

## CRM-201 General Purpose Reinstatement Mortar

### Description

KPRO CRM 201 is a General Purpose Concrete Reinstatement Mortar suitable for both internal and external use, on vertical, horizontal and overhead concrete surfaces. CRM 201 is a one component cement based polymer modified Class R3 mortar, meeting the requirements of EN1504-3. CRM 201 should be used in applications for where reinstatement requires a thickness from 10mm to 70mm on vertical surfaces and up to 60mm overhead. It should be applied in accordance with EN1504-10 recommendations.

### Applications

CRM 201 is suitable for use on suitably prepared concrete surfaces in the following applications:

- Repairing chips, gaps and holes in concrete
- Making good of corners on columns, pillars, walls, beams and slabs
- Smoothing over defects such as honeycombing, air voids, spacer holes etc.
- Repairs to soffits, lintels and beams
- Repairs to precast concrete elements such as stairs, tanks, liners, panels etc.
- Repairs by methods 3.1, 3.3, 4.4, 7.1 and 7.2 as set out in EN 1504-10

Note that the existing concrete should be above C12/15 compressive strength and a pull off strength greater than 1.0 MPa, and a suitable primer may be required depending on the substrate, and whether reinforcing steel is exposed. Normal concrete curing procedures should be adhered to.

### Product Use

**Preparation:** Before using KPRO CRM-201, the preparation of the concrete substrate is of critical importance. Cut back the edges of the repair area to a depth of at least 10 mm to avoid feather-edging and to provide a square edge. Break out the complete repair area to a minimum depth of 10 mm up to the cut edge. Oil and grease residues should be removed by steam cleaning, detergent scrubbing or the use of a suitable degreaser. The effectiveness of decontamination should then be assessed by a pull-off test.

Expose and remove any corroded steel in the area to be repaired. Remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition, including the back of exposed steel bars, using an abrasive-blasting technique. If corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water immediately after abrasive-blasting to remove corrosion products from scratches and depressions of the steel surface. Prime the prepared steel (if present), using a brush, with KPRO Repair-PRIMEX, ensuring complete coverage and allow to dry.

Remove all dust, grease and debris from the area and pre-soak, removing all ponded water to leave the substrate in a saturated surface dry condition. Whilst the area is still in a S.S.D. condition apply a coat of KPRO Repair-PRIMEX. Scrub the fresh primer into the substrate with a brush and do not allow to dry before application of CRM-201.

**Mixing:** This product only requires the addition of clean potable water. K-PRO CRM products should be mixed in a suitable forced action mixer or spiral screw paddle drill at a low speed to ensure a lump free, smooth, consistent mortar. Mix the contents of a 25kg bag with 4.0-4.5 litres of clean potable water. Water should be measured and placed in the mixing container prior to addition of the full 25kg bag of dry powder and mixed for a minimum of 3-5 minutes taking care not to entrain air. The product should be used immediately after mixing in suitable weather conditions between 5°C and 25°C with seasonal concrete working conditions adhered to. Re-mixing or the later addition of water is not permitted as this will have an adverse effect on the life and durability of the product.



### Benefits

- Pre-mixed product only requiring the addition of water
- Excellent bond to concrete surfaces
- Pre-mixed on component eliminates inaccuracy of site mixing
- Low permeability to CO<sub>2</sub> and chlorides
- High build characteristics
- Chloride free

### Approximate Yield

Coat Thickness	m <sup>2</sup> per 25 kg bag
10mm	1.50
20mm	0.75
40mm	0.38
60mm	0.25
80mm	0.19
100mm	0.15

### Application Temperatures



+5°C to +25°C

### Health & Safety

Please refer to the relevant Material Safety data sheet online at [www.kilsaran.ie](http://www.kilsaran.ie).

### Pack Size

- 25kg premixed bags

### Get in touch



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**Placing:** Ensure exposed steel is secured in place and primed. Any movement in exposed steel during CRM-201 application can affect mortar compaction and bond. Prime the prepared substrate (as described above) immediately before placing the CRM-201 reinstatement mortar.

Apply the fresh mortar to the primed area using a trowel or hand (wearing suitable protective gloves, please refer to SDS) compacting it fully into place ensuring to encapsulate steel reinforcement if present. Application thicknesses up to 70mm (vertical) and 60mm (overhead) can be applied in a single application without formwork. For greater thicknesses the use of formwork or using a layer on layer method is recommended. Trowel the surface level with its surroundings using a steel float or straight edge. Once the product has 'picked up' and stiffened slightly, use a wooden float or sponge to give the desired surface finish.

**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 CRM-201 is tested and marketed in accordance to CPR 305/2011 and complies with classification R3 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

Characteristic		Data value	
<b>Strength</b>		<b>Flexural</b>	<b>Compressive</b>
	1 day	> 4.0 MPa	> 15.0 MPa
	7 day	> 8.0 MPa	> 30.0 MPa
	28 day	> 10.0 MPa	> 40.0 MPa
<b>Fresh Density</b>	2200 kg/m <sup>3</sup>		
<b>Initial Set</b>	2.5 hours		
<b>Final Set</b>	4 hours		

<b>CE</b>	
Kilsaran Concrete, Piercetown Dunboyne Co. Meath Ireland 20	
EN1504-3 Concrete repair mortar for structural and non-structural repair, method 3,	
Compressive Strength	R3 (≥ 25 MPa)
Adhesive Bond by pull-off	≥ 1.5 MPa
Chloride ion content	≤ 0.05%
Carbonation Resistance	Pass
Elastic Modulus	≥ 24 GPa
Thermal Compatibility – Part 1: Freeze-thaw	≥ 1.5 MPa
Resistance to fire	Class A1
Dangerous Substances	Complies with 5.4 of EN 1504

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