

# ADVA<sup>®</sup> 109

New polymer-based superplasticiser for high performance, high durability concrete

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## Product Description

ADVA<sup>®</sup>109 is a new superplasticiser based on the latest polycarboxylate-type polymer technology. ADVA 109 superplasticiser is designed to impart high workability, extended slump life, and increased strength performance and enhanced durability to concrete. ADVA 109 contains no added chloride and complies with BS5075: Part 3. One litre weighs approximately  $1.045\text{kg} \pm 0.02\text{kg}$ .

## Dispersion

Based on new comb polymer technology, ADVA 109 is a superior dispersing admixture having a marked capacity to disperse the cement agglomerates normally found in a cement-water suspension. Unlike conventional superplasticisers, which partially rely on electrostatic charge repulsive forces, ADVA 109 efficiently disperses cement particles using a powerful steric repulsion model. This allows for lower dosages and better control.

## Product Advantages

- Long slump life with near neutral set times
- Highly workable or low water-cement ratio concrete with little or no retardation
- Finishes easily without stickiness, tearing or spotty set characteristics
- High slump concrete less susceptible to segregation and bleeding
- Highly efficient in producing high slump concrete with no loss in strength
- Easily added with the concrete mix water for rapid batching

## Compatibility with Other Admixtures

In concrete containing ADVA 109 the use of an air-entraining agent (such as DARAVAIR<sup>®</sup> or DAREX<sup>®</sup> AEA<sup>®</sup>) is recommended to provide suitable air void parameters for resistance against freeze-thaw attack. Due to synergistic effects between ADVA 109 and air-entraining agents, the quantity of air-entraining admixture added to concrete containing ADVA 109 may be reduced. Please consult your local GCP representative for dosage guidance.

Most water reducers or water-reducing retarders are compatible with ADVA 109 Superplasticiser as long as they are added separately to the concrete.

Caution should be exercised when using ADVA 109 with a retarder, as excessive retardation can occur if the admixture dosages are too high. Pre-testing of the concrete should be performed to optimise dosages and addition times of these admixtures. The admixtures should not be in contact with each other before they enter the concrete.

## Dispensing Equipment

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



## Applications

ADVA 109 produces very low water-cement ratio concrete with extreme workability characteristics. The addition of ADVA 109 will also fluidise concrete making it ideal for high pumping concrete or other applications where high slumps are desired.

## Addition Rates

Depending on the application, dosage rates can range from 200 to 2,000mL / 100kg of cementitious material. However, in most superplasticiser applications, 800 to 1,200mL / 100kg of cementitious material will be sufficient. For best results, ADVA 109 should be added with the mix water. At a given water-cement ratio, the slump required for placement can be controlled by varying the addition rate. Should job site conditions require using more than recommended addition rates, please consult your local GCP representative.

## Packaging

ADVA 109 is available in bulk and in 205L drums. ADVA 109 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 109 should be maintained at temperatures above 0°C.

## Health and Safety

See ADVA 109 Material Safety Data Sheet or consult GCP Applied Technologies.

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Last Updated: 2025-05-15

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