

MAPECURE SRA

Curing admixture with the ability to reduce hydraulic shrinkage and the formation of micro-cracks



WHERE TO USE

The product is added during mixing to repair mortars from the **Mapegrout** range (**Mapegrout T40**, **Mapegrout T60**, **Mapegrout Thixotropic**, **Mapegrout Hi-Flow**, **Mapegrout BM**, **Mapegrout FMR** and **Mapegrout Easy Flow**), to binders, such as **Stabilcem** and **Stabilcem SCC**, and to all types of concrete, to allow them to expand during the first few days of curing, including during air curing. This property helps reduce the formation of micro-cracks and also guarantees that the final level of hydraulic shrinkage is extremely low.

Some typical application examples

Construction and repair of:

- floor joists and motorway viaduct piers;
- industrial floors;
- multi-storey car parks;
- hydraulic works, such as canals, overflow channels, tanks, etc.;
- prefabricated concrete elements such as cupolas, beams, pillars, buffer panels, etc.;
- lining road and railway tunnels.

TECHNICAL CHARACTERISTICS

Mapecure SRA is a special, chloride-free liquid admixture specially developed in MAPEI's Research & Development laboratories, to reduce final hygrometric shrinkage of mortar, ordinary and self-compacting concrete, to make them less prone to cracking problems. **Mapecure SRA** works by reducing the surface stresses of the water present in the capillary pores and as a result, the forces which act upon the walls of the pores is greatly reduced. Thanks to this phenomenon, the reduction in shrinkage is clearly visible (Fig. 1).

The best results are obtained when **Mapecure SRA** is mixed with controlled-shrinkage repair mortars or in combination with concrete which contains **Expanscrete**, in that it allows these systems to expand even further during the first few days of hardening, whether they are damp-cured or air-cured.

When **Mapecure SRA** and **Expanscrete (Mapecrete System)** are used together, the advantages of each single product combine and are greatly enhanced, to guarantee that the properties of mortar and concrete reach levels which would normally be impossible with traditional cementitious systems.

As a result of this technology and according to the composition of the concrete, the final expansion and shrinkage levels may be programmed to guarantee that the structure acquires higher durability (Fig. 2).

According to the doses used, **Mapecure SRA** reduces the final mechanical strength by 5-6% (Figs. 3 and 4).

Mapecure SRA is compatible with all traditional, naphthalene sulphonate-based super-plasticising admixtures from the **Mapefluid** range, the new acrylic admixtures from the **Dynamon** range and with all types of cement according to UNI EN 197/1 Standards.

Mapecure SRA complies with Italian standard UNI 11641:2016 concerning the shrinkage reducing agent.

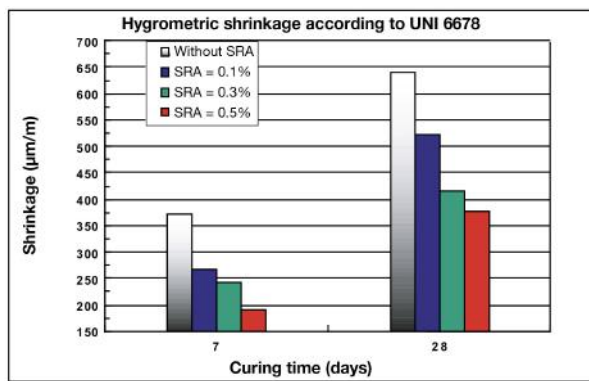


FIG. 1 - Values obtained with mortar containing CEM I 52.5 R cement, normalised sand and water, according to the composition indicated in the EN 196-1 Standards

