Technical Data Sheet

FINOMIX®
DRY MORTARS

Release 2: 12/08/2020

RP 4020 corrosion protect

cementitious anti-corrosive coating for concrete reinforcing elements & bonding bridge

- Protection against water and chloride penetration
- Strong adhesion to concrete and reinforcing steel
- High mechanical strengths
- Easily workable - Mix only with water

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RP 4020 CORROSION PROTECT

**cementitious anti-corrosive coating
for concrete reinforcing elements & bonding bridge**

DESCRIPTION

Cement-based mortar, modified with silica fume and polymers, for the protection of steel reinforcement against corrosion, and also as a bonding bridge.
Classified as product for reinforcement corrosion protection according to European standard EN 1504-7.

APPLICATIONS

Used in repair works of reinforced concrete for protecting the corroded reinforcement or preventively as a barrier coating protecting the reinforcement when it is exposed (or will be exposed) to a corrosive environment. Moreover, as a bonding bridge between old and new concrete or other repairing mortar.

PROPERTIES / ADVANTAGES

- Strong adhesion to concrete and reinforcing steel.
- Excellent resistance against moisture and chloride penetration.
- Protects the steel reinforcing elements of concrete that are subject to corrosion due to carbonation and ingress of moisture and chlorides.
- High mechanical strength.
- Easy-to-use, mix only with water.

HARMONIZED STANDARDS / REGULATIONS

- **EN 1504-7:2004:** Cement-based mortar for the anti-corrosive protection and repair of concrete. Conforms to the requirements of the standard.
- **EN 1504-9:2008:** Products and systems for the protection and repair of concrete structures - General principles for the use of products and systems. Meets the requirements of the standard according to Principle 11 (CA - Control of Anodic areas), according to Method 11.1.
- **Regulation (EE) No. 305/2011:** CE marked product with Declaration of Performance (DoP): RP4020/CPR-7-13/041/10-2013.

APPLICATION INSTRUCTIONS

- The reinforcing elements must be thoroughly cleaned from rust (cleaning degree SA 2½ - DIN 55928-4), dust, grease, etc.
- The substrate (concrete) must be free of dust, grease and subtle materials.
- RP 4020 is added into clean water under continuous mixing until a homogenous mixture without lumps is formed. The mixing is advisable to be done with a low-speed electric mixer or by hand.

Application as corrosion-protective coating

- The ready mixture is applied with a brush in two layers. Each layer is applied after the previous one has dried (2-3 hours). Layer thickness must not exceed 1mm.

Application as bonding bridge

- Soak the substrate with water. Allow excess water to evaporate or remove it using compressed air.
- The ready mixture is applied with a brush in one layer. Layer thickness should be about 2mm.
- The surface should not be allowed to dry before application of the concrete or the repair mortar ("green-on-green" application).

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.

RECOMMENDATIONS

- Temperature during application should be between +5°C and +35°C.
- Do not mix the product with dirty or salty water.
- Don't use excess water for mixing as it will affect the performance of the product.
- Do not add cement, aggregates or other additives.
- Do not apply the product under direct sunlight or strong wind.
- Postpone the application if high temperatures or frost are expected for the following 24 hours after application.
- Do not add water when the mixture begins to set.
- During the curing period protect the fresh surface from dehydration, rainfall and frost.

TECHNICAL CHARACTERISTICS	
PRODUCT CHARACTERISTICS	
Appearance	cementitious powder
Colour	red
Max. aggregates size	0.3 mm
APPLICATION CHARACTERISTICS (+23°C / 50% R.H.)	
Water mixing ratio	24% w/w., i.e: ▪ 0.24 kg of water/1kg RP 4020 ▪ 1.20 kg of water/5kg RP 4020
pH	> 11
Density of mixture	1.90 kg/lt
Pot life	30 min
Max. layer thickness	0.5-1.0 mm
Consumption	▪ As anti-corrosive coating: 0.10-0.15 kg/m of reinforcing steel (depending on the steel diameter) for a 1mm thick layer (application in 2 layers) ▪ As bonding bridge: 1.50-2.00 kg/m^2 for a 1mm thick layer
PERFORMANCE CHARACTERISTICS	
Compressive strength after 28 days (EN 12190)	≥ 35.0 N/mm^2
Flexural strength after 28 days (EN 196-1)	≥ 7.5 N/mm^2
Adhesion to concrete after 28 days (EN 1542, +22°C, 60% R.H.)	≥ 2.5 N/mm^2
Shear adhesion of coated steel to concrete (EN 15184)	Pass (The test is considered to have been passed if the bond strength determined with the coated bars is in each case at least 80% of the reference bond stress determined for the uncoated bars.)
Corrosion protection (EN 15183)	Pass (The test is considered to have been passed if the coated zones of the steels are free of corrosion.)

Note: Measures were carried out in laboratory environment conditions. The different conditions on site (temperature, humidity, wind, substrate absorption) may affect the properties of the material.

SAFETY PRECAUTIONS

- The product contains cement which has an alkaline reaction with water and is classified as irritant.
- Always wear appropriate personal protective equipment for eyes and skin (protective clothing, gloves and goggles).
- If skin contact occurs, rinse well with plenty of clean water.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Consult product's Safety Data Sheet for further instructions on safety handling.
- PRODUCT FOR PROFESSIONAL USE.

PACKAGING - STORAGE

Available in:

- 1kg and 5kg plastic containers.

Storage: 12 months from production date, if stored in original, sealed container, protected from direct sunlight and frost.

LEGAL NOTICE

The technical characteristics and recommendations for the use and application of the **FINOMIX** range of products are based on the knowledge and experience of the company. The above information shall be considered merely indicative and subject to confirmation after long-term practical application. For this reason, anyone who intends to use the product must ensure that it is suitable for the envisaged application. Since the specific site conditions during the applications are beyond the control of our company, the user alone is fully responsible for any consequences deriving from the use of the product. **FINOBETON S.A.** (**FINOMIX**) has the right to modify the properties of its products without prior notice. This release voids any previous publications issued for this technical specifications sheet.

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