

# ADVA<sup>®</sup> Cast 590

High early strength polycarboxylic superlasticiser for precast concrete

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## Product Description

ADVA<sup>®</sup>Cast 590 is a polycarboxylic high range water-reducing admixture that is specially designed for producing superior high early strength concrete in precast applications.

ADVA Cast 590 contains no added chloride. It is formulated to comply with specifications for chemical admixtures for concrete: ASTM C 494, Type F; BS 5075: Part 3: 1985; SS 320: 1987; AS 1478 as a Type HWR. One litre weighs approximately  $1.16\text{kg} \pm 0.0\text{ kg}$ .

## Dispersion

ADVA Cast 590 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 590 exceeds that of normal water-reducing admixtures, resulting in lower dosages and better control.

## Advantages

### Superior Early Strength Enhancement

ADVA Cast 590 accelerates cement hydration at a very early stage. Together with the very efficient dispersion effect, ADVA Cast 590 achieves very high early strength for the production of precast structural elements.

### High Workability

ADVA Cast 590 is ideal for precast applications, where high early strength is desired, as it can also achieve and retain high workability for faster placement and consolidation.

### Superior Surface Finish

ADVA Cast 590 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 590 is highly effective in low water-cement concrete, producing high early strength concrete.

### Optimise Precast Concrete Production

The accelerated set times of ADVA Cast 590 may 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 costs and increased productivity.

## Packaging

ADVA Cast 590 is available in 205L drums and in bulk.

ADVA Cast 590 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 590 should be maintained at temperatures above 0 °C.

## Applications

ADVA Cast 590 produces concrete with high early strength for precast structural elements, while at the same time achieving high workability for easy and fast placement and consolidation. It also allows concrete to be produced with very low water-cement ratios at low or normal slumps.

## Addition Rates

Addition rates of ADVA Cast 590 can vary with type of applications, but will normally range from 200 to 1,500mL / 100kg of cementitious material. In most instances, the addition of 500 to 1,000mL / 100kg of cementitious material will be sufficient. Should conditions require using more than recommended addition rates, please consult your local GCP representative.

## Compatibility

ADVA Cast 590 is compatible with most water-reducing or airentaining admixtures as long as they are separately added to the concrete. Pretesting of the concrete should be performed to optimise dosages and addition times of these admixtures.

## Dispensing Equipment

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

## Health and Safety

Avoid mixing or bringing ADVA Cast 590 in contact with acidic materials. Please see ADVA Cast 590 Material Safety Data Sheet or consult GCP Applied Technologies.

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