4004 Tamirart S40

High-Strength Structural Repairing Mortar (R4)

Technical Data Sheet

Description

Sulphate and chloride resistant, cement based, thixotropic structural repairing mortar having polymer and fiber addition.

Fields of Application

- Repairing damaged high strength concrete
- Protection of concrete against sulphates and chlorides
- Repairing underwater and substructural concrete members
- Repairing tie-rod holes on concrete structure
- Repairing concrete structures which are subject to sea water
- Repairing surface defects between 5-40 mm thickness at single coat

Properties

- Resistant to sulphates and chlorides
- High adhesion strength
- High compression strength
- Resistant to freeze thaw cycle
- Resistant to water
- Adjustable viscosity
- Suitable for vertical and overhead application
- Non-corrosive

Preparation of Substrates

- The substrates must be dry, clean and solid.
- The substrates to be coated should be free of adhesion preventive foreign substances such as dust, dirt, mould oil, paint etc.
- The sub-surfaces that are not strong enough to carry themselves e.g. cracked plasters, weak surfaces, or residues of moss should be cleaned from the application surface.
- Before the application, the surface should be dampened or primed with Kalekim Astar (Primer) for better results.
- Exposed concrete surfaces should be primed with Kalekim B-tone.
- Recommended to apply Tamirart AC with a brush for better adhesion on the reinforcement before the application.

Application

- Pour Tamirart S40 slowly on the amount of clean water specified in the technical table and mix to obtain a homogeneous paste free from lumps. A low speed mixer is recommended to mix. Do not add any additive which is not mentioned in the instructions for application.
- The prepared mortar must be applied without waiting.
- Apply mortar with a flat trowel with a firm pressure to ensure a good adhesion at a thickness not exceeding 40 mm.

Post-Application Protection & Suggestions

- When a smooth surface finish is desired, the mortar should be rested until it runs dry a bit. Then some water should be sprayed on the surface with a brush and mortar is applied with a steel or wooden trowel.
- The product should be used within 60 minutes. Weather conditions such as high temperature, low humidity, and wind may shorten this period.
- Dispose mortars of which pot life is expired.
- Clean tools and hands with water after application.
- The consumption values in the table refers to an average consumption amount. It may vary depending on the application conditions and surface properties.
- Since it contains cement, it irritates the eyes, respiratory system and skin. For further information refer to the safety data sheet.

Storage

- Packages should be kept dry and cool at between +5°C and +35°C in moisture free conditions. Avoid direct sunlight.
- Packages should be protected from water, frost and adverse weather conditions.
- Maximum 3 pallets should be stacked on top of each other.
- Shelf life is maximum 12 months conditional to complying with the above mentioned storage conditions.

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Packaging

- 25 kg multi-ply paper bags.

Quality Certificates

R4 CE

Non-Structural repairing mortar conforming EN 1504 - 3 / Class R4.

Technical Properties

(at 23 °C and 50% RH)

General Data

Appearance	Grey powder
Shelf Life	12 months when stored in the original sealed packing in dry place.

Application Data

Application Temperature Range	(+5°C) - (+35°C)
Mixing Ratio	2.5 – 3.5 lt water / 25 kg powder
Application Thickness	Min. 5 mm - Max. 40 mm
Pot Life	Min. 1 hour
Ready for Use	24 hours
Consumption	20 kg/m² (per 10 mm thickness)

Performance Data

Flexural Strength (EN 12190)	≥ 3.0 N/mm² (1 day) ≥ 5.0 N/mm² (7 days) ≥ 7.0 N/mm² (28 days)
Compressive Strength (EN 12190)	≥ 20.0 N/mm² (1 day) ≥40.0 N/mm² (7 days) ≥55.0 N/mm² (28 days)
Elastic Modulus (EN 13412)	20000 N/mm²
Bonding to Concrete (EN 1542)	≥ 2.0 N/mm²
Restrained Shrinkage/Expansion (EN 12617-4)	≥ 2.0 N/mm²
Capillary Water Absorption (EN 13057)	≤ 0.5 kg/m²h$^{0.5}$
Service Temperature Range	(-30 °C) – (+80 °C)
Release of Dangerous Substances	See SDS.
Reaction to Fire (EN 13501-1)	A1

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