

# MasterCast<sup>®</sup> 870

Retarding agent admixture for mix-in-plant mortar.

## DESCRIPTION OF PRODUCT

**MasterCast 870** is a liquid admixture designed for the mix-in-plant method for mortars that need a long setting time.

**MasterCast 870** is suitable for all types of cement based mortars that require an extended workability time.

Refer to the Technical Department for any application not set out in this specification sheet.

## FIELD OF APPLICATION

A mortar mixed on the site with sands from different sources can only be used for a few hours as it stiffened and starts solidifying in no time.

Moreover it needs to be constantly mixed in order to avoid a separation between water and paste of the cement.

However long lasting mortar **MasterCast 870** delivered on the construction site in adequate recipients remains supple, handy and easily usable for 2 days. The mason can start his work from the first hour, without losing any time.

## PROPERTIES

**MasterCast 870** is a combination of retarder and plasticizer air entrainer that ensures the good cohesion of the mortar, a very little tendency to segregation, a perfect stability that allow an immediate polishing of joints.

**MasterCast 870** has an isolation power close to the o Master Builders Solutions ne of the brick. The process of strengthening and solidification is activated through the absorption of its humidity by the porous bricks.

- Ideal adjuvant for long lasting ready mix mortar
- Avoids installation costs on the construction site
- Avoids its confection on the site
- Avoids waiting time
- Decreases losses in materials
- Guarantees a continuous quality

## ADVANTAGES

- Increases mortar setting time.
- Improves mortar strength.
- Increases cement hydration performance
- Reduces mortar cracking.

- Allows for optimal building work performance

## CHARACTERISTICS

Aspect: Liquid

Color: Pale Yellow

Specific Gravity: 1.150-1.170 at 250°C

Chloride: ( MA 004) <0,1%

pH (MA 003): 10-12

Freezing point (ITM 3005): 0°C

Viscosity at 20C (ITM 2043-2045) 30 mPa.s

## DIRECTION OF USE

## QUALITY OF THE SAND

Sand from good grading composition is necessary for the fabrication of the mortar. Preliminary trials should be done.

## CEMENT CONTENT

To obtain long lasting mortar and when the grading of the sand is adequate, cement dosage vary from 250 to 350 kg/m<sup>3</sup>

## DELIVERY OF THE MORTAR

**MasterCast 870** can be transported in silo dump truck or mixing truck with immobilized drum.

On the site the mortar is discharged in containers that are used as unit of measurement and storage recipient. Those mixing trucks have the advantage of allowing an easy and clean way to fill the containers.

## UTILIZATION OF THE MORTAR

**MasterCast 870** is easier to use than a normal mortar without adjuvant. It is more malleable and holds better on the trowel and the brick.

Mortar joints should not exceed 10 – 12 mm thickness and should directly be polished.

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### Bricks- Cement Blocks:

The strength development and solidification of the mortar are created by the absorption of the water of the bricks or blocks. This is why the absorption features of the bricks are really important. For the assembling with **MasterCast 870**, bricks that have an absorbing power of 20-30 g/dm<sup>2</sup> /mn that have the best results.

With bricks with weak absorption power 0-10 g/dm<sup>2</sup>/mn. The strength development is much longer; with bricks with strong absorption features (more than 40 g/ dm<sup>2</sup>/mn mortar can be burnt. Moreover, storage of the bricks is also critical; they should be protected from cold, rain and snow with plastic wrapping.

### STORAGE OF THE MORTAR

During its storage on the construction site **MasterCast 870** mortar should be put in the shade and covered to avoid desiccation.

At the end of the working day we polish the surface of the mortar and we cover it with a fine layer of water and with a plastic cover. The next day a couple of trowel hits will make water disappear. The mortar should be protected from frost.

### CURE

Visible parts should be protected from a premature desiccation when they are exposed to the sun , to a strong wind or to snow by covering them with plastic covers.

### QUALITY CONTROL

To guarantee permanent quality, frequent checks are necessary.

### RECOMMENDATION

Mortar should be protected from frost but in case it has been frozen mortar could still be reutilized after defrost and good mixing.

### DOSAGE

The dosage of **MasterCast 870** depends on the composition of the sand, the quantity and the quality of the cement and on the type of mixer and the temperature.

Optimal dosage is to be determined by trials done in a factory in production conditions. For

a retard of 48 hours at 20C, we can have an indicative dosage of 1,2 % of the weight of the cement. The duration of the mixing is minimum 3 minutes and should be constantly remain stable.

### PACKAGING:

**MasterCast 870** is supplied in Bulks of 1000 liters.

### STORAGE

**MasterCast 870** should be stored in temperatures higher than 5C.

The product in bulk should be stocked in plastic tanks.

### SHELF LIFE

Up to 12 months if stored according to manufacturer's instructions in unopened containers.

### SAFETY PRECAUTIONS

**MasterCast 870** is not a fire or health hazard. Spillages should be washed down immediately with cold water. For further information, refer to the material safety data sheet.

### NOTE

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

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

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## QUALITY STATEMENT

All products manufactured by Master Builders Solutions Egypt, or imported from Master Builders Solutions affiliate companies world - wide, are manufactured to procedures certified to conform to the ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007 standards.

\* Properties listed are based on laboratory controlled tests.

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