

Non-shrink thixotropic fiber-reinforced mortar with normal setting for cortical restoration of concrete



OLY GROUT T4 is a ready-to-use thixotropic anti-shrinkage hydraulic mortar with the addition of synthetic fibers and corrosion inhibitors. It has high mechanical resistance to both short and long curing, strong adhesion to concrete, high resistance to sulphates and excellent durability even in highly aggressive conditions (marine areas, de-icing salts, acid rain). It does not contain metal particles and is free from chlorides. **OLY GROUT T4** is CE marked as R4 structural mortar based on UNI EN 1504-3 and complies with UNI 8147. Among the advantages are: high performance (final mechanical development required for R4 mortars within the first 7 days); no risk of cracking; versatility (mixed with additives or latexes it is used for applications with specific needs); available in variants with different types of grain size and fibers; durability and resistance to environmental aggressions proven by works dating back to the early 1980s; excellent workability and ease of application (manual or mechanized).

OLY GROUT T4 it is used for consolidation and restoration of reinforced concrete works. (pillars, beams, cornices, balcony fronts, road and rail bridges and viaducts, canals, dams, tunnels); functional and structural recovery of stone or brick walls and vaults.

Features	Typical value
Appearance	Powder
Color	Grey
Maximum size of aggregates	2,5 mm
Mixing water	Ca. 4,5 L
Density of the product in powder form	1400 kg/mc ca.
Wet product density	2000 kg/mc ca.
Density of hardened product	1850 kg/mc ca.
Workability time	45 min

Mechanical characteristics of the product	EN 1504-3 limits For R4 mortars	Typical value
Class	R4	R4
Typology		PCC
Compressive strength after 28 days UNI EN 12190 [MPa]	≥ 45	≥ 45
Withdrawal / expansion prevented [MPa]	≥ 2	>2
Compression secant modulus of elasticity EN 13412 [GPa]	≥ 20	> 20
Chloride content EN 1015-17 [%]	≤ 0,05	≤ 0,05
Adhesion to concrete (UNI EN 1542) [MPa]	≥ 2	≥ 2
Thermal compatibility (UNI EN 1542) after dry cycles EN 13687-4 [MPa]	>2	> 2
Thermal compatibility (UNI EN 1542) after storm cycles EN 13687-2 [MPa]	≥ 2	>2
Thermal compatibility (UNI EN 1542) after freeze-thaw cycles EN 13687-1 [MPa]	≥ 2	> 2
Resistance to accelerated carbonation, UNI EN 13295	Depth of carbonation, dk <Reference concrete type MC 0.45 a / c	Outdated specification
Impermeability to water (capillary absorption coefficient, UNI EN 13057) [Kg / m ² • h ¹ / ²]	≤ 0,5	< 0,5
Reaction to fire		A1

Installation

The substrate must be perfectly clean, compact, free from dust, grease, paint, etc. Carefully remove the degraded and inconsistent concrete by hammering until a compact support is found. The surface tensile strength of the “Pull off” concrete must not be less than 1.5 MPa, as indicated by the quality control procedures of the substrate according to EN 1504-10. If the substrate has lower mechanical characteristics, the designer will evaluate the measures to be taken to protect against the poor characteristics of the original material (consult the Technical Department). The metal reinforcements in sight must be freed from the concrete in contact with them by using a needle gun; sandblast the total surface and protect the metal reinforcements with **OLY FER** applied by brush. Saturate the area to be treated, taking care to eliminate any stagnant water at the time of casting. Mix the product for max. 2 minutes with a cement mixer or, in the case of small mixes, with a drill and whisk. Add $\frac{3}{4}$ of water required and continuously the product and the remaining water until the desired consistency is obtained. Apply with a trowel or spray with suitable plastering machines. If with the **OLY GROUT T4** a continuous coating is required, it is essential to bush hammer the total surface, place a suitable galvanized electro-welded metal mesh connected and anchored to the support, and apply the mortar with a thickness such as to create a concrete cover of at least 2 cm . When application in several layers is foreseen (for thicknesses greater than 3 cm), between one coat and the other carry out smoothing, roughening with a notched trowel, hydro-washing and wetting before proceeding with the application of the next layer, allowing hand and the other at least 12 hours. For different application times between the two coats, consult the Technical Department.

Consumption

18 Kg/m²/cm

Packs

25 kg bags
Pallet 60x25 - 1500 Kg

Storage

The product fears humidity. Store in a sheltered and dry place; in these conditions and in unopened containers, the product maintains its stability for 12 months.

Warnings

Given the possibility that different supplies of the same raw materials have slightly discordant colors, between one production batch and the next there may be small color variations that do not in any way affect the technical performance of the products supplied. Do not remix the product by adding water once it has started to set. Do not add cement, additives or other mortars. Before use, check the integrity of the package and do not use the product with the presence of lumps. Use all the material once the package is opened. Take all the necessary precautions for a good curing of the casting. Do not cast at temperatures below + 5 ° C. Wet with water for the first 48 hours, or cover with wet plastic sheets or jute bags. Do not use anti-evaporation products if additional coatings are planned. The marking obligations are not linked to the intrinsic nature of a given product, but to the use for which a specific material is used: before placing the order, it will be the customer's responsibility to submit all the documentation available to the D.L. so that it can establish the suitability of the materials (in terms of certifications and performance) in relation to the use they are intended for.

The technical and mechanical characteristics and the methods of installation indicated in this sheet are based on an extensive analysis of the state of the art of the research and of the applications in question, but cannot imply any guarantee on our part on the final result of the product. applied in particular with regard to the installation of systems that must be carried out by specialized personnel.

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www.olympus-italia.com

E-mail:

info@olympus-italia.com