ALVERTEX® FASTONE II

TECHNICAL PROFILE & APPLICATION

For Technical Directors, R&D Departments and Laboratories

1. Technical Summary

ALVERTEX® FASTONE II is a cementitious quick-hardening additive developed for rapid hardening systems. Its key technical feature is an adjustable handling time of approximately 20 minutes to 2 hours using general setting modifiers such as tartaric or citric acid.

The PDS states 10–30 MPa after 6 hours, excellent crack resistance through expansion characteristics, and applications including quick-hardening grout, self-leveling materials, quick-hardening repair materials, decorative mortar and instant demolding of small products.

2. Key Product Parameters

Parameter	ALVERTEX® FASTONE II
Handling time	Approx. 20 min – 2 h, adjustable with tartaric/citric acid
Early strength	10–30 MPa after 6 h
Shrinkage / cracking	Expansion characteristics reduce self- and drying shrinkage
Specific weight	2.92
Blaine	6,000 cm²/g
Dosage	5–25% by cement weight
Appearance	Greyish white powder
Packaging	25 kg bags; 1,000–1,200 kg jumbo bags

3. Mechanism

The PDS describes early strength through void filling with ettringite formed from hydration of amorphous calcium aluminates before the main cement hydration reaction starts.

4. Applications

- Quick-hardening grout
- Self-leveling materials
- Quick-hardening repair materials
- Decorative mortar
- Instant demolding of small products

5. Recommended Laboratory Program

Test	Purpose
Handling time	Measure at 5–25% FASTONE II and several modifier levels.
Strength	1–2–3–6–24 h, plus 28 days where required.
Flow / workability	Compare fresh-state performance at equal water/binder.
Shrinkage / expansion	Measure linear deformation and crack resistance.
Demolding	For precast/small products, record demolding time and surface quality.
Temperature sensitivity	Repeat at relevant production temperatures.
Modifier compatibility	Compare tartaric/citric acid and the customer's current modifier.

6. Technical Positioning

ALVERTEX® FASTONE II should be positioned as a close functional alternative in the quick-hardening segment, with the strongest case being the combination of the same core quick-hardening profile, adjustable 20-minute-to-2-hour handling time, 10–30 MPa at 6 hours, 6,000 cm²/g Blaine, 2.92 specific weight and overlapping applications. The commercial case should be confirmed by a controlled side-by-side test.

7. Next Step

Run a controlled side-by-side laboratory comparison in the customer's current formulation, using the same cement, sand, water, retarder/modifier and curing conditions. Measure handling time, flow, early strength, shrinkage/expansion and demolding performance where relevant.

8. ALVENTUS Technical Support

ALVENTUS can provide samples, technical documentation and support in setting the dosage and modifier level for the customer's formulation.