



VHDRS®
 Very
 High
 Durability
 Repair & Prevention
 System



Certified Quality System since **FEBRUARY 1st**

From Project to Jobsite

RAPIDO GRIP 613 mono

R3
 EN 1504-3
 NORMA EUROPEA

**SHRINKAGE COMPENSATED REPAIR MORTAR WITH INVERTED SETTING TIME:
 THE LOWER THE TEMPERATURE, THE FASTER THE SETTING TIME**

**CE approved – Certificato n. 1305 - CPD - 0808
 EN 1504-3 Classe R3**

Description RAPIDO GRIP 613 is cement based pre-mix, ready to use, which forms an easy to apply mortar after mixing with water. The rapid set of the product allows repairs in 5 to 10 minutes. The applied product shall have optimal adhesion and durability, is impermeable to water, and has high mechanical resistances, initially and on long term. The product does not contain expansive metal compounds.

- Advantages and characteristics**
- **The set is faster with decreasing temperature, which allows fast repair jobs, even in very unfavourable conditions.**
 - Optimal adhesion to the substrate, easy to apply to difficult substrates, on the interior parts of by-passes, soffits.
 - Easy to apply with the equipment, normally used to apply this type of renders.
 - The fast set and hardening allow the finishing of either which repair job, or the movement of any repaired ornament after only a few minutes.
 - Excellent resistance against chemical attack.
 - Good resistance to water penetration
 - High mechanical resistance values, dimensional stability, no bleeding.

- Fields of use**
- Structural repairs of deteriorated concrete (renders, structural repairs of the surface, soffits,..) for which it is a benefit to have a fast setting and hardening mortar.
 - Local repairs to by-pass, pillars, beams, ..., when the concrete needs repaired from 5 mm to 5 cm thickness or more.
 - For the rapid fixing and sealing of tubes, bolts,...etc.
- RAPIDO GRIP 613 is grey or white coloured or formulated "ad hoc" for the creation or the modelling of different creations and structures:
- Thematic areas (like the Valle dei Re in Gardaland)
 - Amusement park
 - Artificial rocks
 - Water courses
 - others

Method of use **Preparation of the substrate**
 The substrates have to be well prepared, and sound, free from all substances which interfere good adhesion (oil, grease, waxes, dirt,..) . Saturate the substrate with water, especially for small repairs, and in hot and windy conditions. Start already a longer period before the application to humidify the substrate completely. The excess water has to be removed with a sponge, immediately before the application of RAPIDO GRIP.



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Method of application

Mix RAPIDO GRIP 613 with water or with the RMB in ratio from 14 to 16% calculated on the powder.

Mix well during about 45" – 1', or till a homogeneous and lump free mortar is obtained. Start with the approximate amount of liquid required, a little less than suggested. When mixed, adjust the consistency by adding the missing liquid. Note that the liquid demand can fluctuate a few percent, depending on the ambient conditions.

N.B. Prepare only the amount of mortar which can be applied in 5 minutes. Do not add any water or remix when the setting has already started.

Apply by trowel like normal cement based products, shape according the desired repair, and finish with a sponge.

After the application, and even before the final setting, keep the fresh repair substrate wet during the first 24 hours in order to prevent drying out of the mortar. This is especially needed in case of hot temperature and wind (than an optimal result can be obtained when keeping the substrate of the repair wet during 3-4 days.) .

- Remarks**
- **Use the product in the season indicated on the bag.**
 - Do not apply when temperature is lower than +1 °C.
 - Inverted setting time = in winter climate, if the product set too fast, it is possible to lengthen the workability time for some minute, using "hot" mixing water (30 – 60 °C).
 - Inverted setting time = in extremely hot conditions, keep the bags in the shade and use cool mixing water; otherwise the product will not reach its rapid setting properties.
 - Information according to 2003/53/CE:
Storage: The product can be kept for at least 12 months if stored in dry and protected conditions, in the original packaging, between +5 °C and + 35 °C.
Do not use the content of opened bags if the powder is agglomerated in lumps

Packaging Bags of 25 Kg.



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Technical characteristic (typical values)

- Initial setting time : about 10 minutes
- Mixing water: 14 ÷ 16 %

		RAPIDO GRIP 613 mono
• Compressive strength	N/mm ²	18 (1d.) 50 (28 d.)
• Flexural strength	N/mm ²	4 (1d) 10 (28 d.)
• ELASTICITY MODULUS	N/mm ²	19.000 (28 days.)
• Adhesion to concrete	N/mm ²	1,5 ÷ 2,5 (28 d.)
• Pull-out rebars	N/mm ²	> 10 (28 d.)
• Carbonation in time	8 years mm	2
	18 years mm	10
	25 years mm	14
• Resist. to CO ₂ penetration	μ	990
• Water vapour permeability coeff.	μ	60
• ① Res. FROST/THAW	gr/m ²	505
• ② Permeab. To CHLORIDES	Coulomb	630
• Type mortar		Thixo mortar
• N. components		Mono
• Advised layer thickness	mm	5 ÷ 50
• Application		by hand
• Curing : wet		SE
• Curing : protected		SE
• Typical application		rapid repairs
• Setting time		Inverted setting time, fast set
• Hardening		Accelerated
• Shrinkage compensation		YES
• Consumption	Kg/m ² /mm	1,85

1N/mm² = 1MPa = 10,19 Kg/cm²

★ the formulation for this type of products can be also made with the addition of corrosion inhibitors and MuCis®.

① Freeze and thaw resistance in the presence of salt. SIA 162 11/91 (< 600 gr/sm= very high freeze and thaw resistance)

② Chlorides permeability. FH WA RD/81 (100 = 1000 COULOMB = very low chlorides permeability)

SE Depending on the applicative conditions (rain, sun, hot temperatures, humidity)

VHDRS Very High Durability Repair & Prevention Systems

VHDRC Very High Durability Reinforced Concretes

MuCis Multiple Corrosion Inhibiting Synergies

AED Very High Deformation Energy

Safety indications Read carefully the safety indications on the packaging, or consult the relevant Material Safety Data Sheet of this product.

The above information is based on our best experiences and lab results and on results of the application of the product in various fields. Tecnochem Italiana is not responsible for negative performances due to not proper use of the product or for defects due to elements not connected with the quality of the product included wrong storage.

Technical characteristic in this technical data sheet are up-to-dated periodically. Revision date of this technical data sheet is indicated below. Changes of this data sheet can be found in our web-site www.tecnochem.it where you can find the same technical data sheet updated in real time.

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Nr. rev.: 6

RAPIDO GRIP 613
pag.3/3

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