

MAPECRETE SRA-N

Shrinkage reducing admixture with the property of reducing hydraulic shrinkage and the formation of micro-cracks



DESCRIPTION OF THE PRODUCT

The product is added to all types of concrete and mortars, to reduce the volume reduction from hydraulic shrinkage. This property helps reduce the formation of micro-cracks and also guarantees that the final level of hydraulic shrinkage is extremely low. The product is added during mixing of concrete or repair mortars from the **Redirep** or **Mapecgrout** range.

WHERE TO USE

Some application examples

Construction and repair of:

- Industrial floors
- Floor joists and motorway viaduct piers
- 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

Mapecrete SRA-N 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.

Mapecrete SRA-N 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 **Mapecrete SRA-N** is mixed with controlled-shrinkage repair mortars or in combination with concrete which contains **Expancrete**, in that it allows these systems to expand during the first few days of hardening, whether they are damp-cured or air-cured (Fig. 2).

When **Mapecrete SRA-N** 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). Depending on the dosages used, **Mapecrete SRA-N** will reduce final mechanical strength by 5 - 6 %.

Mapecrete SRA-N is compatible with all products from the **Dynamon** range and with all types of cement according to UNI ENV 197/1 Standards.

RECOMMENDATIONS

Mortar and concrete which contain **Mapecrete SRA-N**, especially in hot, windy climates, must be cured under damp conditions or protected with an anti-evaporation film, **Mapecure**, to avoid rapid evaporation of water due to the high surrounding temperature.

HOW TO USE

Concrete

- Add **Mapecrete SRA-N** to the mix at a rate of 0.7 - 2 % of cement weight.

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 **Mapecrete SRA-N** at a rate of 0.25 - 0.5 % by weight of the mix.
- Continue mixing until a lump-free, homogenous mix is obtained.

CONSUMPTION

Concrete

0.7 - 2 % by weight of cement in the concrete.

Mortar

0.25 - 0.5 % by weight of the mix.

PACKAGING

Mapecrete SRA-N is available in 25 liter cans, 200 liter drums, 1000 liter IBC tanks and in tank.

STORAGE

The product can be stored down to -15°C, and will retain its properties for at least one year if stored unopened in its original packaging. If the product is exposed to direct sunlight, colour variation may occur, but this will not affect the technical properties of the product.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.no

PRODUCT FOR PROFESSIONAL USE.

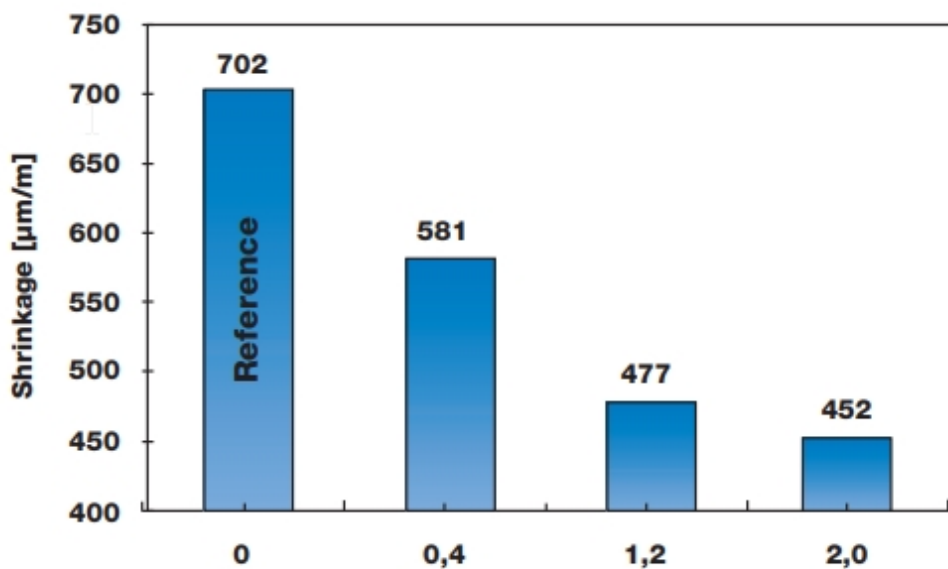


Figure 1: Shrinkage with increasing dosages of Mapecrete SRA-N (% from cement).

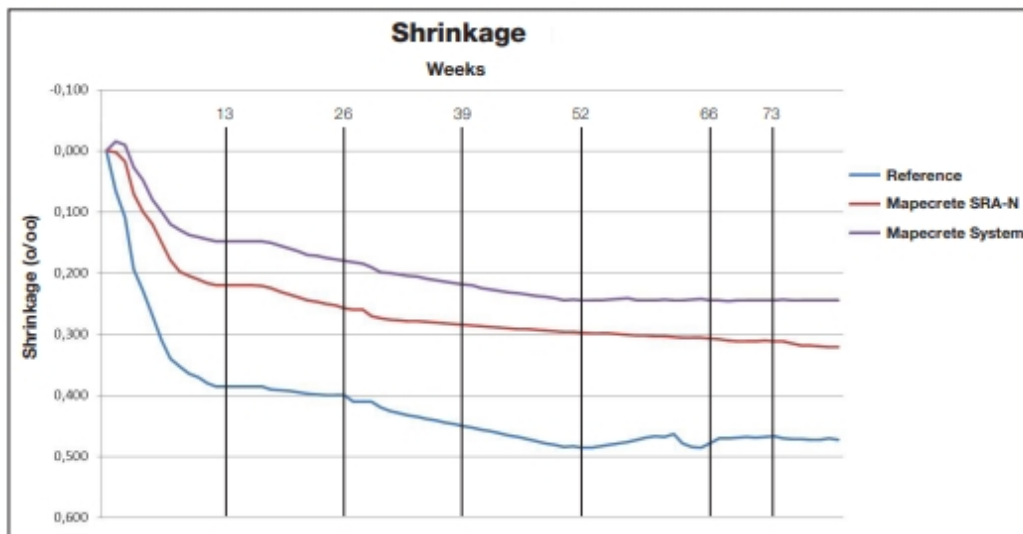


Figure 2: Shrinkage comparison reference concrete, 1 % Mapecrete SRA-N concrete and Mapecrete System (1 % Mapecrete SRA-N + 5 % Expancrete).

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Consistency:	liquid
Colour:	colourless
Density:	0.91 g/cm ³
Viscosity:	easy flowing; < 30 mPa·s
Solids content*:	100 %
pH:	6.5 ± 1
Water-soluble chlorides according to EN 480-10:	< 0.1 %
Alkaline (Na ₂ O-ekv):	< 0.1 %
Product certification:	The product is certified by AAA Certification AB. The certification is accredited by Swedac. Certificate nr. 2930.

* The product does contain 100 % of a liquid chemical compound, which is not containing any water. Therefore, it is more correct to define dry material content as 100 %. In this way the SRA-admixture is not influencing the water/binder-ratio.

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 web site www.mapei.no

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ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.



Casting of "Mapecrete System" floor 1300 m² jointless

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