

MasterSet[®] AC 555

Set accelerating admixture for concrete

MATERIAL DESCRIPTION

MasterSet AC 555 is a ready to use liquid admixture formulated to accelerate setting time and to produce high early strength in special application concretes.

TYPICAL APPLICATION

MasterSet AC 555 is recommended for use in:

- Precast concrete.
- Pre-stressed concrete (either pre-tensioned or post-tensioned)
- Concrete repairs where early service is required.
- For addition to stabilised long haul concrete where **MasterRoc HCA 10** is used.
- Use as an Antifreeze admixture for cold weather concreting.

Neither calcium chloride nor any other intentionally added chloride-containing ingredients are used in the manufacture of **MasterSet AC 555** admixture. Therefore, **MasterSet AC 555** admixtures will not initiate or promote corrosion of steel embedded in concrete.

ADVANTAGES

The compressive and the flexural strengths of concrete containing **MasterSet AC 555** accelerating admixture will develop more rapidly compared to plain concrete. Benefits to concrete construction and to the manufacture of concrete products because of the increase in early strengths are as follows:

1. Earlier stripping and re-use of forms for walls and pre-cast work
2. Earlier structural use of concrete, as in lift-slab construction, tilt-up, paving and floors.
3. Earlier tensioning in post-tensioned concrete
4. Earlier de-tensioning in pre-stressed concrete
5. Potential energy savings in accelerated steam-cured applications (pre-stressed concrete)
6. Potential energy savings in accelerated steam-cured applications (pre-stressed/pre-cast) by reducing curing temperatures and/or the curing time necessary to reach the desired strengths.
7. Offsetting the set retardation of stabilised concrete

PACKAGING

MasterSet AC 555 is provided in drums of 210 litres or in bulk.

DOSAGE

The normally recommended dosage rate of **MasterSet AC 555** is approximately:

By Volume - 0.50 to 3.00 litres per 100 kg of cement (binder) content.

The dosage rates given above are for typical usages, they are not meant as absolute limits, as other dosages may be utilised in special cases according to specific job conditions. If required consult MBS Construction Chemicals Technical Services Department for advice. Trial mixes should be carried out to ensure optimum dosage and effect.

TYPICAL PROPERTIES

Properties listed are for guidance and are not a guarantee of performance.

Appearance	Light brown to clear liquid
Specific gravity @ 20°C	1.375
pH value	6.0±1
Alkali content (%)	< 2.50 by mass
Chloride content (%)	Chloride free to EN 934
Corrosion behaviour	Contains only components according to BS EN 934-1:2008, Annex A.1 & declared list A.2.
Air Content	Equal or up to reference mix +1.0%

SET ACCELERATION

Concrete with **MasterSet AC 555** has a significantly faster setting time than plain concrete. Increasing the dosage rate of this product increases set acceleration. This is dependent on the type and source of the cement. Particularly beneficial in cold weather, reduction in setting time allows for the earlier finishing of concrete. This can result in substantial time and money savings in construction through better scheduling, fewer cold weather delays, faster construction and earlier occupancy.

COMPATIBILITY

MasterSet AC 555 can be used with all types of cementitious materials such as Microsilica, GGBS and Fly Ash. For use with other special cements, contact our Technical Services Department.

MasterSet AC 555 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing

MasterSet AC 555 they must be dispensed separately.

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MasterSet AC 555 can be used with air-entraining admixtures. This admixture can also be used in conjunction with other MBS Construction Chemicals admixtures to achieve cost-effective, customised concrete performance.

When such complimentary admixtures are required it is important that trials are performed, prior to any supply, to determine the respective dosages of any complimentary admixture, and the suitability, in the fresh and hardened state, of the resultant concrete. In these circumstances we recommend that you consult our Technical Services Department for further advice

SAFETY PRECAUTIONS

Avoid contact with eyes and prolonged contact with skin. During application, always wear gloves and appropriate clothing to minimise contact. In case of contact with eyes, immediately flush with plenty of water for at least 15 minutes. Should skin contact occur, wash immediately with soap and water. Seek the advice of a physician should symptoms persist.

DISCLAIMER

The technical information and application advice given in this MB Construction Chemicals Solutions Kenya Ltd 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.

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STORAGE

Store in original sealed containers and at temperatures between -5°C and 50°C. Store under cover, such as in a storage tank drum or 1,000 litre IBC and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local MBS representative.

MBS reserves the right to have the true cause of any difficulty determined by accepted test methods.

* Properties listed are based on laboratory controlled tests.

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

QUALITY AND RESPONSIBLE CARE

All products originating from MB Construction Chemicals Solutions are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, environmental and occupational health and safety standards.

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