

MasterMatrix[®] 110

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

DESCRIPTION

MasterMatrix 110 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, **MasterMatrix 110** 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:

MasterMatrix 110 is a key component to Master Builders Solutions 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 placing productivity.
- Ecology: Less fines - less CO₂, and higher concrete durability.
- Ergonomic: No vibration, no noise, low stickiness of the concrete mixture

TYPICAL APPLICATIONS

MasterMatrix 110 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)

ADVANTAGES

MasterMatrix 110 offers the following benefits for the concrete industry:

- Prevents segregation and bleeding
- Can be used with all types of cement
- Does not affect setting time
- Mixes are less sensitive to changes in water demand

PACKAGING

MasterMatrix 110 is supplied in 210 L drums, 1,000 L containers or in bulk.

TYPICAL PROPERTIES*

Appearance	Light brown to dark brown liquid
Specific gravity @ 25°C	1.009 g/cm ³
pH value	9.5
Chloride ion content	<0.1%

APPLICATION GUIDELINES

MasterMatrix 110 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.

MasterMatrix 110 is batched on the total of fines below 0.1 mm and is recommended between 0.1 - 0.5% 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.

Recommended application of **MasterMatrix 110** to reduce air loss during pumping.

Density	Dosage
1000 kg/m ³ or lower	2 to 3 L
Above 1000 kg/m ³	1 - 2 L

MIXING

MasterMatrix 110 is compatible with all types of cements. The rheological behaviour induced by **MasterMatrix 110** is optimised when used in combination with **MasterGlenium** superplasticizer. It is incompatible for use with naphthalene sulphonate based superplasticizers.

To produce highly fluid concretes or SCC, **MasterMatrix 110** needs be used in combination with a superplasticizer admixture of the **MasterGlenium** range in order to guarantee maximum efficacy.

MasterMatrix[®] 110

STORAGE AND SHELF LIFE

MasterMatrix 110 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.

Shelf life is 12 months if stored according to manufacturer's instructions in original unopened packaging.

HEALTH AND SAFETY

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. **MasterMatrix 110** is nonflammable, non-toxic or irritant and is not subject to special transport requirements. **MasterMatrix 110** is dilutable with water.

*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.

QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001 and ISO 14001.

* Properties listed are based on laboratory controlled tests.

® = Registered trademark of the MBCC Group in many countries.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by Master Builders Solutions either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions, are responsible for carrying out procedures appropriate to a specific application.

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