ARMOFIX MT

FLUID TWO-COMPONENT EPOXY RESIN FOR GROUTING

Specific for impregnation of ARMOSHIELD C fabric by immersion, grouting ARMOSHIELD BC bars and for horizontal application of ARMOGRIP connectors

CE EN 1504-4 | ARMO CERTIFICATO SISTEMA | ELEVATA ADESIONE ACCIAIO e CALCESTRUZZO | AGGRESSIONE CHIMICA | RHEOCONTROL TECHNOLOGY

DRACO

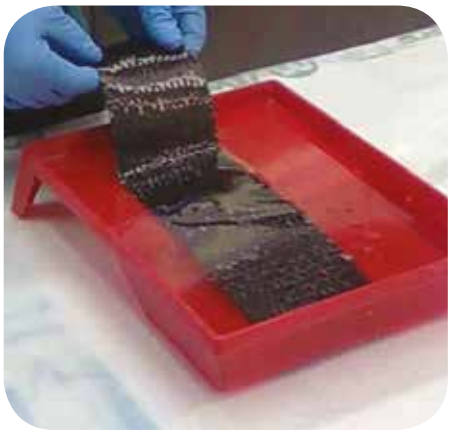
REFURBISHMENT and PROTECTION LINE

SPECIAL ADHESIVES AND RESINS FOR COMPOSITE STRENGTHENING SYSTEMS

ARMOFIX MT is a two-component fluid epoxy resin specifically formulated to be used as an adhesive and plaster. **ARMOFIX MT** is free of solvents, plasticizers and diluents and exhibits strong adhesion to all building materials. It enables you to carry out structural bonding, grouting and repairs in cavities. **ARMOFIX MT** cures without shrinkage even in moist environments.

BENEFITS

- ✓ **HIGH BOND STRENGTH: ARMOFIX MT** adheres perfectly to construction materials such as concrete, masonry, wood, steel and natural stone.
- ✓ **STRUCTURAL ADHESIVE:** by using **ARMOFIX MT** there is no shrinkage, but there is structural bonding even between elements of different materials.
- ✓ **CHEMICAL RESISTANCE: ARMOFIX MT** has a high level of resistance to water, salts, hydrocarbons, and to aggressive, acid, alkaline and saline solutions.
- ✓ **APPLICABLE ON DAMP SUBSTRATES: ARMOFIX MT** is insensitive to the substrate moisture.
- ✓ **EASY TO APPLY: ARMOFIX MT** is featured by long workability, high yield and lower scrap.



AREAS OF APPLICATION

ARMOFIX MT is used as structural adhesive for:

- ✓ Impregnation by immersion of ARMOSHILED C carbon-fibre fabrics.
- ✓ Anchoring of aramid fibre connectors ARMOGRIP, ARMOGRIP BC and ARMOGRIP MONO in horizontal position, in the floor or in the extrados of vaults.
- ✓ Grouting of ARMOSHIELD BC carbon-fibre bars for structural reinforcement to carbon-fibres.
- ✓ Grouting of cracks and anchoring injectors by injection.

SUBSTRATES PREPARATION

CLEANING AND RESTORATION

- Remove all loose and crumbling parts from the area to be restored by taking care not to damage the structures.
- Remove stains, efflorescences, residues of oil, grease, varnish, dust, dirt, form-release agents, etc;
- Before any work on walls and vaults the surface must be carefully brushed and dedusted. Any cracks must be saturated with ARMOLIME or with lime-based fluid grouts.
- On well-preserved concrete substrates proceed with a simple sandblasting process. In case of deteriorated substrates remove the damaged layer by means of milling or hydroblasting. Then proceed with the substrate restoration by treating the rebars with the passivating product DRACOSTEEL and the volumetric reconstruction of concrete with FLUECO line mortars.
- For restoring edges or micro-cracks the product ARMOFIX MTL can be used. In the presence of fissures and cracks, restore the structure's load-bearing capacity and monolithic nature, by injecting highly diffusive special resins (EPOX INIEZIONE R.M.2 or R.M.3).

