

# CERMIREP HSR R4

## HIGH SULFATE-RESISTANT REPAIR MORTAR – CLASS R4



Grey



### DESCRIPTION

Fibre-reinforced single-component mortar containing special cements (CEM PMES NF), highly pure perfectly calibrated silica sand and specific fibre-reinforced admixtures.

### ADVANTAGES

- Contains PMES cements
- Can be pumped, sprayed and applied manually
- Excellent adhesion
- Suitable for thicknesses from 10 to 50 mm, even on verticals
- Chloride-free, non-corrosive. Does not affect reinforcements.
- Shrinkage-compensating
- Perfectly compatible with concrete and masonry

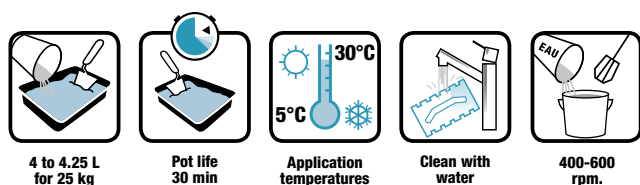
### WHERE TO USE

Structural and non-structural concrete repairs for:

- Water treatment plants
- Restructuring of damaged elements
- Repair of prefabricated components
- Grading surfaces
- Repair and remediation in marine environments

### HOW TO USE

Note: The following is a typical description of the application. If your site has other parameters, contact our Technical Department.



### SUITABLE SUBSTRATES

Concrete  
Masonry (through stone, blocks)  
Cement renders

### COVERINGS

The cured product may remain bare or be covered:  
- by ceramic coverings/natural stone: 12/24 hr drying at 20°C.  
- by painting: 2 to 3 days of drying depending on outdoor conditions.

### SURFACE PREPARATION

The substrate must be clean, free of grease and have any loose material removed.

Methods that achieve this may be finishing with a bush hammer, milling, hammering or any other method that is sufficiently efficient to produce a cohesive value greater than 1.5 MPa.

After preparation, moisten the substrate to its core without making it leach (mat damp).

Clear away residual water.

### PREPARING THE MIXTURE

Mix 25 kg of CERMIREP HSR4 with a maximum of 4-4.25 L of water. Pour 90% (3.6 L) of the water into a mixing bucket.

Gradually add the powder while mixing with a mixer (400 to 600 rpm) for 3 minutes until a homogeneous consistency is achieved.

Stir again by slowly adding the rest of the water until the desired consistency is achieved (never exceed the prescribed amount).

For small quantities, the product can also be mixed manually with a trowel.

### HOW TO APPLY THE SYSTEM

To optimize adhesion, it is recommended to apply a slurry using a brush. Make it up on the basis of the mortar mixed, adding water until it has the consistency of pancake batter.

Apply the mortar using a trowel on the fresh slurry. Then add extra thickness portionwise.

In case of rework, the previous layer must be scratched.

### APPLICATION CONDITIONS

Application temperature: +5°C to +30°C

Start of set: approximately 90 min

End of set: approximately 280 min

Pot life: 30 minutes at 20°C

### COMMENTS

In hot weather or high winds, as soon as the visible surface of the mortar becomes mat, perform an effective cure by spraying clean water, covering with a damp cloth or applying a curing product.

In cold weather, cover with insulation cloth made of polystyrene or another insulating material.

Protect the repair area from rain until the product is fully hardened.

### CLEANING AND MAINTENANCE

The equipment must be cleaned immediately with clean water.

Once cured, the product has to be removed mechanically.

## TECHNICAL CHARACTERISTICS

### COVERAGE

2 kg of powder/m<sup>2</sup>/mm thick.

### TECHNICAL CHARACTERISTICS

Technical Characteristics	Value
Particle size	0 – 1,6 mm
Powder density	1,23
Paste density	2,11
Exposure classes (EN 206-1)	X0, XC1, XC2, XC3, XC4, XS1, XS2, XS3, XD1, XD2, XD3, XF1, XF3, XA1, XA2, XA3
Compressive strength	at 24 hr 35 MPa
	at 7 days 40 MPa
	at 28 days 73 MPa
Flexural strength	at 24 hr 4 MPa
	at 7 days 6 MPa
	at 28 days 8 MPa



### CERMIREP HSR R4

CERMIX- Rue de la Belle Croix - 62 240 DESVRES

13  
0333 - CPR - 030016

EN 1504-3  
Concrete repair product for structural repair CC mortar

Compression strength	Class R4 (≥ 45 MPa)
Chloride ion content	≤ 0,05 %
Adhesion	≥ 2,0 MPa
Shrinkage/expansion prevented	3,3 / 3,2 MPa (≥ 2,0 MPa)
Carbonation strength	Satisfactory
Modulus of elasticity	36,5 GPa
Thermal compatibility Part 1, freeze-thaw	≥ 2,0 MPa
Slip and skid resistance	NPD
Coefficient of thermal expansion	NPD
Capillary absorption	≤ 0,5 mm kg.m <sup>-2</sup> .h-0.5
Reaction to fire	Class F
Hazardous substances	See safety data sheet

### REFERENCE DOCUMENTS

Eurofins / Certificate of conformity to positive reference lists No. 17  
CLP NY 039 (Valid until 10/2022)

## PACKAGING

25 kg bag – 48 bags per pallet

## STORAGE & SHELF LIFE

Can be stored for 12 months from the manufacturing date in the original, unopened packaging. Store in a dry place at temperatures between +5°C and +35°C.

## SAFETY INSTRUCTIONS

- EMISSIONS IN INDOOR AIR (1): Information on the level of volatile substances emitted in air indoors, presenting a toxicity risk by inhalation, on a classification scale ranging from A+ (very low emissions) to C (high emissions).
- Consult the safety data sheet at [www.quickfds.fr](http://www.quickfds.fr) or ask CERMIX France for it.
- Always wear personal protective equipment that meets current guidelines and regulations.
- Dispose of the contents and container in accordance with local/regional/national/international regulations.

We reserve the right to update this technical document. It is the user's responsibility to always check whether there is a more recent version available at our website, [www.cermix.com](http://www.cermix.com). It is the responsibility of the person using the products to ensure that the products are compatible and suitable for the planned use. Prior tests may be carried out to confirm that products behave as expected.