BASF
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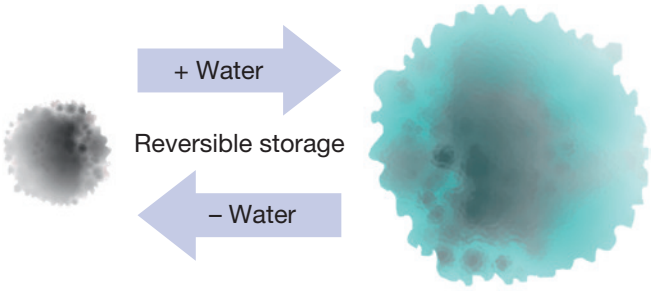
Starvis® S effects

What is Starvis® S?

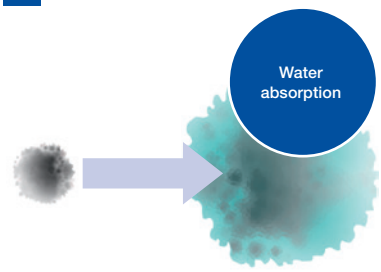
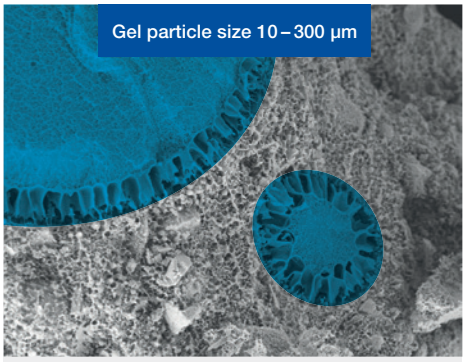
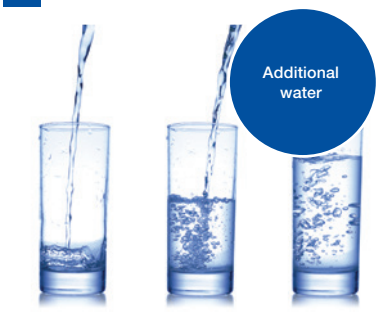
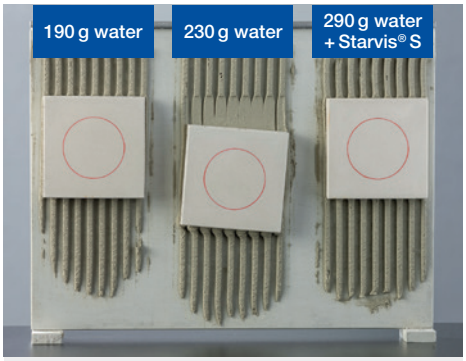
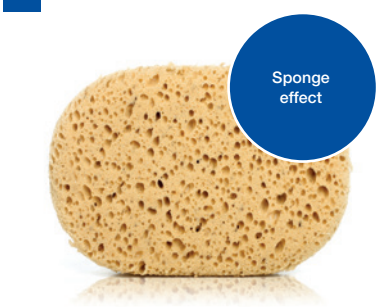
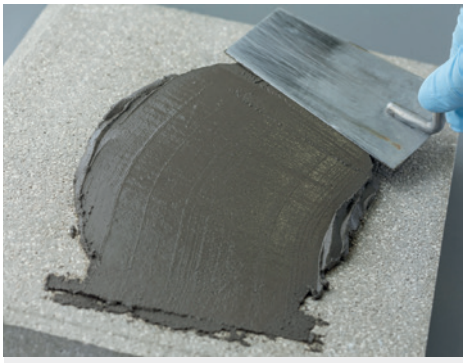
Starvis® S is a polymer-based powder additive.
It stores part of the mixing water by means of reversible swelling, thus forming defined water reservoirs.
The mechanism is stable towards salt ions and alkalinity.

What principal effects can be achieved with Starvis® S?

