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OLYMPUS®

TECHNICAL DATA SHEET

OLY RESIN 20 HTG

Two-component epoxy resin for impregnation and structural bonding

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OLY RESIN 20 HTG is a two-component, solvent-free, thixotropic epoxy resin. It is formulated for fabric impregnation of FRP reinforcement systems and for structural bonding. *OLY RESIN 20 HTG* is CE marked according to EN 1504-4 as structural bonding. It is supplied in two pre-dosed containers (A, resin + B, hardener). *OLY RESIN 20 HTG* can be applied by roller, brush or spray depending on the field of application.

Characteristics	Typical value
Number of components	2, A (resin) e B (i hardener)
Catalysis ration by weight	A:B=2:1
Curing time at 20°C	24 hours
Total curing time at 20°C	7 days
Pot life	23°C ≈ 35 min
Application temperature	+ 5 °C / +30°C
Glass transition temperature T_g EN 12614	≥ 60°C
Density (A+B) UNI EN 2811-1	1,10 ± 0,05 g/cm^3
Adhesion to concrete	> 3 MPa (concrete breaking)

Performance according to EN 1504-4 - Products and systems for the protection and repair of concrete structures. Structural bonding

Characteristics	Typical value	Reference Legislation
Bond strength/adhesion	Tensile strength > 14 MPa	UNI-EN 12188
	Compressive shear strength at 50°C > 60 MPa at 60°C > 70 MPa at 70 °C > 80 MPa	UNI-EN 12188
Shear strength	> 12 MPa	UNI-EN 12188
Linear shrinkage	a 30°C ≤ 0,1%	UNI-EN 12617
Compressive strength	> 70 MPa	UNI-EN 12190
Durability	Specification exceeded	UNI-EN 13733
Compressive elastic modulus	> 2.000 MPa	UNI-EN 13412
Coefficient of thermal expansion	≤ $100x10^{-6}$ °C	UNI-EN 1770
Glass transition temperature	Specification exceeded	UNI-EN 13733
Reaction to fire	> 40°C	UNI-EN 11357-2-2013
Dangerous substances	D – s2, d0	UNI-EN 13501-1
Bond strength/adhesion		See SDS

Installation instructions

Impregnation of FRP systems
Add component B to component A and mix at low speed with an electric mixer for approx. 3 minutes (until uniform). It is recommended not to allow the catalysed mixture to absorb too much air during the mixing phase.
The freezing time (pot life) starts when the two parts are mixed. Therefore, it is recommended to catalyse as much of the system as can be used in a time frame that varies depending on the technical temperature (pot life). With higher temperatures, the processing time is shortened; with lower temperatures, it is lengthened. Furthermore, the larger the mass, the shorter the processing time.

- ✓ Apply a first layer of mixed resin to the substrate with a brush or short-haired roller;
- ✓ Spread the reinforcement fabric over the first resin layer, taking care not to wrinkle it. Press the fabric using a grooved metal roller to facilitate the escape of air. Pressing should be done in the direction of the fibres;
- ✓ Apply a second layer of mixed resin to the laid fabric layer and roll again;
- ✓ For the deposition of several layers, repeat the same steps. This must take place within a time frame of 45 minutes at 20 °C.

At the end of the rolling, a layer of quartz sand can be applied, which must be dry and of controlled grain size, to improve adhesion for the final coating.

Structural bonding – Rapid Structural Screed system®

OLY RESIN 20 HTG can be applied by brush, roller or spray using a special equipment.
The resin must be applied over the entire surface to the previously prepared and cleaned extrados of the slab.
The subsequent laying of the concrete must be carried out fresh within the pot life indicated in the technical data sheet.

Consumption

Impregnation of FRP systems
Fabric impregnation: 0.6 to 1.5 kg/m2 depending on fabric weight and type of substrate.

Strand impregnation: 0,15 kg/m.

Structural bonding – Rapid Structural Screed system ®
From 1 to 1,5 kg/m^2

Packaging

Two-component packaging in 6 kg pre-dosed buckets (Resin: 4 Kg – Hardener: 2 Kg)

Storage conditions

The product fears humidity, store in hermetically sealed containers, in a sheltered and dry place, with temperature between +15°C and +20°C. Under these conditions its stability is 12 months.

Warnings

Do not apply the product when rain is imminent, in the presence of fog and dew or at temperatures below + 5°C. Equipment used to prepare and apply the product must be cleaned with solvent (such as acetone) before hardening. *OLY RESIN 20 HTG* must be handled with care: use gloves, protective creams and goggles to avoid contact with skin and eyes. In case of contact with the eyes, wash thoroughly with warm water and consult a doctor. For applications in hot or cold environments, it is advisable to keep the product for at least 12 hours in an air-conditioned room (20°C) in order to facilitate mixing operations and not excessively affect the workability life of the system. This product must be handled and used by experienced operators. Processing residues must be hardened and disposed of as special waste.

This data sheet replaces and cancels previous versions.

The information in this data sheet corresponds to our current knowledge and experience. The data have been compiled with the utmost care and conscientiousness, without, however, any guarantee of accuracy or completeness and without any liability for the user's further decisions. The data in themselves do not entail any legal commitments or other secondary obligations. The data do not in principle exempt the customer from independently checking the product with regard to its suitability for the intended use. Our products are subject to continuous quality controls on both the raw materials and the finished product to ensure consistent quality. Our technicians and consultants are at your disposal for information, clarification and questions regarding the use and processing of our products, as well as for on-site inspections. The latest technical data sheets can be found on the internet at www.olympus-italia.com or can be requested from our offices.

Marking obligations are not related to the intrinsic nature of a given product, but to the purpose for which a specific material is used: before placing the order, it will be the customer's responsibility to submit all available documentation to the Works Department so that it can establish the suitability of the materials (in terms of certification and performance) in relation to the intended use.

To check the latest version of this technical data sheet, information, technical assistance and other structural reinforcement systems, please contact the Olympus technical department:
email: ufficiotecnico@olympus-italia.com – tel: 800.910272 – web: www.olympus-italia.com

Product for professional use

EPD CAM compliance study published on the website https://www.environdec.com

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