



The Chemical Company

RheoMATRIX[®] 100

High-performance viscosity modifying agent (VMA) for fluid concretes

Description of Product

RheoMATRIX 100 is an innovative product. It is an aqueous solution of a high-molecular weight synthetic copolymer.

Thanks to its tailored mode of action in concrete, RheoMATRIX 100 imparts a level of viscosity within a mix enabling the right balance between fluidity, passing ability and resistance to segregation - apparently opposing properties - to be achieved. The balance is lacking when the fluidity of the concrete is obtained by adding water.

Smart Dynamic Construction[™]:

RheoMATRIX 100 is a key component to BASF's Smart Dynamic Construction concept for benefits in:

- Economy: Savings on fines (<0.125 mm), up to 40% faster placing and up to 5 times higher labor productivity
- Ecology: Less fines - less CO₂ emission, and higher concrete durability
- Ergonomic: No vibration, no noise, low stickiness of the concrete mixture

Fields of Application

RheoMATRIX 100 is optimized for use whenever an increase in mix viscosity would be advantageous, especially for:

- SCC (Self-compacting concrete) with a low fines content (material passing the 0.125 mm sieve)

Features and Benefits

RheoMATRIX 100 offers the following benefits for the concrete industry:

- Prevents segregation and bleeding
- Can be used with all types of cement
- Does not effect setting times nor early strengths
- Mixes are more robust to changes in water demand

Mechanism of Action

RheoMATRIX 100 consists of a water-soluble polymer which modifies the rheological properties of the mix. The polymer adjusts the viscosity of the paste to obtain the optimum stabilization.

RheoMATRIX 100 has a dual action:

- It maintains internal cohesion of the concrete during casting
- It resists segregation when the concrete has been placed

Application Procedure

RheoMATRIX 100 is a ready-to-use liquid admixture, which should be added to the concrete during the mixing process together with the water. 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.

RheoMATRIX[®] 100

Technical Data/Typical Properties	
Appearance	Brown
Specific Gravity @ 20°C	1.0 – 1.02 g/cm ³
pH-value @ 20°C	6 – 9
Chloride ion content	< 0.1 %

Dosage rate

RheoMATRIX 100 is batched on the total of fines below 0.125 mm and is recommended between 0.1- 1.5 % by weight of fines. Other dosages may be recommended in special cases according to specific job site conditions. In this case please consult our Technical Services Department.

Compatibility

RheoMATRIX 100 is compatible with all types of cements.

The rheological behaviour induced by RheoMATRIX 100 is optimised when used in combination with GLENIUM[®] superplasticizer. It is incompatible for use with naphthalene sulphonate based superplasticizers.

To produce highly fluid concretes or SCC, RheoMATRIX 100 needs be used in combination with a superplasticizer admixture of the GLENIUM[®] range in order to guarantee maximum efficacy.

RheoMATRIX 100 is available in 200 kg drum, 1'000 kg container or in bulk.

Shelf Life

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

Storage

RheoMATRIX 100 must be stored at temperatures above 5°C. Store under cover, out of direct sunlight and protect from extreme temperatures. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For special storage advice consult our Technical Services Department.

Handling and transportation

No special requirements must be observed while the product is used. Protection gloves and glasses are recommended. Do not eat, drink or smoke during the application. RheoMATRIX 100 is non-flammable, non-toxic or irritant and is not subject to special transport requirements. RheoMATRIX 100 is dilutable with water.

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