

MasterSet R 220 BM

Set retarding admixture for pre-mixed mortars and ready-mix concrete to be used in hot climates.

Material description

MasterSet R 220 BM is a liquid product based on retarding chemicals to be used for the preparation of pre-mixed mortars having high workability retention, to 48 hours depending on the dosage used, and with very quick setting time when the mortar is applied in a thin layer (brick or render mortar).

MasterSet R 220 BM can be used in concrete as set retarding admixture, especially in hot climates and when a long slump retention is required.

MasterSet R 220 BM can be used also as a retarder for backfilling mortars and slurries in TBM excavation.

MasterSet R 220 BM is chloride free, EN 934-2 and it is also compatible with all cements meeting the EN 197-1 standards.

Benefits

For premixed Mortars

- Workability retention of the mortar prepared until 48 hours from the preparation.
- Short setting times when the mortar is applied in thin layers.
- Very good stability of mortar when stocked without need of re-mixing during the stocking period.

For Concrete

- In addition to a water reducer and depending on dosage and mix design, long slump retention especially in hot climates.

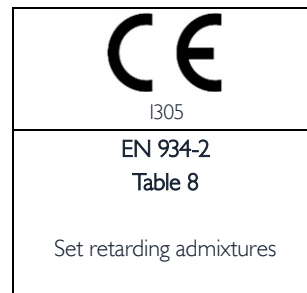
Compatibility

MasterSet R 220 BM is compatible with all types of Portland cements and lime than can be used for the mortar preparation and with all types of Portland cements to produce concrete.

For the production of pre-mixed retarded mortars it is strongly advised the use of MasterAir 160 at a dosage of 0,4% in volume on cement/cement-lime weight in order to obtain good plasticity and cohesion of the final mortar.

For concrete production, we strongly recommend the use of a water reducer or high range WR from MasterGlenium, MasterEase or MasterCO₂re line to lower the W/C ratio.

In compliance with the European Regulation (EU No 305/2011 and EU No. 574/2014) the product is provided with the CE marking according to UNI EN 934-2 and the relative DoP (Declaration of Performance).



Dosage

MasterSet R 220 BM is dosed in liters per m³ of pre-mixed mortar at a dosage ranging from 2 to 4 liters/m³ as a function of the retardation needed and the external temperature.

A preliminary trial using the dosage of 2 liters/m³ using all the materials is advised to set up the correct dosage of the admixture.

For concrete, the recommended dosage can range from rate is 0.2 to 1.0 litres per 100 kg of binder depending on the retardation required and the external temperature. A preliminary trial is strongly advised to set up the correct dosage of the admixture.

Other dosages may be recommended in special cases according to specific job site conditions. In these cases, please consult our Technical Service Department for advice.

Packaging and storage

MasterSet R 220 BM is supplied in 10 L cans, 208 L drums, 1,000 L tanks or in bulk.

Store the product in a place where temperature will not drop below + 5°C. In case of freezing, warm up and homogenise the admixture solution before using.

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Technical Information	
Form	Liquid
Relative density (g/ml at 20°C)	1.113 – 1.173
Essential characteristic in accordance to EN 934-2	Performance
Chloride ion content	≤ 0.1% by mass
Alkali content (Na ₂ O equivalent)	≤ 5.0%
Corrosion behaviour	Contains component only from EN 934-1: 2208 Annex A.1
Compressive strength	Equal consistence: 7 days ≥ 80% 28 days ≥ 90%
Air content	Equal consistence: ≤ 2.0 %
Setting time	initial: test mix ≥ control mix + 90 min final: test mix ≥ control mix + 360 min

Directions for use

For premixed Mortars

MasterSet R 220 BM is a ready to use liquid admixture, which should be added after all the other components are in the mix and at least 3/4 of the mixing water is added. The remaining water can be adjusted at the desired consistency of the mortar.

For Concrete

MasterSet R 220 BM can be added to the concrete during the mixing process:

- mix cement and secondary binders, sand, coarse aggregates and the mix water until a stiff, yet homogeneous, mixture is obtained;
- optimal mixing water reduction is obtained if MasterGlenium, MasterEase or MasterCO₂re and MasterSet R 220 BM is mixed into the concrete right after the addition of the initial 80-90% of the total water;
- avoid adding the admixture to the dry aggregates;
- add MasterSet R 220 BM before the addition of the admixture and mix again for to 60 seconds in order to disperse it homogeneously;
- continue mixing until required workability is obtained, with addition of the remaining water.

Safety instruction

For information on the correct and safe use, transport, storage and disposal of the product, consult the most recent Safety Data Sheet.

Other services

For additional technical information, brochures, references, technical reports and technical support please visit www.master-builders-solutions.com/it-it or alternatively contact infomac@masterbuilders.com.

Scan QR code to visit the product page and download the latest version of this technical data sheet and any additional documentation.



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Disclaimer

Since 16/12/1992, Master Builders Solutions Italia Spa has been operating under a Certified Quality System compliant with the UNI EN ISO 9001 Standard. Furthermore, the Environmental Management System is certified according to the UNI EN ISO 14001 Standard and the Safety Management System is certified according to the UNI ISO 45001 Standard.

For further information, please consult the local Technician of Master Builders Solutions. The technical advice on how to use our products, either written or verbally given, are based on the current state of our scientific and practical expertise, and does not imply the assumption of any guarantee and/or responsibility for the final results of works executed using our products.

Therefore, the customer is not exempted from the exclusive task and responsibility of verifying the suitability of our products for the intended use and purposes.

This version supersedes all the previous ones.

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