

# Grout iTOP

Pourable structural mortar that rapidly reaches peak efficiency in 24 hours



Grout iTOP is a high-performance, structural, expansive cement mortar to be cast for centimetric thickness in precision anchorages or for the construction and restoration of concrete structures. Grout iTOP complies with the requirements of the EN 1504/3 standard as a high-performance structural mortar (Class R4) and develops extensive resistance within the first 24 hours after application (>35 MPa). Grout iTOP is slightly expansive in both plastic and hardened phases whilst being resistant to aggressive environmental agents, thus protecting the reinforcements and minimising the risk of corrosion.

**CUSTOMS CODE:** 3824 5090

**COMPONENTS:** Single-component

**APPEARANCE:** Powder

**AVAILABLE COLORS:** Gray

**PACKAGING AND DIMENSIONS:** Bag 25 kg - Pallet: 50 x (Bag 25 kg)

## OBTAINED CERTIFICATIONS AND REGULATIONS



## FEATURES AND BENEFITS

The main features of Grout iTOP are:

- The mix of super-fine high-strength binders combined with micronised silica having pozzolanic properties renders the mortar intrinsically impermeable to water and extremely durable against the most severe exposure environments (exposure classes XC = carbonation-induced corrosion, XF frost and thaw, XA chemical attack, XS and XD chloride-induced corrosion) at the end of the hardening process;
- The strongly alkaline pH (> 12) protects the reinforcement bars from triggering corrosion;
- The negligible breathability of the carbon dioxide ensures hardened mortars with extremely prevalent anti-carbonation characteristics;
- If required or necessary, it is possible to add a 25 kg/m<sup>3</sup> quantity of Readymesh MM-150 steel fibres to the Grout iTOP (300 grams per 25 kg bag of Grout iTOP)—for application thicknesses greater than 8 cm, 25% to 35% of Ghiaietto 6.10 can be added, being selected dried gravel with particle sizes from 6 to 10 mm, specifically for structural castable mortars, to improve the particle size curve on the basis of the increased casting thickness required;
- A very high fluidity and flow capacity, being a decisive factor in ensuring all gaps are filled in the subplate anchorages and in thin foundation formworks;
- Elevated mechanical characteristics both for short and long curing;
- Great adhesion to concrete and steel.

## FIELDS OF APPLICATION

Grout iTOP is particularly suited to precision anchorages for steel pillars, turbines, compressors, alternators, frontal and horizontal furnaces, milling machines, planers, presses, port cleats, mills, wind turbines, rock cutting machines and machinery generally. In the road works sector, it is particularly apt for anchoring structural road joints and securing road safety barriers.

## ALLOWED SUPPORTS

Concrete - Prefabricated concrete - Mixed walls (bricks and stones) - Brickworks - Stone walls - Steel



## PREPARATION OF SUPPORTS

The applicative surfaces must be clean, free from contamination or any loose or detached parts and dust, being sufficiently rough to permit good mechanical gripping between the surface and the Grout iTOP casting. Sufficiently saturate the foundation concrete with water for at least eight hours before pouring the casting mortar. Remove any surface water with sponges or air jets until it is "saturated with a dry surface". An adequate roughening of the surfaces by scarifying, sandblasting etc. is always necessary in order to obtain the maximum adhesion values to the substrate. The optimal values are obtained with high pressure hydro-scarification. Bare the irons undergoing disruptive oxidation or deeply oxidized, removing the rust of the exposed irons (by sandblasting or abrasive brushes).

## MODE OF USE

Add two-thirds (about 2.5 litres per bag) of the total water into the concrete mixer, then gradually add Grout iTOP and the remaining water, stirring for 3-4 minutes until a homogeneous mixture with the desired consistency and free of lumps is reached. Grout iTOP can be easily pumped, following proper mixing with the correct quantities of water (we do not recommend pumps with volumetric dosing of water in which the amount of liquid is not well defined and the product is quickly mixed into the pumping circuit). For elevated anchoring profiles, adding Ghiaietto 6.10 is recommended (see the relevant data sheet for more information). The application temperature is to be between +5° and +35° C. Abundantly disarm the formwork to prevent surface imperfections and the subtraction of mixture water (Grout iTOP is strongly adhesive and grips to the various media including wood and steel, if not properly unarmed). Given the self-levelling properties of the product and its self-compacting capacity, paying due attention to the vibration phase is recommended. Excessive zeal in the vibration operation can worsen the aesthetic rendering of the end result. Do not use in the absence of suitable lateral containments. Ensure exposed surfaces are protected and wet-cured. Adopt casting procedures to ensure the absence of voids and discontinuities. Only pour the mortar from one part of the casting perimeter to avoid air pockets.

## APPLICATION METHODS

Pour out

## TOOL CLEANING

Water

## KEY FEATURES



Maximum diameter of aggregate: 6 mm



Shelf-life: 12 months



Temperature of use: +5°/+35 °C

## TECHNICAL SPECIFICATIONS

UNI EN 12190

Compressive strength after 1 day > **35 MPa**

UNI EN 12190

Compressive strength after 28 days > **90 MPa**

UNI EN 196/1

Flexural strength after 7 days > **10 MPa**

Steel bar extraction at a load of 75 kN (EN 1504/6) < **0.6 mm**

No bleeding according to UNI 8998

Density **2350 g/l**

Fire resistance **A1**

UNI EN 12190

Compressive strength after 7 days > **75 MPa**

UNI EN 196/1

Flexural strength at 1 day > **6 MPa**

UNI EN 196/1

Flexural strength after 28 days > **12 MPa**

Concrete adhesion (cutting test) > **6 MPa**

Capillary absorption < **0.5**

Static elastic modulus **29.000 MPa**

UNI EN 12390-8

Water penetration under pressure (5 bar for 72 hours) < **5 mm**



## CONSUMPTION

Approximately 19 kg/m<sup>2</sup> of Grout iTOP for every centimetre of thickness to be implemented (approximately 1900 kg per cubic metre).

## STORAGE AND CONSERVATION

Store the product in its original packing, in a fresh and dry environment, avoiding frost and direct sunlight. Inadequate storage of the product may result in a loss of rheological performance. Protect from humidity.

## PHOTO GALLERY



## ADDITIONAL CONTENT



## WARNINGS AND PRECAUTIONS

The general information, along with any instructions and recommendations for use of this product, including in this data sheet and eventually provided verbally or in writing, correspond to the present state of our scientific and practical knowledge. Any technical and performance data reported is the result of laboratory tests conducted in a controlled environment and thus may be subject to modification in relation to the actual conditions of implementation.

Azichem Srl does not assume any liability arising from inadequate characteristics related to improper use of the product or connected to defects arising from factors or elements unrelated to the quality of the product, including improper storage. Those wishing to utilise the product are required to determine prior to use whether or not the same is suitable for the intended use, assuming all consequent responsibility.

The technical and characteristic details contained in this data sheet shall be updated periodically. For consultation in real time, please visit the website: [www.azichem.com](http://www.azichem.com). The date of revision is indicated in the space to the side. The current edition cancels out and replaces any previous version.

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It is forbidden to dispose of the product and/or packaging in the environment.

