

Starvis® RS 421/01 F

Innovative thickening compound for cementitious tile adhesives (CTA)

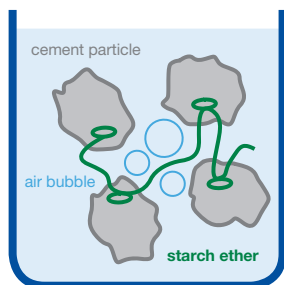
What is Starvis® RS 421/01 F?

Starvis® RS 421/01 F is a special designed thickening compound for cementitious tile adhesives (CTA). It combines the positive effects of Starvis® SE, Starvis® T, Starvis® S and Starvis® polyelectrolytes on workability, open time, sag resistance and adhesion in one product. This allows a formulation of high quality C2 tile adhesives by simply adding Starvis® RS 421/01 F to a basic formulation consisting of cement, sand, limestone powder, cellulose ether and redispersible latex powder (so called C0 tile adhesives).

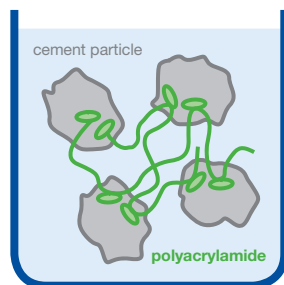


How does Starvis® RS 421/01 F work?

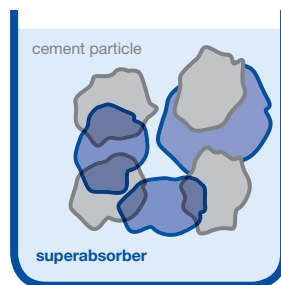
Starvis® SE starch ethers



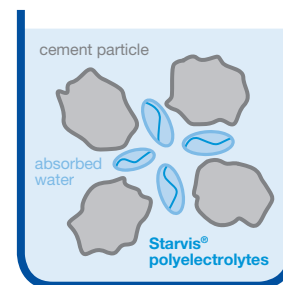
Starvis® T polyacrylamide



Starvis® S water-swellaible polymers



Starvis® polyelectrolytes



Mode of action

- flocculation of cement particles and stabilization of air bubbles
- strong flocculation of cement particles due to surface interaction
- reversible water storage
- water absorption by hydrogen bonding

Effect in Starvis® RS compound

- ✓ increases yield point
- ✓ controls setting time
- ✓ reduces mixing force
- ▶ introduces basic sag resistance, creates smooth workability and prolongs open time
- ✓ strongly increase yield point, even at temperatures > 35°C
- ▶ creates an improved sag resistance for big and heavy tiles and at high temperature
- ✓ allows addition of more water
- ✓ water is stored in Starvis® S
- ✓ when shear force is applied water is released
- ▶ prolongs open time, creates excellent workability, increases flexibility and yield
- ✓ provides water retention
- ✓ improves tile correction time
- ▶ allows to reduce cellulose ether

Application example

Raw Materials	Reference C(0)	Reference + 0.4 % Starvis® RS 421/01 F C2 TE
	Dosage (%)	Dosage (%)
Ordinary Portland Cement (e.g. CEM I 42.5 R)	35.0	35.0
Quartz sand (< 0.5 mm)	57.2	56.8
Limestone powder (< 180 µm)	6.0	6.0
Redispersible latex powder	1.5	1.5
Cellulose ether (unmodified, 30,000 mPas)	0.3	0.3
Starvis® RS 421/01 F	-	0.4
DRY MORTAR (TOTAL)	100.0	100.0
MIXING WATER	19.0	31.0

Reference | Reference + 0.4 % Starvis® RS 421/01 F

Sag resistance

Double DIN 40 kg / m²

With 19% water sag resistance is achieved (Sag DIN tile ≤ 0.5 mm)

Even with 31% water sag resistance is achieved (Sag DIN tile ≤ 0.5 mm)

- ✓ Starvis® RS allows to significantly increase amount of mixing water without losing sag resistance

Reference | Reference + 0.4 % Starvis® RS 421/01 F

Open time

5 minutes open time | 20 minutes open time

- ✓ Starvis® RS addition results in much longer open time without strong influence on setting

Correction time

5 minutes correction time | 20 minutes correction time

- ✓ Starvis® polyelectrolyte component within Starvis® RS strongly improves correction time

Workability

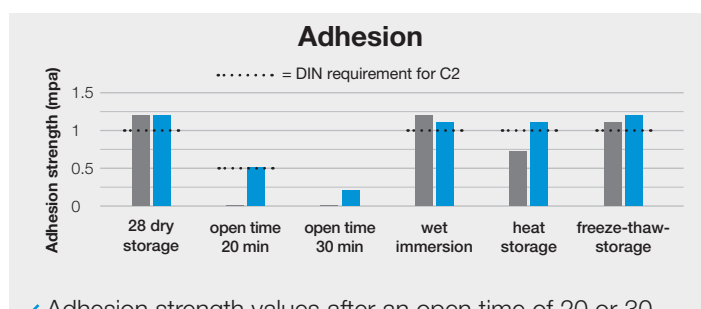
Viscosity 2,400 Pas | Viscosity 1,400 Pas

- ✓ Reduced viscosity results in smoother workability

Flexibility

Deformation 1.7 mm | Deformation 2.2 mm

- ✓ Improved flexibility due to reduction of E module allows appropriate RDP content reduction



- ✓ Adhesion strength values after an open time of 20 or 30 min and even after heat storage are improved due to higher flexibility and better water retention.

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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