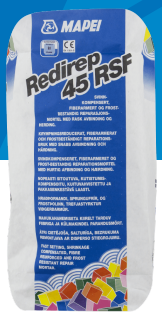
REDIREP 45 RSF

Fibre reinforced shrinkage compensated thixotropic mortar for concrete repair



PRODUCT DESCRIPTION

Redirep 45 RSF is a dry mortar for repairing concrete substrates.
Redirep 45 RSF is frost-resistant, and has very good adhesive properties. The mortar sets quickly with low shrinkage.
Redirep 45 RSF consists of special cement, dry well-graded sand, as well as additives to improve the mortar's workability and adhesion.
Redirep 45 RSF does not contain any components, neither in the cement nor the sand, that could give rise to alkali reactions.

AREA OF USE

Redirep 45 RSF is specially suitable for repairing all kinds of defects and damage to concrete substrates.

Redirep 45 RSF has the following characteristics:

· Sets rapidly:Low risk of plastic shrinkage.
· Shrinkage compensated: Low drying shrinkage.
· Hardens rapidly: Makes rapid progress possible.
· Good resistance to marine environment.
· Low permeability: Very high frost resistance.

Redirep 45 RSF meets the requirements defined by EN 1504-9 ("Products and systems for protection and repair of concrete structures - Definitions and requirements, quality control and evalauation of conformity. General principles for the use of products and systems"). And the minimum requirements claimed by 1504-3 ("Structural and non-structural repair") for mortars of class R4.

INSTRUCTIONS FOR USE

Preparation

Surfaces must be cleaned to remove dust and loose particles. Dry surfaces should be pre-wetted. There should be no excess water on the surface when work begins.

Mixing

Use the recommended amount of water (max. 3.2 litres), and pour this into a container, add the dry **Redirep 45 RSF** mortar, and mix mechanically for 2 - 3 minutes. Let the mixture stand for 3 minutes then stir again. Remember that excessive water weakens the mortar and increases shrinkage.

Application

To ensure adhesion between the substrate and the new mortar, a bonding coat of **Redisit** or **Mapepoxy L** can be applied to the substrate. Then apply the **Redirep 45 RSF** while the **Redisit** coat is still wet. The mortar should be applied to the surface by hand, using appropriate mason's tools, or with suitable spraying equipment. Thickness 3 - 40 mm per layer.

NB!

The mortar is workable for approx. 20 minutes at +20°C, and for approx. 35 minutes at +10°C. You should therefore make sure that you do not mix more than you can use within this time.

CLEANING

Fresh mortar can be removed from tools and equipment with water. Hardened mortar can only be removed mechanically.

CONSUMPTION

Approx. 2 kg/m^2 mm of thickness.

PACKAGING

Redirep 45 RSF is supplied in 25 kg sacks.

STORAGE

Redirep 45 RSF can be stored up to 12 month from production date in unopened, original packaging in dry conditions. Opened bags should be used immediately.

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.

TECHNICAL DATA (typical values)

Redirep 45 RSF: Cementious mortar for concrete repair. The product complies with specification EN 1504-3.

PRODUCT IDENTIFICATION	
Strenght class according to EN 1504-3:	R4
Type:	PCC
Apperance:	powder
Colour:	grey
Maximum aggregate size (mm):	1.0
Dry solid content (%):	100
Chloride ions content - minimum requirements < 0,05 % - according to EN 1015-17 (%):	≤ 0.05
EMICODE:	EC1 Plus - very low emission

PRODUCT APPLICATION DATA (at +20°C - 50 % RH)	
Colour of mixture:	grey
Mixing ratio:	100 parts **Redirep 45 RSF** with 12.8 - 13.8 parts water (approx. 3.2 - 3.45 l per. 25 kg sack
Consistency of mixture:	thixotropisk
Density (g/cm^3):	2.05
pH of mixture:	> 12
Application temperature range:	from +5°C til +35°C
Pot life of mixture:	Approx. 20 min

FINAL PERFORMANCE (12,8 % blending water):

Performance characteristics	Test method	Minimum requirements requirements according to EN 1504-3 for R4 class mortar	Product performance
Compressive strenght (N/mm^2):	EN 12190	≥ 45 (after 28 days)	> 20 (after 1 day) > 30 (after 7 days) > 45 (after 28 days)
Flexural strenght (N/mm^2):	EN 196-1	none	> 3 (after 1 day) > 4 (after 7 days) > 6 (after 28 days)
Carbonatin resistance:	EN 13412	D_k ≤ control concrete (MC(0,45))	passes
Modulus of elasticity in compression (GPa):	EN 13412	≥ 20	22 (after 28 days)
Bond strenght to concrete (MC 0,40 type substrate w/c ratio= 40 according to EN 1766 (N/mm^2):	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	0.11
Thermal compability fo freeze thaw cycles with deicing salts measured as according to EN 1542 (N/mm^2):	EN 13687-1	≥ 2.0 (after 50 cycles)	3.5
Exposure class:	EN 206-1	none	X0/XC4/XS3/XD3/XF4/XA1
Reaction to fire:	Euroclass	Value declared by manufacturer	A1

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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