



Product information

Microsit® 90S

**Pozzolanic additive –
for high performance cement-based construction materials**

Description

Microsit® 90S is a new additive for the controlled production of high-quality mortars and concrete. Microsit® 90S consists mostly of SiO₂ and Al₂O₃ and is classified as an aluminium silicate.

Chemical composition (M.-%, approx.)

SiO ₂	51
Al ₂ O ₃	23
Fe ₂ O ₃	6
CaO	3

Physical characteristics (approximate)

<i>Appearance:</i>		
Colour	grey	
Whiteness	28	(Dr. Lange)
Particle shape	spherical	
Specific density	2,41 g/cm ³	(EN 196, part 6)
Bulk density	0,89 g/cm ³	
Blaine value	3,600 cm ² /g	
Particle size distribution	d ₁₀ ≤ 4 µm d ₅₀ ≤ 20 µm d ₉₅ ≤ 90 µm	(laser granulometer)

Function

The special particle size distribution and the spherical form of Microsit® 90S increase the flow properties. The amorphous particles increase the mechanical properties of compounds through their pozzolanic reaction.

Relative spread	108 %	(DIN 18555, part 2)
	(compared to a cement mortar with CEM I 42.5)	
Activity index	28 d: 89 % 90 d: 99 %	(EN 196, part 1) (EN 196, part 1)



Advantages

Microsit® 90S is characterised by a very fine and defined particle size distribution. The particle size distribution is uniform and the particles spherical.

This is the reason why through the use Microsit® 90S the particle size distribution of mortars and concrete can be optimised in the fine particle range. This gives a high packing density and durability of the cement bound matrix.

Microsit® 90S also reduces the water demand and improves rheological properties.

Application

Given its excellent processing properties and its high pozzolanic reactivity Microsit® 90S is best suited for the production of construction materials with special properties, such as

- self compacting construction materials with high fluidity
- reinforced and wear resistant mortars and concrete
- self levelling compounds
- mortars and concrete with high resistance to chemical and physical attack
- injection mortars, very fine binders for crack repair

The quality measures applied to the production guarantee the optimal product characteristics and the uniformity of the product. Microsit® 90S has a quality certificate and is in accordance with DIN 1045-2 as additive.

Addition level

The addition level of Microsit® 90S depends on the final properties of the system required. Typical addition levels are 10 - 20% on the cement weight.

Compatibility

Microsit® 90S is compatible with Portland cement and hydraulic binders, including ground blast furnace slag, fly ash and hydrated lime.

Health & Safety

Refer to Material Safety Data Sheet for full details.

Storage

To guarantee a storage stability of the material, the following conditions must be applied

- store under dry conditions
- keep containers and bags closed
- use opened bags within 3 days

Under these conditions the material will be stable for 6 months after date of delivery.

Older material shall be checked for possible agglomerates before use.

Packaging

In bags of 25 kg, or in big bags of 500 and 1000 kg, bulk.

The above information and recommendations are based upon our experience and are offered merely for advice. They do not absolve the consumer from making his own tests. Responsibility for damage arising from the use of our products cannot be derived from the recommendations given. The observance of any intellectual property rights of third parties is the responsibility of the consumer in each case.

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