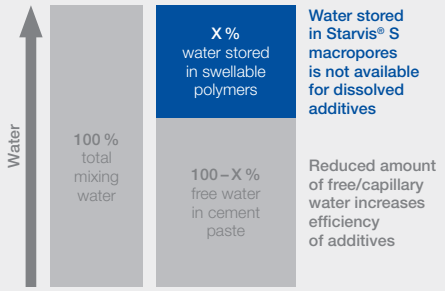
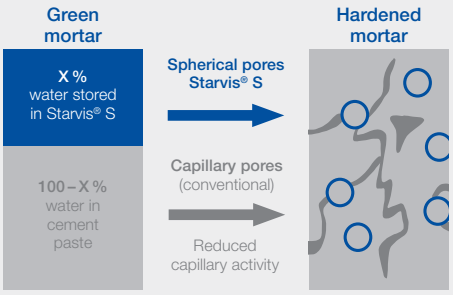
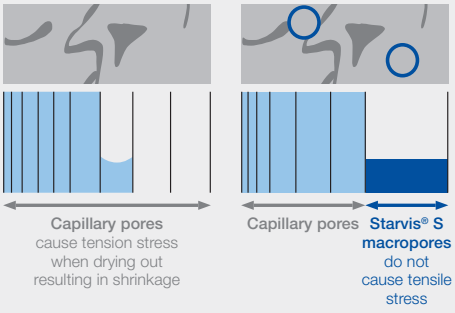
Starvis® S is a unique technology that enables multiple effects as shown in the table below:



Effects in green mortar

Starvis® S feature	Effect in dry mortar	Description
1 	 ▸ Defined water reservoirs	**1g Starvis® S absorbs 20 – 30 g cementitious pore solution:** ▸ This makes it possible to add more water without losing sag (see effect 2) or ▸ To reduce free pore solution and change capillary system (constant water approach) (see effects 4 – 6)
2 	 ▸ Active water management	**Starvis® S allows a significant increase of the water content:** ▸ Without losing sag resistance ▸ Without introducing stickiness or a strong retardation like other thickeners ▸ With considerable improvement of pot life, open time and degree of cement hydration for fast drying application ▸ Improved yield of fresh mortar and flexibility of hardened mortar
3 	 ▸ Reversible water uptake	**Starvis® S forms water-filled gel particles which:** ▸ Introduce thickening without loss of workability or pumpability as water is released under pressure or shear ▸ Take up water again immediately after pressure release

Effects in hard mortar

Starvis® S feature	Effect in dry mortar	Description
4 	 ▸ Up-concentrate your additives	**Starvis® S takes up part of the mixing water:** ▸ Thus, other additives are more concentrated in the reduced free available pore water. ▸ This makes it possible to use other additives more efficiently and along the way reduce their negative side effects (e.g. RDP, cellulose ether).
5 	 ▸ Improved freeze-thaw resistance	**Starvis® S introduces defined pores within your system:** ▸ Less free water to create capillary pores ▸ Less internal surfaces, shrinkage; less water uptake ▸ Higher durability; improved freeze-thaw stability due to space for ice accretion
6 	 ▸ Reduced shrinkage, improved durability	**Starvis® S provides water reservoirs within your system:** ▸ Keeping internal relative humidity high (capillary pores stay saturated) preventing autogenous and reducing drying shrinkage ▸ Reducing number of capillary pores – resulting in lower water uptake at constant water content

Application guide	Dosage recommendation	1 Water absorption	2 Additional water	3 Sponge effect	4 Intensi-fication	5 Functional pore design	6 Internal water reservoir
CTA	0.10 – 0.40 %	■	■	■	■	■	■
Grout	0.05 – 0.20 %	■	■	■	■	■	■
EIFS	0.10 – 0.40 %	■	■	■	■	■	■
Render	0.05 – 0.30 %	■	■	■	■	■	■
Repair	0.10 – 0.20 %	■	■	■	■	■	■

■ Recommended ■ Suitable ■ Not effective

Further information (test formulations and further test results) is available on demand. Please feel free to contact our local sales representatives.

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