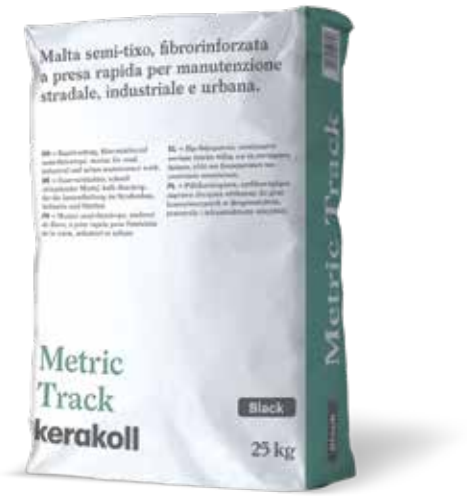
Metric Track

Rapid-setting, fibre-reinforced semi-thixotropic mortar for road, industrial and urban maintenance work.

Metric Track is a class R4 mortar for applications that must be ready for use quickly, such as industrial and airport flooring and pavements and to anchor and fix traps and drains, manholes, fences, sign posts, safety barriers.



1. **Grey and black colour**
2. **Semi-thixotropic, class R4**
3. **Rapid setting 20 min**
4. **Thicknesses from 10 to 100 mm**
5. **Specific for road and street furniture works**
6. **Can withstand foot and vehicle traffic just 2 hours after application**

kerakoll

Areas of application

→ Intended use:
- Applications which must be ready for use quickly even at low temperatures, such as repair of industrial and airport flooring, pavements, drains
- Specific for road and street furniture works
- Fastening and structural anchoring of tie-rods, plates, machinery, pre-fabricated structures, road traps, manholes, fences, road signs, protective barriers
- Preparation of inclined surfaces on concrete elements and floorings
- Filling of rigid joints

Instructions for use

→ Preparation of substrates
In case of concrete surfaces, before applying Metric Track it is necessary to:
- thoroughly remove all weakened concrete until a solid, resistant substrate is obtained; roughen it by mechanical scarification or hydro-demolition to a depth of ≥ 5 mm, equivalent to level 9 of the Test kit for preparation of reinforced concrete and masonry substrates;
- remove the rust from the reinforcing bars, which must be cleaned by brushing (manual or mechanical) or sandblasting;
- clean the treated substrate using compressed air or a high pressure washer;
- saturate with water until the substrate is saturated yet with no excess water on the surface. Alternatively, on horizontal concrete surfaces, apply Primer Uni or Epobinder on a dry substrate in order to ensure regular absorption and promote better mortar adhesion.

For road applications: clean the substrate as described above. Metric Track can come into lateral contact with any existing bitumen, but the substrate must still be made of concrete. Considering the instability of road substrates, it is recommended to add suitable fibres to increase ductility (0.75 kg of Steel Fiber for every 25 kg of Metric Track).

Check that the resistance class of the supporting concrete is suitable.
In case of thick patched layers and on large surface areas, provide a reinforcing welded mesh anchored to the substrate.

→ Preparation
Prepare Metric Track by mixing the powder with the amount of water indicated on the packaging (we advise using the whole bag). The mixture can be prepared in a cement mixer (bearing in mind the fact that the mortar hardens quickly), or in a bucket using a mortar mixer or a drill-type mixing device with a low-rev agitator until the mixture is smooth and has no lumps.

→ Application
- To fasten elements, apply the mortar by hand using a trowel.
  Metric Track must never be applied in a thickness of less than 10 mm. For applications involving a thickness of more than 60-100 mm (according to the type of work to be carried out and the size of the operation), to contain hydration heat, mix up a fine grain concrete, adding gravel, such as Ghiaia 3.6 in a ratio of 25-40% by weight of the powder (25-40 kg of Ghiaia 3.6 for every 100 kg of Metric Track), so that the grain size curve is optimised according to the application thickness.
- For grouting of bars, fill the hole previously made with Metric Track and insert the bar with a rotating movement.
- Before applying Metric Track treat any reinforcing bar with Metric Rebar.

Allow the surfaces to cure for at least 24 hrs. Metric Track can be applied at room temperatures of -10 °C in the presence of substrates with a minimum temperature of +5 °C; it is advisable to store the product in a heated room. If no special precautions are taken, it is recommended to use Metric Track at temperatures ≥ +5 °C.

→ Cleaning
Residual traces of Metric Track can be removed from tools and machines using water before the product hardens.

Certificates and marks

Grey

Black

When properly emptied, the packaging is recyclable as paper (up to 80 per cent) according to the ATICELCA® 501 method.

Abstract

Supply and laying of rapid-setting, fibre-reinforced semi-thixotropic mortar with compensated shrinkage, such as Metric Track by Kerakoll, for fastening of road traps, manholes and street furniture and for repairing of industrial flooring and concrete surfaces. Rapid return to normal use even at low temperatures. To be applied manually, after adequate preparation and wetting of the substrates until fully saturated. CE-marked and compliant with the performance requirements of standard EN 1504-3, Class R4, CC and PCC type, for volumetric reconstruction, and standard EN 1504-6 for anchoring; according to principles as defined by standard EN 1504-9.

