



# Mapecure

# SRA



## Curing admix with the property of reducing 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 expanding 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 admix specially developed in MAPEI's own 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 **Expancrete**, 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 **Expancrete (Mapecrete System)** are used together, the effect is that the advantages of each single product combine and are greatly amplified, to guarantee that the properties of mortar and concrete reach levels which would normally be impossible with traditional cementitious systems. As 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 admixes from the **Mapefluid** range, the new acrylic admixes from the **Dynamon** range and with all types of cement according to UNI ENV 197/1 Standards.

TECHNICAL DATA (typical values)	
<b>PRODUCT IDENTITY</b>	
Consistency:	liquid
Colour:	colourless
Density (g/cm <sup>3</sup> ):	0.91
Hazard classification according to EC 1999/45:	none. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packing and Safety Data Sheet
Customs class:	3824 40 00

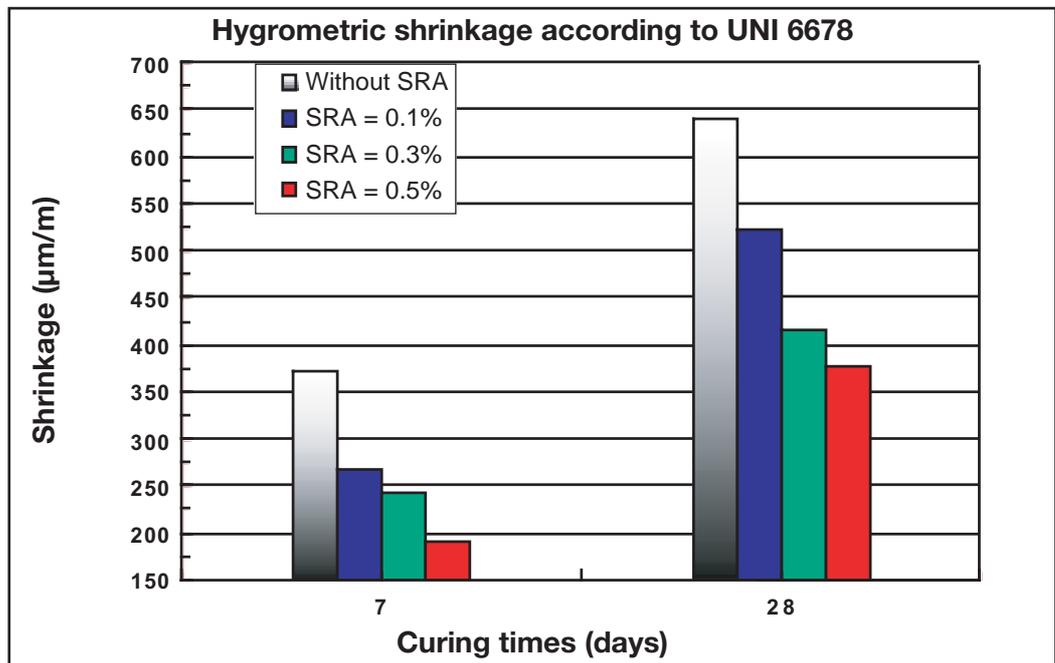


FIG. 1 - Values obtained with mortar containing CEM I 52.5 R cement, normalised sand and water, according to the composition indicated in the EN 196-1 Standards

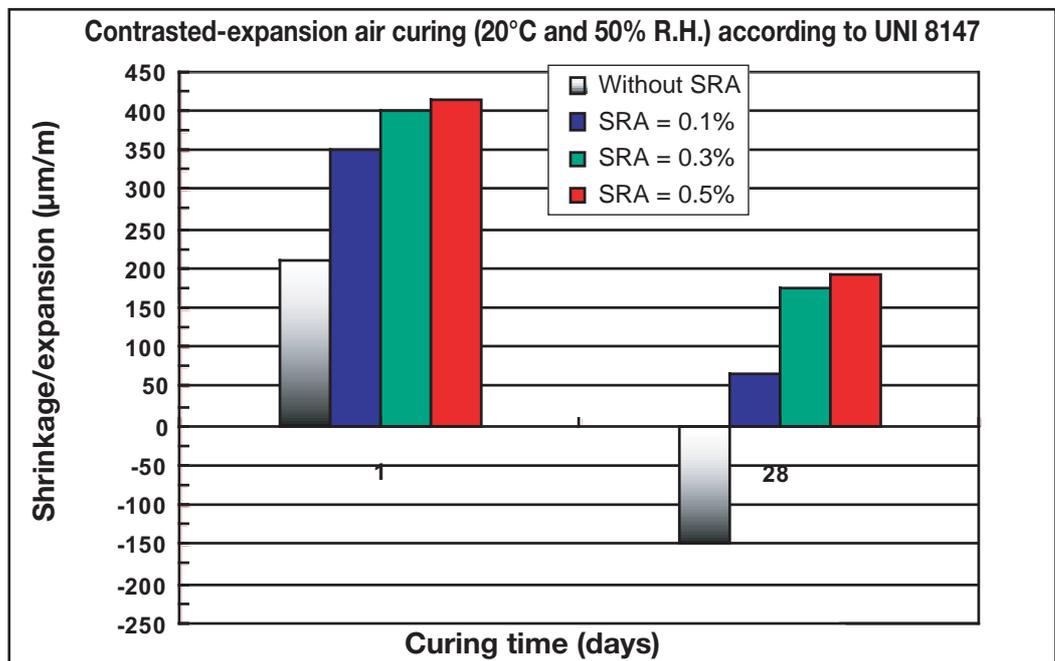


FIG. 2 - Values obtained with mortar containing CEM I 52.5 R cement, normalised sand and water, according to the composition indicated in the EN 196-1 Standards, and 7% of Expancrete admix

