

Pumping aid and segregation reducing admixture**CAA Admixtures Categories for "Special Purposes"****Description of Product**

The new technology of rheodynamic concrete allows concretes to be obtained that can self compact without vibration, even with densely reinforced structures.

A self-compacting mix should have a high workability and high viscosity.

The fluidity of the mix is guaranteed provided there is no friction between the internal particles and the concrete can flow freely; segregation occurs when the components of the concrete separate out into mortar and large aggregates. Reaching the right balance between fluidity and resistance to segregation – apparently opposing properties – is essential for this type of mix. This balance cannot be achieved when the fluidity of the concrete is obtained by adding only water.

Although a superplasticizer admixture gives high fluidity, alone it does not guarantee the necessary properties to ensure a good degree of self-compacting. That is why GLENIUM[®] STREAM 5 is a complementary admixture when making Rheodynamic Concrete.

Mechanism of Action

GLENIUM[®] STREAM 5 consists of a mixture of water-soluble polymers, which are absorbed onto the surface of the cement granules, thereby changing the viscosity of the water and influencing the rheological properties of the mix.

GLENIUM[®] STREAM 5 has a dual action:

- It resists segregation due to aggregations of the polymer chains when the concrete is not moving.
- It decreases viscosity and maintains internal cohesion of the concrete during casting, thanks to the polymer chains of the admixture, which arrange themselves in the direction of flow of the mix.

The rheological behaviour induced by GLENIUM[®] STREAM 5 is optimised using it in combination with the GLENIUM[®] range of superplasticizers.

GLENIUM[®] STREAM 5 is chloride-free and compatible with all cements envisaged by European and ASTM standard for reinforced concrete. It is incompatible for use with naphthalene sulphonate based superplasticizer admixtures.

Thanks to its particular chemistry with GLENIUM[®] STREAM 5 is it possible to:

- Refine the rheology of the mixes by increasing cohesiveness and eliminating bleeding;
- Produce concretes distinguished by their great stability and strong capacity to retain water;
- Obtain a more even mortar to entrain and keep the solid concrete particles in suspension, thereby ensuring excellent filling of the formwork;
- Make the mixture less sensitive to variations in sand grading, to the shape and moisture content of the aggregates and to the characteristics of the binders;
- Obtain greater flexibility of choice and type of casts because of a low risk of segregation, greater pumping speeds and distances;
- Provide a wide range of tolerance in mix water content, thanks to the viscosing effect, without problems of segregation.

Technical Data/Typical Properties

Appearance	Brown liquid
Specific Gravity @ 20°C	1.02 g/cm ³
pH-value	8.0
Chloride Ion Content	< 0.1%
Alkali Content	< 0.1%

Application Procedure

Dosage

GLENIUM[®] STREAM 5 is batched on the total of fines below 0.1 mm and is recommended between:

By Volume - 0.5 to 1.0 litres per 100 kg of cement (binder) and fines

By Mass - 0.51 to 1.02 kg per 100 kg of cement (binder) and fines

Other dosages may be recommended in special cases according to specific job site conditions.

GLENIUM[®] STREAM 5 is a ready-to-use liquid admixture, which should be added to the concrete after all the other components of the mix. This is particularly important in order to obtain maximum efficacy. For best performance it is advisable to continue mixing until the mix is completely homogeneous. To produce Rheodynamic Concrete, GLENIUM[®] STREAM 5 should be used in combination with the other superplasticizer admixtures of the GLENIUM[®] SCC range in order to guarantee maximum efficacy.

Packaging

GLENIUM[®] STREAM 5 is available in 25 litres, 208 litres, and 1000 litre container or in bulk.

Shelf Life

Up to 12 months if stored according to manufacturer's instructions in original unopened packaging.

Storage

GLENIUM[®] STREAM 5 should be stored in a place where temperature does not drop below +5°C. If product has frozen, thaw at +3°C and agitate until completely reconstituted. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult our Technical Services Department.

Watchpoints

GLENIUM[®] STREAM 5 is not compatible with admixtures of the RHEOBUILD[®] line.

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GLENIUM[®] STREAM 5, BASF IBC Admixture Systems Limited, Version 5**Health and Safety**

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Spillage

Chemical products can cause damage; clean spillage immediately.

DISCLAIMER

"BASF IBC Admixture Systems Limited" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.