Technical Data compliant with Kerakoll Quality Standard		
Appearance	powder	
Apparent volumetric mass	≈ 1400 kg/m³	UEAtc
Aggregate mineral content	silicate - carbonate	
Grading	0 – 2.5 mm	EN 12192-1
Shelf life	≈ 6 months from production in the original sealed packaging, protect from humidity	
Pack	25 kg bags	
Mixing water:		
- Metric Track grey	≈ 3.8 l / 1 x 25 kg bag	
- Metric Track black	≈ 4 l / 1 x 25 kg bag	
Flow of the mixture	150 – 170 mm	EN 13395-1
Density of the mixture:		
- Metric Track grey	≈ 2180 kg/m³	
- Metric Track black	≈ 2190 kg/m³	
pH of the mixture	≥ 12.5	
Pot life:		
- Metric Track grey	≈ 50 min. (at +5 °C) / ≈ 45 min. (at +10 °C) / ≈ 40 min. (at +21 °C)	
- Metric Track black	≈ 30 min. (at +5 °C) / ≈ 25 min. (at +10 °C) / ≈ 15 min. (at +21 °C)	
Start/End of setting	≈ 30 – 40 min. (≈ 40 – 50 min. at +5 °C)	
Temperature range for application	from +5 °C to +35 °C	
Minimum thickness	10 mm	
Maximum thickness	60-100 mm (according to the type of work and the size of the operation)	
	For thicker layers, mix with Ghiaia 3.6 gravel	
Coverage	≈ 19 kg/m² per cm of thickness	

Values taken at +21 °C, 60% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

Performance					
VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions					
Conformity	EC 1 plus GEV-Emicode		GEV certified 17804/11.01.02		
HIGH-TECH					
Performance characteristic	**Test Method**	**Requirements of standard EN 1504-3, class R4**	**Performance in CC and PCC conditions**		
			-10 °C*	**+5 °C**	**+21 °C**
Compressive strength (N/mm²):	EN 12190				
- 2 hrs				> 12	> 20
- 4 hrs			> 12	> 15	> 25
- 24 hrs			> 14	> 30	> 35
- 7 days			> 40	> 40	> 50
- 28 days		≥ 45	> 45	> 50	> 60
Flexural tensile strength (N/mm²):	EN 196-1	None		**+5 °C**	**+21 °C**
- 2 hrs				> 2	> 3
- 4 hrs				> 3	> 4
- 24 hrs				> 5	> 6
- 7 days				> 6	> 8
- 28 days				> 8	> 9
Adhesive bond after 28 days	EN 1542	≥ 2 N/mm²	> 2 N/mm²		
Resistance to carbonation	EN 13295	d_k ≤ reference concrete [MC (0.45)]	value exceeded		
Modulus of elasticity under compression	EN 13412	≥ 20 GPa (28 days)			
- in CC			25 GPa		
- in PCC			25 GPa		
Thermal compatibility with freeze/thaw cycles with de-icing salts	EN 13687-1	bond strength after 50 cycles ≥ 2 N/mm²	> 2 N/mm²		
Capillary absorption	EN 13057	≤ 0.5 kg·m^{-2}·h$^{-0,5}$	< 0.5 kg·m^{-2}·h$^{-0,5}$		
Chloride ion content (determined on the product in powder form)	EN 1015-17	≤ 0.05%	< 0.05%		
Reaction to fire	EN 13501-1	Euroclass	A1		

Performance			
	Test Method	**Requirements of standard EN 1504-6**	**Performance**
Pull-out strength of steel rebars (movement in mm in relation to a 75 kN load)	EN 1881	≤ 0.6 mm	< 0.6 mm
Chloride ion content (determined on the product in powder form)	EN 1015-17	≤ 0.05%	< 0.05%
Hazardous substances		compliant with point 5.4	
Aggregate performance characteristic	**Test Method**	**Requirements of standard UNI 8520-22**	**Aggregate performance**
Alkali-aggregates reaction	UNI 11504	reactivity class	NR (non-reactive)

* Room temperature -10°C for the first 12 hours and thereafter +5°C, substrate and dust temperature +5°C

Warning

→ Abide by any standards and national regulations
→ store the product away from any sources of humidity and out of direct sunlight
→ use at temperatures between +5 °C and +35 °C
→ do not add binders or additives to the mixture
→ do not apply to dirty, loose and flaking surfaces
→ do not lay on gypsum or wood
→ following application, protect from direct sunlight and wind
→ allow the product to cure during the first 24 hours
→ if necessary, ask for the safety data sheet
→ for any other issues, contact the Kerakoll Worldwide Global Service +39 0536 811 516 - globalservice@kerakoll.com

Kerakoll Spa
via dell'Artigianato 9
41049 Sassuolo - MO

+39 0536.816.511
info@kerakoll.com

www.kerakoll.com