

MasterSet AC 555

Set accelerating admixture for concrete - EN 934-2: T6

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.

Fields of Application

MasterSet AC 555 is recommended for use in:

- Concrete to be placed on galvanised steel flooring and roof systems.
- Pre-stressed concrete (either pre-tensioned or post-tensioned)
- Concrete bridge deck repair
- Concrete pipe
- Concrete containing steel reinforcement

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.

Characteristics and Benefits

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.

Dosage

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

- *By Volume* - 0.5 to 2.00 litres per 100 kg of cement (binder) content.
- *By Weight* - 0.80 to 2.60 kg 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 our 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. Tests have demonstrated that MasterSet AC 555 admixture can produce setting time acceleration equivalent to that produced when 2% calcium chloride is added to a concrete mix. 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.

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Compatibility

MasterSet AC 555 can be used with all types of EN 197 Cements. 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 approved under BS EN 934-2, ASTM and CRD specifications when air-entrained concrete is desired. This admixture can also be used in conjunction with other Master Builders Solutions 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.

Packaging

MasterSet AC 555 is supplied in 1000-litre IBC's and 15-litre containers.

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Product Data	
Appearance:	Light brown to clear liquid
Specific gravity @ 20°C:	1.39 ± 0.03 g/cm ³
pH-value:	4.75 ± 1
Alkali content (%):	≤ 2.00 by mass
Chloride content (%):	≤ 0.10 by mass
Logistics	
Shelf life:	12 months if stored according to manufacturer's instructions in unopened container.
Storage conditions:	Store in original sealed containers and at temperatures between 5°C and 30°C. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.
Handling, transportation & disposal:	Refer to MasterSet AC 555 Safety Data Sheet

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DISCLAIMER

MasterSet AC 555, Master Builders Solutions UK Ltd, Version 8

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.

Health and Safety: *For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted. **Spillage:** Chemical products can cause damage; clean spillage immediately.

DISCLAIMER: "Master Builders Solutions UK Ltd" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use. Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application. Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.

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Declaration of Performance can be found at:
www.master-builders-solutions.com/en-gb

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