DRACO Italiana SpA • via Monte Grappa, 11 D-E • 20067 Tribiano (MI) t. +39 02 90632917 • f. +39 02 90631976 • info@draco-edilizia.it

ARRANGEMENT OF HOUSING HOLES

Make the holes in the structure according to the type of aramid connector or carbon bar to be used. The actual sizes will be evaluated on the basis of the size and type of wall, as defined by the designer. The edges of the outer profile of the hole must be rounded (minimum radius 1 cm), whereas dust and loose material must be removed by vacuum cleaner.

PRIMING

Both for the application of carbon-fibre fabrics and for grouting of bars and connectors proceed with the application of the ARMOPRIMER 100 primer by brush or roller on dry substrate. With weak or porous substrates use PRIMER ES40. Lay the adhesive within 16 hours after the primer application.

SMOOTHING

Smoothing is necessary in the presence of irregular or non-planar surfaces. Smoothing must be performed after the primer touch dry period has elapsed and in any case within 24 hours, by using the epoxy paste adhesive EP FIX applied by spatula or trowel.

ADHESIVE PREPARATION

ARMOFIX MT consists of:

A - base formulation

B - hardener

Use components A and B and mix them together with spatula or low-speed drill or suitable mixer, till getting a well-blended mix. Do not take partial quantities out of the packages to avoid errors in the mixing ratio that would cause damages during the hardening process.

RECOMMENDATIONS FOR HOT CLIMATES

- Store ARMOFIX MT away from sunlight;
- Do not perform work during the hottest hours of the day;
- Do not work at temperatures higher than 35°C.

RECOMMENDATIONS FOR COLD CLIMATES

- Store ARMOFIX MT in a frost-free location;
- Do not apply at temperatures lower than 10°C;
- Start working during the hottest hours of the day, however with temperatures of at least 10°C;

HOW TO USE

1. BONDING OF THE ARMOSHIELD C CARBON-FIBRE FABRICS

IMPREGNATION BY IMMERSION OF FABRICS

Cut the carbon-fibre fabric in the size required and dip it into a pan filled by 1/3 with **ARMOFIX MT**.

Let the fabric immersed for a few minutes to allow the total impregnation of the fibres. Remove the fabric from the container and gently press lengthwise with the fibres to remove the product in excess by carefully avoiding to bend or twist the tape. Use waterproof rubber gloves to protect the skin. Immediately proceed with laying the carbon-fibre fabric.

LAYING OF FABRICS

Manually place the portion of fabric soaked in **ARMOFIX MT** resin (as on design) on the resin layer which is still fresh and apply it by taking care to make no wrinkles or creases. Apply a layer of **ARMOFIX MT** by roller or pasting brush and subsequently use the ARMOROLLER spiked roller to help the resin penetration into the fabrics and to remove any air bubbles forming during the application.

2. GROUTING OF CONNECTORS AND BARS

ARMOFIX MT is applied on the dry and clean surface within 24 hours after the application of the ARMOPRIMER 100 primer at a temperature comprised between +10 and +35°C. The product must be applied into the fixing hole by casting or injected by using a cartridge. The methods and times for product laying depend on the type of ARMOGRIP connector or ARMOSHIELD BC bars to be used, for the application specifications refer to the relative technical data sheets.

PRECAUTIONS

Use rubber gloves and safety glasses while applying and cleaning. Avoid contact of resin with skin, mucous membranes and eyes; if contact occurs, wash with plenty of water and neutral soap. The substrate moisture may affect the proper product adhesion.

PACKAGING AND STORAGE

ARMOFIX MT is available in pails:

- 6 kg + 2.4 kg pails = (A + B) 8.4 kg
- 11 kg pail + 4.4 kg pail = (A + B) 15.4 kg

If the product is stored properly in its original packaging, indoors in a dry location, at a temperature of not less than +10°C, it maintains its original features for one year.

ITEM SPECIFICATIONS

Impregnation by immersion of the ARMOSHIELD C carbon-fibre fabrics, structural bonding and anchoring of the ARMOGRIP aramid fibre connectors and of the ARMOSHIELD BC carbon-fibre bars with two-component fluid epoxy resin specifically formulated to be used as an adhesive and plaster type ARMOFIX MT by DRACO Italiana S.p.A. ARMOFIX MT will be used according to the recommendations of the manufacturer, Draco Italiana S.p.A., that will provide technical support upon request.

