

# MasterSet R 510

Set Retarding admixture for mortar & concrete BS EN 934- 3: T3, & BS EN 934-2: T8

## Material Description

MasterSet R 510 is a ready-to-use, liquid set retarding admixture for producing more uniform and predictable quality mortar and concrete. Placing and finishing requirements are facilitated because this admixture retards setting time.

## Fields of Application

MasterSet R 510 admixture is recommended for use in all types of mortar and concrete where moderate to extended retardation of set and improved performance are desired. For mortar this can be up to periods of 72 hours.

MasterSet R 510 admixture is designed to have a specific synergy with air-entraining admixtures from the MasterAir range complying with BS EN934-2 and BS EN 934-3. When used in conjunction with another admixture, each admixture must be dispensed separately into the mix. On its own, MasterSet R 510 admixture does not entrain air.

MasterSet R 510 admixture can be used in pigmented mortars and concretes.

Concrete to be placed on galvanised steel flooring and roof systems.

## Characteristics and Benefits

The set retarding characteristics of MasterSet R 510 admixture aid in the production of mortar and concrete with the following special qualities:

- Improved retention of air content and placeability over extended periods.
- Superior handling and trowelling properties.
- Controlled retardation - depending on the addition rate.
- Provides flexibility in scheduling of placing and finishing operations.
- Offsets the effects of too early hardening during extended delays between mixing and placing.
- Helps eliminate cold joints.

- Lowers peak temperature and/or rate of temperature rise in mass concrete - reduces thermal cracking.

## Dosage

For most mortar mixes using typical ingredients, MasterSet R 510 admixture is recommended for use at the rate of:

- *By Volume* - 0.2 to 1.2 litres per 100 kg of cement (binder) content.
- *By Weight* - 0.20 to 1.20 kg per 100 kg of cement (binder) content.

Typically for a dosage of 0.5 litres per 100kg of cement, set will be delayed by 24 hours, and at 0.9 to 1.2 litres per 100kg of cement, 72 hours

For most concrete mixes using average concrete ingredients, MasterSet R 510 admixture is recommended for use at the rate of:

- *By Volume* - 0.1 to 0.5 litres per 100 kg of cement (binder) content.
- *By Weight* - 0.20 to 0.50 kg per 100 kg of cement (binder) content.

However, variations in job conditions and materials may necessitate the use of dosage rates outside the recommended range. In such cases, contact our Technical Services Department. Trial mixes should be made with job materials and approximating job conditions to determine dosage rates and performance.

## Effects of Overdosing

If MasterSet R 510 is used at too high a dosage rate then the mortar or concrete set may be retarded for a significant period of time. In this situation, and provided that the material is protected from frost and water loss, the 28 day strength is likely to be at least equivalent to a normal dosage of MasterSet R 510.



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## Effects of Underdosing

The detrimental effects of an underdose of MasterSet R 510 will depend upon the magnitude of the underdose, but the concrete will set at a quicker rate

## Air Entrainment

Within the recommended dosage range, the use of MasterSet R 510 will not entrain air in excess of the requirements of BS EN 934-2, Table 8.

## Compatibility

MasterSet R 510 can be used with all types of EN 197 Cements. For use with other special cements, contact our Technical Services Department.

MasterSet R 510 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing MasterSet R 510 they must be dispensed separately.

MasterSet R 510 is compatible with concrete and mortar containing our other admixtures or admixture systems – water reducers, high-range water reducers, air entrainers and water repellents.

For retarded mortar, it is particularly effective when used in combination with MasterAir 130. When such complimentary admixtures are required it is important that laboratory 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 mortar or concrete. In these circumstances we recommend that you consult our Technical Services Department for further advice.

## Packaging

MasterSet R 510 is supplied in 1000-litre IBC's and 15-litre containers.

## Contact Details

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Product Data - General	
Appearance:	Clear
Main active ingredient:	Sodium Gluconate
Raw material sourcing:	UK & EU
Manufacturing site:	Swinton, UK
Specific gravity @ 20°C:	1.15 ± 0.03 g/cm <sup>3</sup>
pH-value:	9.0 ± 1
Alkali content (%):	<4.5% by mass
Chloride content (%):	<0.1% by mass
Sulfate content (%):	≤ 0.10 by mass
Solids content (%):	31.5 ± 1.5
Dangerous substances:	NPD
Durability:	NPD
Corrosion behaviour:	Contains only components according to BS EN 934-1:5108, Annex A.1
Product Data - BS EN 934-3: T3 Mortar	
Consistence after 28 h standing:	Initial value ± 15mm
Resistance to penetration after 72 h:	≥ 1.0N/mm <sup>2</sup> of Reference mix
Air Content after standard mixing:	17.0% ± 3%
Air Content after extended mixing:	Air content at standard mixing ± 5%
Air Content after 28 h standing:	Fulfilled
Compressive strength - 28 days:	≥ 70% of Reference mix
Product Data - BS EN 934-2: T8 Concrete	
Setting time - initial:	≥ 90 minutes extentsion
Setting time - final:	≤ 360 minutes extension
Air Content: BS EN 934-2 T8	Fulfilled
Compressive strength:	Fulfilled
Logistics	
Shelf life:	12 months if stored according to manufacturer's instructions in unopened container.

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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 and transportation:	Refer to MasterSet R 510 Safety Data Sheet
Disposal:	Refer to MasterSet R 510 Safety Data Sheet



0086-CPR-469071



1073-CPR-7420

EN 934-2: T3.1 & EN 934-2 T8

Declaration of Performance can be found at [www.master-builders-solutions.com/en-gb](http://www.master-builders-solutions.com/en-gb)



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## Disclaimer

### MasterSet R 510, Master Builders Solutions UK Ltd, Version 4

#### Health and Safety

\*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.

#### 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.