

MasterSet® AC 555

Set accelerating admixture for concrete

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 APPLICATIONS

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:

- Earlier stripping and re-use of forms for walls and pre-cast work
- Earlier structural use of concrete, as in lift-slab construction, tilt-up, paving and floors.
- Earlier tensioning in post-tensioned concrete
- Earlier de-tensioning in pre-stressed concrete
- Potential energy savings in accelerated steam-cured applications (pre-stressed concrete)
- 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

- Offsetting the set retardation of stabilised concrete

PACKAGING

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

TYPICAL PROPERTIES*

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%

APPLICATION GUIDELINES

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 Master Builders Solutions Construction Chemicals Technical Services Department for advice. Trial mixes should be carried out to ensure optimum dosage and effect.

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.

MasterSet® AC 555

MIXING

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.

MasterSet AC 555 can be used with air-entraining admixtures. This admixture can also be used in conjunction with other Master Builders Solutions 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

STORAGE AND SHELF LIFE

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.

MasterSet AC 555 should be stored in tightly closed original containers, has a shelf life of at least 12 months.

HEALTH AND SAFETY

Safety glasses or goggles and rubber gloves must be worn when handling **MasterSet AC 555**. In case **MasterSet AC 555** come in contact with eyes, skin or clothing, immediately flush with water (for skin, wash with soap and water) for 15 minutes. Remove contaminated clothing and shoes, and wash clothing before reuse. DO NOT take internally. Keep product away from children at all times.

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.

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.

Master Builders Solutions
Construction Chemicals LLC
 P.O. Box 37127, Dubai, UAE
 Tel: +971 4 8090800
www.master-builders-solutions.com/en-ae

Disclaimer: the TUV mark relates to certified management system and not to the product mentioned on this datasheet



A brand of
MBCC GROUP

MBS_CC-UAE/Set_AC555_01_07/v3/11_17