

CRM - 204 LA Repair Concrete

Description

CRM-204 LA Repair Concrete is a low-alkaline, shrinkage-reduced, cementitious repair micro-concrete mortar designed for repairing damaged concrete structures. Suitable for both internal and external applications on vertical, horizontal, and overhead surfaces, CRM-204 LA RC offers a durable solution for restoring concrete elements. It complies with EN 1504-3 Class R4 for structural and non-structural repair, and provides excellent protection against carbonation and chlorides.

Applications

CRM-204 LA RC is ideal for use on suitably prepared concrete surfaces in various applications:

- Structural repairs to beams, columns, and floors
- Restoration of bridges, tunnels, car parks, and other infrastructure
- Filling of voids, cracks, and honeycombing in concrete
- Repairing spalling concrete due to reinforcement corrosion
- Smoothing surface imperfections and providing a uniform finish
- Suitable for repairs by methods 3.1, 3.3, 4.4, 7.1, and 7.2 as set out in EN 1504-10

Note: Existing concrete should have a minimum compressive strength of C25/30 and a pull-off strength greater than 1.5 MPa. Use of a suitable primer may be required depending on the substrate condition.

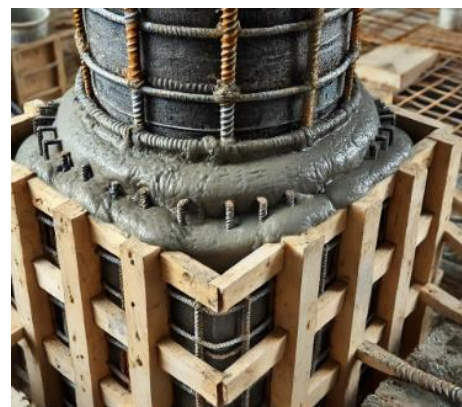
Product Use

Preparation: To prepare the repair area, begin by cutting back the edges to a minimum depth of 10 mm to avoid feather-edging and create a clean, square edge for a stronger bond. Break out the entire repair area to a depth of at least 10 mm, ensuring that all loose or damaged concrete is removed. Clean the surface thoroughly, removing dust, debris, and any unsound or contaminated material such as plaster, oil, paint, grease, corrosion deposits, or algae. If breaking out is not necessary, roughen the surface and remove any laitance by light scabbling or abrasive blasting to provide a sound, clean substrate.

Inspect the steel reinforcement in the repair area and remove any corroded steel. Clean the exposed steel to a bright metal finish using abrasive blasting, ensuring that all rust and corrosion products are removed. Wash the cleaned steel with clean water to eliminate any remaining corrosion particles. Once cleaned, prime the exposed steel thoroughly with an appropriate primer, ensuring complete coverage, and allow it to dry as specified.

Pre-soak the prepared repair area with clean water to achieve a saturated surface dry (SSD) condition, ensuring the substrate is damp but free of standing water before applying the repair mortar. This will promote good adhesion and prevent the substrate from absorbing moisture from the freshly applied mortar.

Mixing: Measure 2.75 litres of clean water. With the mixer running, add a full 25 kg bag and mix for 1 minute. After hydrating all the 25 kg mortar, mix for an additional 2-3 minutes until a smooth consistency is achieved. Always add powder to water. When using a drill and paddle, add all 2.75 litres of water first, then the 25 kg bag, mixing for 2-3 minutes. Use a forced-action mixer or a heavy-duty drill with a slow-speed (400-500 rpm) spiral paddle. Do not use free-fall mixers or attempt to mix partial bags. Ensure mixing capacity and labour are sufficient for continuous application. Avoid re-mixing or adding water after initial mixing, as this can reduce the durability of the mortar.



Benefits

- Pre-mixed product only requiring the addition of water
- Pre-mixed on component eliminates inaccuracy of site mixing
- Low Alkali Reactive Particles
- Low permeability to CO₂ and chlorides
- High build characteristics
- Chloride free

Approximate Yield

No. 25kg bags	Yield
1	12.5 litres

Application Temperatures



+5°C to +25°C

Health & Safety

Please refer to the relevant Material Safety data sheet online at www.kilsaran.ie.

Pack Size

- 25kg premixed bags

Get in touch



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Placing: The freshly mixed material should be applied within 20 minutes of mixing to ensure optimal workability, fluidity, and full effectiveness of the adherence process. Placing the material promptly will maximize its flow characteristics and allow it to adhere properly, filling all gaps and voids while achieving the desired bond strength and durability. Delays in placing may result in reduced fluidity and compromise the performance of the repair. Formwork should be securely installed around the repair area when working on vertical surfaces. This will provide necessary support and containment for the repair mortar, ensuring that it stays in place while curing and prevents any sagging or displacement.

Curing: Should be as per standard practices for cement based products. Repair mortar should be protected from strong sunlight and cold weather. Care should be taken to ensure water does not run onto recently repaired areas less than 12 hours old.

Technical Data

KPRO Repair CRM-204 LA Repair Concrete is tested and marketed in accordance to CPR 305/2011 and complies with classification R4 according to EN 1504-3 for the structural and non-structural repair of concrete structures using method 3.1, 3.3, 4.4, 7.1 and 7.2 as set out in EN 1504-10

Stiffening and Setting Properties – EN 13395-2 as per EN 1504-3 Table 2 note b / EN 13294

Stiffening	40 mins	Initial Set	60 mins	Final Set	180 mins
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Properties – EN 1504 Requirements			
Characteristic	Test Method	Declared Value	
Compressive Strength	EN 12190	Age	Flowable
		1 day	≥ 40 MPa
		7 day	≥ 65 MPa
		28 day	≥ 80 MPa
Flexural Strength	EN 1015-11	1 day	≥ 8 MPa
		7 day	≥ 9 MPa
		28 day	≥ 11 MPa
Fresh Wet Density	EN 1015-6	Nominally 2230 kg/m ³	
Adhesive Bond Strength (by Pull-off)	EN 1542	≥ 2.0 MPa	
Chloride ion Content	EN 1015-17	≤ 0.05%	
Carbonation Resistance	EN 13295	Pass	
Elastic Modulus	EN 13412	23 GPa	
Shrinkage	EN 12617-4	(EN 1504-3, Table 1) Not required if thermal cycling is undertaken	
Alkali Reactive Particles	RILEM AAR	≤ 0.1% .vol	
Thermal Compatibility (Part 1 – Freeze-thaw)	EN 13687-1	≥ 2.7 MPa	
Testing of Anchoring Products by pull out method	EN 1881	≤ 0.6mm @75kN load (wet & dry)	
Resistance to Fire	EN 1504-3	Class A1	


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Compliance

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Kilsaran Concrete, Piercetown Dunboyne Co. Meath Ireland 24	
EN1504-3 Concrete repair products for structural repair CC mortar (based on hydraulic cement) : Anchoring of reinforcing steel bar.	
Compressive Strength	R4 (≥ 45 MPa)
Adhesive Bond by pull-off	≥ 2.0 MPa
Chloride ion content	$\leq 0.05\%$
Carbonation Resistance	Pass
Elastic Modulus	23 GPa
Thermal Compatibility – Part 1: Freeze-thaw	≥ 2.0 MPa
Testing of anchoring products By pull-out method	$\leq 0.6\text{mm}$ @ 75kN load
Resistance to fire	Class A1
Dangerous Substances	Complies with 5.4 of EN1504 part 3

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