

ADVA[®] Cast 512

Polymer-based superplasticiser for high early strength in precast concrete

Product Description

ADVA[®]Cast 512 is a polymer-based, high range water-reducing admixture that is specially designed for producing superior high early strength concrete in precast applications. ADVA Cast 512 contains no added chloride. It is formulated to comply with specifications for chemical admixtures for concrete: ASTM C 494 and Type F; BS 5075: Part 3: 1985.

One litre weighs approximately 1.06kg ± 0.02kg.

Dispersion

ADVA Cast 512 is a superior dispersing admixture, having a marked capacity to disperse cement agglomerates normally found in a cement-water suspension. The capability of ADVA Cast 512 exceeds that of normal water-reducing admixtures (Type WR) and high range water reducers (Type HWR), resulting in lower dosages and better performance.

Product Advantages

- Superior Early Strength Enhancement — ADVA Cast 512 accelerates cement hydration at a very early stage. Together with the very efficient dispersion effect, ADVA Cast 512 achieves very high early strength for the production of precast structural elements.
- High Workability — ADVA Cast 512 is ideal for precast applications, where high early strength is desired, and where high workability will aid faster placement and improved mix consolidation.
- Superior Surface Finish — ADVA Cast 512 produces concrete with superior surface finish, without stickiness, tearing or spotty set characteristics.
- Superior Water Reduction — With up to 40% water reduction possible, ADVA Cast 512 is highly effective in low water-cement concrete, producing high strength and high early strength concrete.
- Optimise Precast Concrete Production — The accelerated set times of ADVA Cast 512 may reduce or eliminate the need for heat curing to achieve high early strength concrete. The earlier removal of forms leads to reduced cycle times, faster mould turnaround, reduced total costs and increased productivity.

Compatibility

ADVA Cast 512 is not compatible with Darex[®]Super 20, Daracem[®] and other NSFC-based admixture products. ADVA Cast 512 is compatible with most water-reducing admixtures as well as specialty admixtures like accelerators, DCI[®] Corrosion Inhibitor, Eclipse[®] Shrinkage-Reducing Admixture and V-MAR[®] Rheology Modifying Admixture. All admixtures should be separately added to the concrete. Pre-testing of the concrete should be performed to optimise dosages and addition sequence of these admixtures.

Dispensing Equipment

Please contact your local GCP representative for further information regarding the dispensing equipment for this product.



Uses

ADVA Cast 512 produces concrete with high early strength for precast concrete elements, while at the same time achieving high workability for easy and fast placement of concrete. It also allows concrete to be produced with very low water-cement ratios in low to high slump ranges.

Addition Rates

Addition rates of ADVA Cast 512 can vary with type of applications, but will normally range from 200 to 1,000mL / 100kg of cementitious material. In most instances, the addition of 300 to 800mL / 100kg of cementitious material will be sufficient. Should conditions require using more than recommended addition rates, please consult your local GCP representative.

Packaging

ADVA Cast 512 is available in 205L pails and in bulk.

ADVA Cast 512 contains no flammable ingredients. It will begin to freeze at approximately 0°C, but will return to full strength after thawing and thorough agitation.

In storage, and for proper dispensing, ADVA Cast 512 should be maintained at temperatures above 0°C.

Health and Safety

Please refer to ADVA Cast 512 Material Safety Data Sheet or consult GCP Applied Technologies.

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Last Updated: 2022-01-28

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