ARMOFIX MT

DRACO
REFURBISHMENT & PROTECTION LINE

PRODUCT FEATURES

APPEARANCE	Paste
CONSISTENCY	Fluid
DENSITY	Comp. A: 1.13 kg/l - Comp. B: 0.96 kg/l
SPECIFIC GRAVITY (A+B)	1,1 g/cm^3
STORAGE PERIOD	12 months
PACKAGING	6 kg + 2.4 kg pails = (A + B) 8.4 kg 11 kg pail + 4.4 kg pail = (A + B) 15.4 kg

APPLICATION DATA 20 °C - 65% R.H.

PASTE COLOUR	Clear amber
ASH CONTENT FROM DIRECT CALCINATION - EN ISO 3451-1	0,5%
POT LIFE - UNI EN ISO 9514	40 min
TGA DSC - THERMOGRAVIMETRY - EN ISO 11358	+ 84°C
SETTING TIME (TOUCH DRY TIME)	approx. 50 min
COMPLETE CURE TIME	7 days
APPLICATION TEMPERATURE RANGE	From +10° C to +35° C
APPLICATION THICKNESS	approx. 1 mm
CONSUMPTION	approx. 1.1 kg/m^2 per mm of thickness (nominal)

Legal notice - SLCMP version dated 01.03.2017

In the technical specifications herein, Draco Italiana s.p.a. used the indicators therein specified, with the relevant standards.

Please check if this Sheet and the figures therein contained apply to the product batch you are interested in or if they have been overridden by any later release. If in doubt, check whether this Sheet matches the one applicable at the time of finalising the sales agreement, at **www.draco-edilizia.it**, and/or contact our Engineering Department.

No advice provided by our staff, either verbally or in writing at your request, about the potential applications of the Products shall be binding under the sales agreement or shall be considered an integral part of the agreement. Such advice is based on our experience and on the best available practical and/or scientific knowledge; as such, it shall not be binding or conditional on the buyer or user. Please try our products first to find out whether they are fit for your intended use or application; in any case, you shall be solely responsible for your choice.

ARMOFIX MT

DRACO
REFURBISHMENT & PROTECTION LINE

CE
UNI EN 1504-4
1982-CPD-348

FINAL PERFORMANCE (20°C - 65% R.H.)

PERFORMANCE CHARACTERISTIC	TEST METHOD	MINIMUM REQUIREMENTS ACCORDING TO EN 1504-4	PRODUCT PERFORMANCE
COMPRESSIVE MODULUS OF ELASTICITY	EN 13412	≥ 2000 N/mm^2	3200 MPa
FLEXURAL MODULUS OF ELASTICITY	EN ISO 178	≥ 2000 N/mm^2	3100 MPa
COEFFICIENT OF THERMAL EXPANSION	EN 1770	≤ 100 × 10^{-6} per K	26 × 10^{-6}/K
TOTAL LINEAR SHRINKAGE FOR STRUCTURAL ADHESIVE AGENTS	EN 12617-1	≤ 0,1%	0,04%
GLASS TRANSITION TEMPERATURE	EN 12614	≥ 40°C	84°C
INJECTABILITY	EN 12618-2	Cohesive failure of support on concrete substrate	Meets specifications
DURABILITY (TEMPERATURE-HUMIDITY CYCLES)	EN 13733	compressive shear load > tensile strength of concrete No failure of steel test sample	Meets specifications
REQUIREMENTS FOR STRENGTHENING USING BONDED PLATE			
SHEAR STRENGTH	EN 12188	≥ 12 MPa	19,4 MPa
PERFORMANCE REQUIREMENTS OF THE ADHESIVE FOR MORTAR AND CONCRETE			
COMPRESSIVE STRENGTH	UNI EN 12190	≥30 MPa	60 MPa
BONDING ON CONCRETE MC (0,40) - EN 1766	EN 12636	Cohesive failure of the concrete substrate	Meets specifications
OPEN TIME ON MC (0.40) CONCRETE - EN 1766	EN 12189	Declared by the manufacturer	60 min