MAPEI

CE
EN 1504-3

IN COMPLIANCE WITH EUROPEAN STANDARD
EN 1504-3
R4
MAPEI
CONCRETE REPAIR

Confix SR

One-component special mortar for repair and strenghtening of concrete structures. Contains sulphate resistant cement

APPLICATION AREA

Confix SR is a dry mortar specifically designed for repairs, reinforcement and maintenance of concrete in thickness 10-50 mm in areas where strength, low shrinkage and density are crucial. **Confix SR** is based on suphate resistant cement.

Examples of use:

- Bonded screeds and repair with a monolithic bond.
- Repair of concrete floors.
- Casting of slopes to drains and drainage.
- Casting of covings.
- General repair of concrete structures.

TECHNICAL INFORMATION

Confix SR is a pumpable, cement based, dry mortar with a mix cement and well graded aggregates up to 4.0 mm and with additives that give good casting results and workability.
Confix SR, which is only to be added water, is designed for maximum density, firmness and low shrinkage.
If the mortar is to be sprayed, it's preferable to use the wet method.

Confix SR meets the requirement defined by EN 1504-9 "*Products and Systems for the protection and repair of concrete structures: Definitions, requirements, quality control and evaluation of conformity.General principles for the use of products and systems*," and the minimum requirements described in EN 1504-3, ("*Structural and non-structural repair*") for structural mortars of class R4.

RECOMMENDATIONS

- For thicker repairs apply **Confix SR** in several layers, athorizontal areas or areas with horizontal support **Confix SR** can be applied in a single layer.
- Do not add extra water after the mixture has started to set.
- Do not use **Confix SR** if the bag is damaged or previously opened.

INSTRUCTIONS FOR USE

Preparation
The substrate must be thoroughly cleaned, loose concrete and surface contamination must be removed. Chipping, chiselling or sand blasting might be necessary.
Chip surface repair edges 10 - 20 mm vertically into the concrete, thereby avoiding featheredges.
Wet the concrete thereafter, preferably the day before, so that it can dry up again. Standing surface water must not occur.

Mixing
Smaller quantities can be mixed with a drill and whisk. Larger volumes are mixed with a mortar mixer or agitator mixer. Mixing time; a minimum of 3 minutes. The consistency is regulated by adding water, but be aware that using a higher volume of water than recommended, approx. 3.25 litres per sack of 25 kg, can result in greater shrinkage, reduced firmness and a poor result.

Confix SR

TECHNICAL DATA (typical values)

PRODUCT IDENTIFICATION	
Strength class according to EN 1504-3:	R4
Type:	CC
Consistency:	powder
Colour:	grey
Aggregate:	natural sand 0-4-mm
Cement type, class according to EN 197-1	Cem 1 42,5 N/MH/SR3/LA
Chloride content - minimum requirements < 0,05 % - according to EN 1015-17 (%):	< 0.05
PRODUCT APPLICATION DATA (at +20°C - 50% RH)	
Colour of mixture:	grey
Mixing ratio:	100 parts of **Confix SR** to 13 parts of water (approx. 3.25 litre per 25 kg sack)
Consistency of mixture:	thixotropic
Density of mixture (kg/m³):	2 200
pH of mixture:	> 12
Application temperature range:	from +5°C to +35°C
Pot life of mixture:	30 minutes

FINAL PERFORMANCE (water amount 13 %):

Mechanical characteristics	Test method	Minimum requirements according to EN 1504-3 for R4 class mortar	Product performance
Compressive strength (N/mm²):	EN 12190	≥ 45 (after 28 days)	8 (after 1 day) 25 (after 7 days) 60 (after 28 days)
Flexural strength (MPa):	EN 196-1	none	> 2 (after 1 day) > 5 (after 7 days) > 7 (after 28 days)
Carbonation resistance:	EN 13295	D_k ≤ reference (MC(0,45))	complies with the requirements
E-modul (GPa):	EN 13412	≥ 20	> 20 (after 28 days)
Bonding to concrete (MC 0.40, v/c = 0.40) acc. to EN 1766 (MPa):	EN 1542	≥ 2.0 (after 28 days)	> 2.0 (after 28 days)
Capillary absorption ($kg/m^2 \cdot h^{0.5}$):	EN 13057	≤ 0.5	< 0.5
Resistance to freeze / thaw cycles with deicing salts measured acc. to EN 1542 (MPa):	EN 13687-1	≥ 2.0 (after 50 cycles)	> 2.0
Exposure class:	EN 206-1		X0/XC4/XS1/XD2/XF3/XA2
Fire resistance:	Euroklas	Values declared by manufacturer	A1

The mortar must be applied no later than 30 minutes after mixing has taken place. Do not add extra water when the mortar has start to set.
If the thickness to be laid exceeds 50 mm, we recommend to add approx. 30% gravel 8-12.

APPLICATION

The mortar is spread with ordinary mason tools, with a pump or suitable spraying equipment - and compacted well.
Use at temperatures between +5°C and +35°C.

Monolithic bonding
To achieve good bonding and transferred adhesion to the substrate, **Confix SR** can be pasted to the substrate with **Mapepoxy L**.
The method is performed wet-on-wet.
Mapepoxy L is applied to the hardened concrete (substrate) with a brush or with a rubber trowel on smooth surfaces.
On larger areas and areas with reinforcement, a hopper gun can also be used.
Make sure that **Mapepoxy L** is applied within the adhesive's usage time (depending on temperature). Fresh **Confix SR** must be applied within the adhesive's open time.

If open time is exceeded, cover the adhesive with sand and apply a new layer of adhesive. Bonding of fresh **Confix SR** to hardened concrete with **Mapepoxy L** can be done at any temperatures when it is appropriate to cast **Confix SR** without adding antifreeze additives. A more reliable result is obtained if the surface is dry, but some moisture in concrete surface can be tolerated (see separate technical data sheet for **Mapepoxy L**).

Finishing
Finishing is best done to exposed surfaces with the application of the curing compound **Mapecure 1**, **Cur-Imp** or **Mapecure WF-75** immediately after casting, and then wetting from the next day and 3 - 4 days afterward. Covering with plastic sheeting is also effective and is preferred when the surface has to be treated.

CLEANING
Fresh mortar can be removed from tools and equipment with water. Cured material can be removed mechanically.

CONSUMPTION
Approx. 2 kg per liter of the final, mixed product.

PACKAGING
Confix SR is supplied in 25 kg sacks and 1200 kg bags.

STORAGE
Confix SR remains stable for at least 12 months if stored in a dry place.
The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

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.

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

LEGAL NOTICE
The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.
The most up-to-date TDS can be downloaded from our website www.mapei.no
ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

All relevant references for the product are available upon request and from www.mapei.no

10047-11-2017 (GB)

MAPEI®
BUILDING THE FUTURE