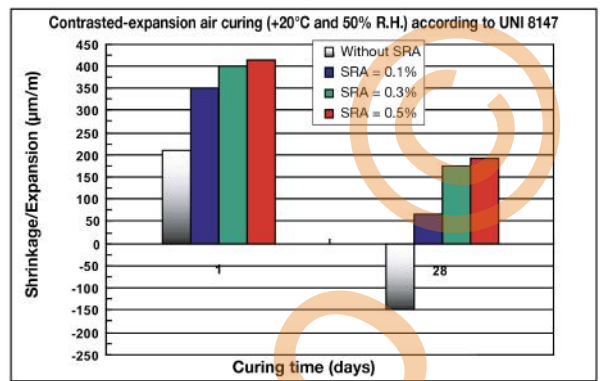


FIG. 2 - Values obtained with mortar containing CEM I 52.5 R cement, normalised sand and water, according to the composition indicated in the EN 196-1 Standards, and 7% of Expancrete admixture

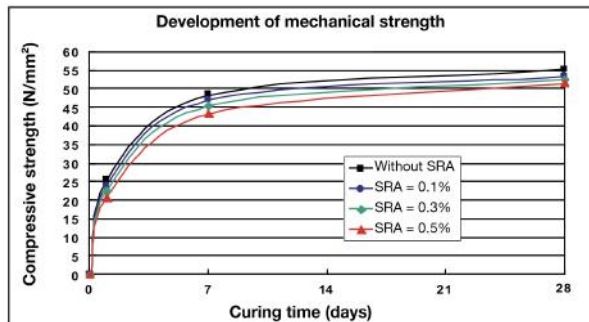


FIG. 3 - Values obtained with mortar containing CEM I 52.5 R cement, normalised sand and water, according to the composition indicated in the EN 196-1 Standards

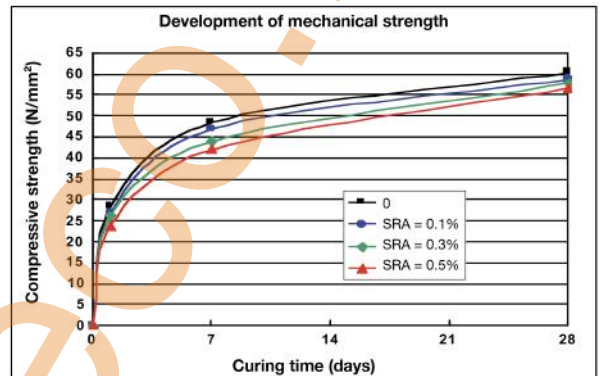


FIG. 4 - Values obtained with mortar containing CEM I 52.5 R cement, normalised sand and water, according to the composition indicated in the EN 196-1 Standards, and 7% of Expancrete admixture

RECOMMENDATIONS

- Mortar and concrete which contain **Mapecure SRA**, especially in hot, windy climates, must be cured under damp conditions or protected with an anti-evaporation film, such as **Mapecure S** or **Mapecure E**, to avoid rapid evaporation of water due to the high surrounding temperature.
- Only add **Mapecure SRA** to the concrete once all the other components have been added.

HOW TO USE

Repair mortar:

- pour the amount of water recommended in the Technical Data Sheet for the product to be used into a concrete mixer;
- start up the concrete mixer and mix the contents for a few minutes;
- add **Mapecure SRA** at a rate of 0.25-0.5% by weight of the mix;
- continue mixing until a lump-free, homogenous mix is obtained.

Concrete:

- add **Mapecure SRA** to the mix at a rate of 5-8 l/m³ after adding the cement, aggregates and 70% of the mixing water required;
- then add the remaining water and mix until the required consistency is obtained.

CONSUMPTION

Mortar:

0.25-0.5% by weight of the mix.

Concrete:

5-8 l/m³.

PACKAGING

Mapecure SRA is supplied in:

- 900 kg tanks;

- 20 kg drums;
- 32 pcs x 0.25 kg boxes.

STORAGE

Mapepure SRA may be stored for up to 12 months in its original packaging in a dry place.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Consistency:	liquid
Colour:	transparent
Density (g/cm ³):	0.91

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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