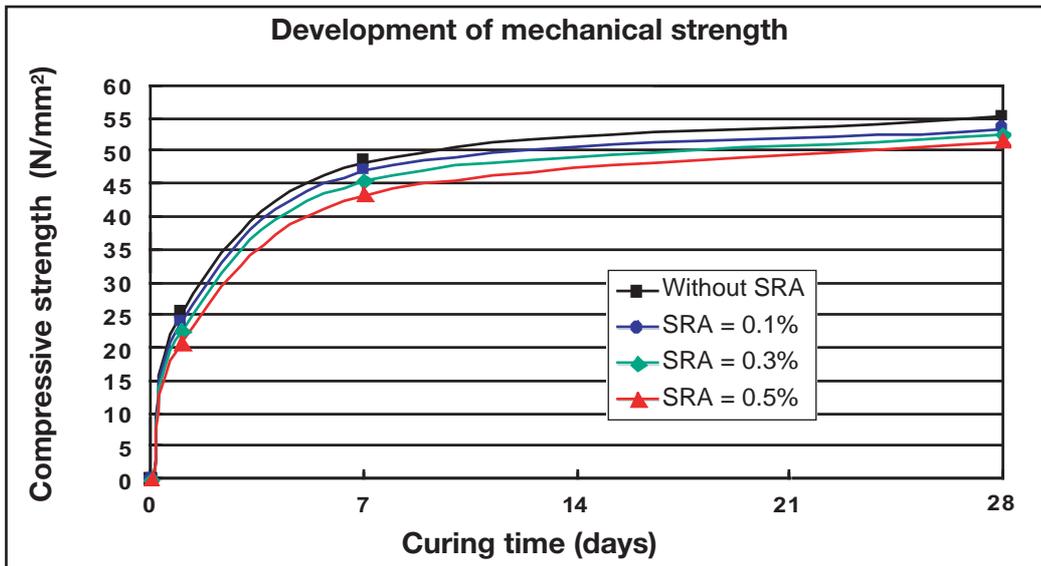


FIG. 3 - Values obtained with mortar containing CEM I 52.5 R cement, normalised sand and water, according to the composition indicated in the EN 196-1 Standards

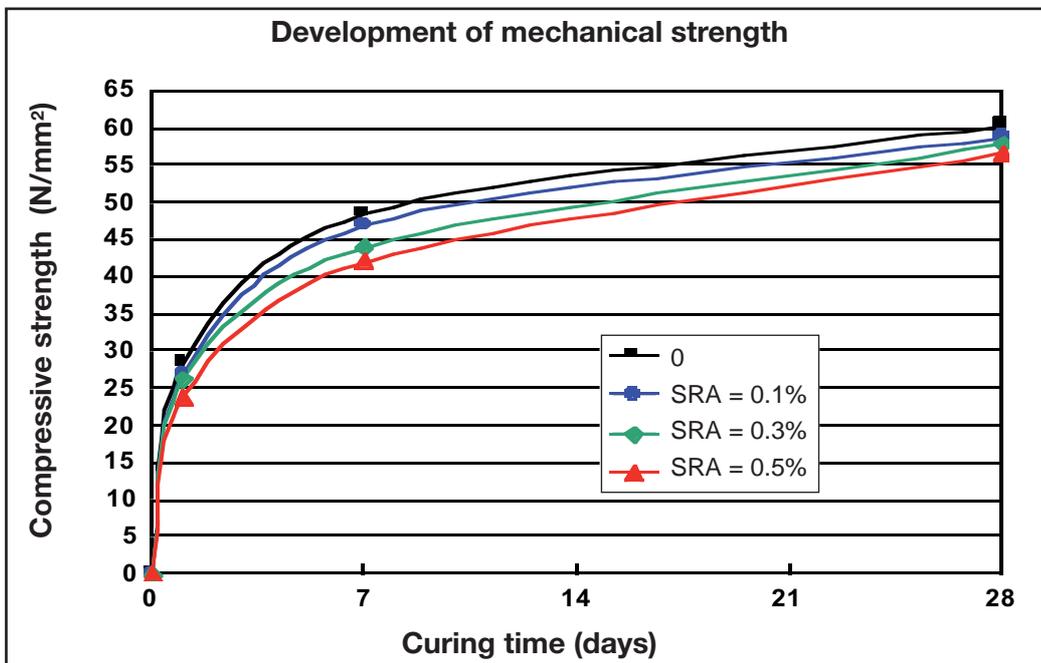


FIG. 4 - Values obtained with mortar containing CEM I 52.5 R cement, normalised sand and water, according to the composition indicated in the EN 196-1 Standards, and 7% of Expanscrete admix

## 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 ingredients 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/m<sup>3</sup> 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.

# Mapecure SRA



**Concrete:**  
5-8 l/m<sup>3</sup>.

## **PACKAGING**

Mapecure SRA is supplied in:

- 1000 kg tanks;
- 20 kg drums;
- 0.25 kg cans.

## **STORAGE**

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

## **SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION**

Mapecure SRA is not considered a dangerous substance according to current norms and regulations regarding the classification of preparations. However, the use of protective gloves and goggles and the application of the usual precautions taken when handling chemical products are recommended.

The Safety Data Sheet is available upon request for professional users.

PRODUCT FOR PROFESSIONAL USE.

## **WARNING**

*While the indications and guidelines contained in this data sheet correspond to the company's knowledge and wide experience, they must be considered, under all circumstances, merely as an indication and subject to confirmation only after long-term, practical applications. Therefore, anybody who undertakes to use this product, must ensure beforehand that it is suitable for the intended application and, in all cases, the user is to be held responsible for any consequences deriving from its use.*

**All relevant references for the product are available upon request and from [www.mapei.com](http://www.mapei.com)**