Particle density	2.55 kg/dm ³	(EN 196, Part 6)
Bulk density	Loose 0.82 kg/dm ³	
	Vibrated 1.00 kg/dm ³	
Colour	light grey to grey	
Reflectance	30	(Dr. Lange)
Water requirements	30 % by mass	(in-house process)

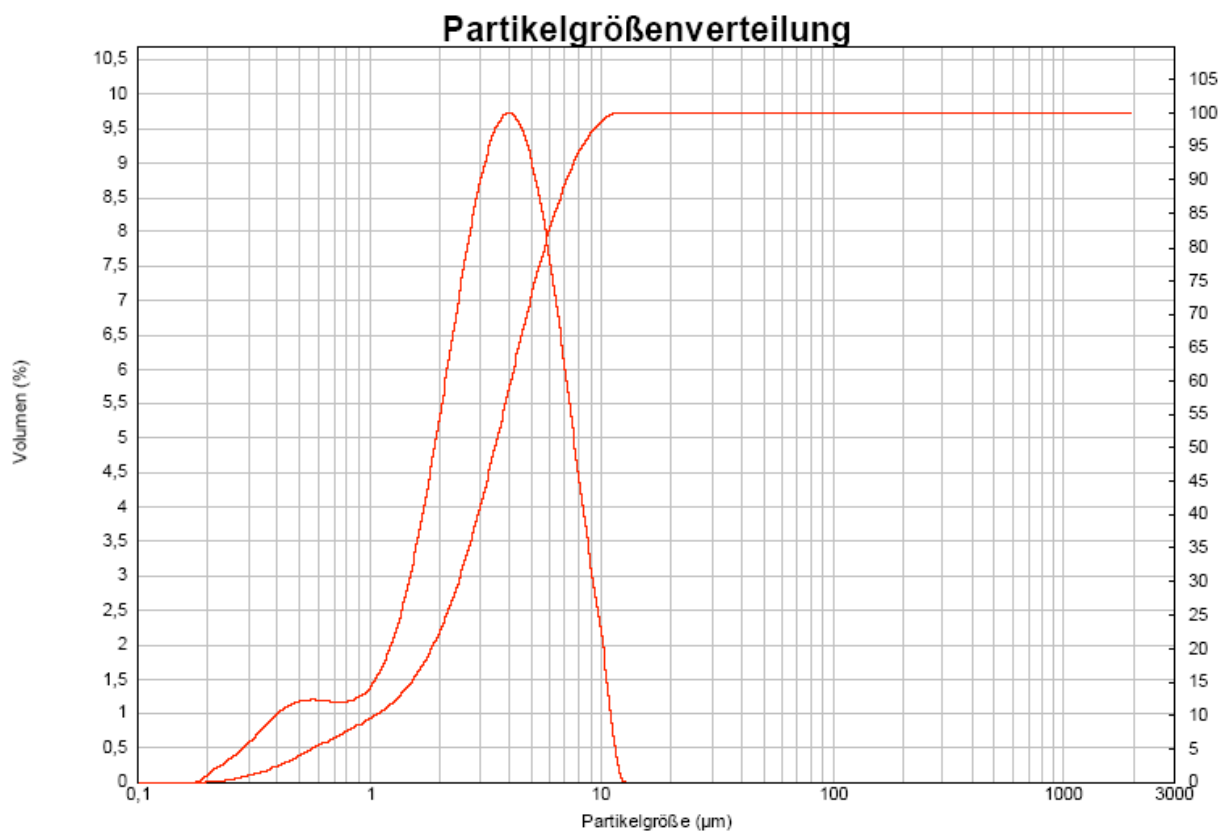
Mortar properties^{*)}

rel. slump	108 %	(DIN 18555, Part 2)
(compared with cement mortar)		
Activity index:	28d 90 %	(EN 196, Part 1)
	90d 105 %	(dito)

^{*)} average of the year 2011 in reference with CEM I 52,5 R Premium of Milke, Geseke

Fineness

PARTICLE SIZE DISTRIBUTION (on the average)



TECHNICAL SPECIFICATIONS

Microsit® H20

Material Properties^{*)}

Loss on ignition	2.5 % by mass	(EN 196, Part 2)
Particle shape	spherical	
Specific surface	5,700 cm ² /g	
Particle density	2.52 kg/dm ³	(EN 196, Part 6)
Bulk density	Loose 0.82 kg/dm ³	
	Vibrated 1.02 kg/dm ³	
Colour	light grey to grey	
Reflectance	28.5	(Dr. Lange)
Water requirements	29.0 % by mass	(in-house process)

Mortar properties^{*)}

rel. slump	108 %	(DIN 18555, Part 2)
(compared with cement mortar)		
Activity index:	28d 84 %	(EN 196, Part 1)
	90d 102 %	(ditto)

^{*)} average of the year 2011 in reference with CEM I 52,5 R Premium of Milke, Geseke

Fineness

PARTICLE SIZE DISTRIBUTION (on the average)

