

## Cuglacrete Flow R4


Constructive concrete repair mortar R4 in accordance with NEN-en 1504-3

- a cementitious mortar for structural repairs according to NEN-EN 1504-3
- factory made polymer modified mortar based on Portland cement
- completed with high-quality polyacrylonitril fibre
- ideal for using indoor and outdoor
- developed with the latest nanotechnology



### CUGLACRETE Flow R4 can be used for repair methods according to NEN-EN 1504-9 table 1:

- 3.1 Concrete restoration by applying mortar by hand
- 4.4 Structural strengthening by adding mortar or concrete
- 7.1 Increasing cover to reinforcement with additional cementitious mortar or concrete
- 7.2 Replacing contaminated or carbonated concrete

 0956	
CUGLA BV Rudonk 6a 4824 AJ BREDA 13 0956-CPR-0707	
NEN-EN 1504-3	
DoP: EM0458-02-10-2023	
Concrete repair mortar based on cement for constructional application	
Compressive strength	class R4
Chloride ion content	≤ 0,05 %
Adhesive Bond	≥ 2,0 MPa
Carbonation resistance	Passes
Elastic modulus	≥ 20 GPa
Thermal compatibility	≥ 2,0 MPa
Capillary absorption	≤ 0,5 kg/(m <sup>2</sup> *h <sup>0,5</sup> )
Dangerous substances	comply with 5.4
Reaction to fire	class A1

## Directions for use

---

### Use of CUGLACRETE Flow R4

Cugla advises to do the concrete repair with CUGLACRETE FLOW R4 as described in **NEN-EN 1504-10**. Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity – **Part 10:**

### Site application of products and systems and quality control of works.

#### Pre-treatment

For an optimal adhesion Cugla advises the use of:

- Pre-treatment with water.  
The surface must only be moistened with water (Please note: No free water!)
  
- or
- Pre-treatment with CUGLACRETE HECHTPRIMER CEMENTGEBONDEN, a cement polymer modified system, or CUGLACRETE HECHTPRIMER EPOXY SEALER, an epoxy-based system or CUGLACRETE HECHTPRIMER POLYMEER, a fine polymer dispersion in water based on a acrylic resin.

#### Mixing

Mechanically mix CUGLACRETE FLOW R4 until it becomes a homogeneous mixture. Mixing time depends on the type of mixer, approx. 3 minutes.

#### Water dosage

Water bandwidth: 2,4 - 2,6 ltr/20 kg mortar. Dose, within the indicated water range, with plenty of water so as to produce a mortar with the right consistency.

#### Apply Mortar

Apply mortar pouring or pumping

#### Follow up treatment

The finished surface must be carefully protected against dehydrations with CUGLA CURING COMPOUND, or cover with plastic met plastic foil.

#### Storage and shelf life

If stored in a dry place is has a shelf life of up to 6 months after production date, as stated on the packaging.

## Health aspects

---

Cugla advises:

- To wear appropriate personal protective equipment (PPE).
- To avoid contact with eyes and skin.
- In case of contact with the eyes, to rinse immediately with plenty of water and seek medical advice.
- In case of swallowing the product immediately contact a doctor and show the package or the safety data sheet.

Safety date sheets, SDS, are available via our website [www.cugla.com](http://www.cugla.com).

## EC declaration of conformity

---

The undersigned declares that this concrete repair product, as mentioned in this technical data sheet, meets the requirements according to NEN-EN 1504-3.

The Factory Production Control (FPC) is evaluated by KIWA NEDERLAND BV RIJSWIJK. The EC certificate of conformity, number 0956-CPR-0707, is awarded by KIWA NEDERLAND BV on 01-07-2013.

Breda, 02 Octobre 2023

I. Velthoen  
Technical Director

---

**Technical data at 20 °C and 65% RH**

Property	Standard	Value	
Maximum grain size	EN 12192-1	4,0	mm
Water range		2,4 – 2,6	l/20 kg
Exposure class	EN 206-1	X0 till XA3	
Layer thickness		60	mm max.
Density	EN 12190	2250	kg/m <sup>3</sup>
Workability		t = 0 min.	> 450 mm
		t = 30 min	> 400 mm
Initial setting time		30	minutes
Air content	EN 12350-7	0,5 – 3,5	%
Compressive strength	EN 12190	1 day	> 25 N/mm <sup>2</sup>
		28 days	> 60 N/mm <sup>2</sup>
Adhesive bond		28 days	> 2,0 N/mm <sup>2</sup>
Freeze-thaw (50 cycli with salt)	EN 12687-1	> 2,0	N/mm <sup>2</sup>
Elastic modulus	EN 13412	> 20000	N/mm <sup>2</sup>
Resistance to carbonatation		Complies	
Capillary absorption	EN 13057	< 0,5	kg/(m <sup>2</sup> *h <sup>0,5</sup> )

Cuglacrete® does not contain any chlorine, nor any other corrosive substances. For application at temperatures < 5 °C please contact Cugla B.V.

Changes to this document will not automatically be issued. Any previous product information hereby becomes null and void. The above data is provided to the best of our knowledge. The tests have been carried out under laboratory conditions. We will not accept any liability for the results achieved on the work, now that we have no influence on the process nor the specific conditions of the work.

Our general sales, delivery and payment conditions apply to all our transactions and are available at [www.cugla.com](http://www.cugla.com).