APSE®
floor products since 1964

N. 535 - REV. 08/2026

ANCORFIBER TIX

TWO-COMPONENT STRUCTURAL EPOXY RESIN FOR CARBON FIBER BONDING AND ANCHORING

DESCRIPTION

ANCORFIBER TIX is a two-component structural adhesive specifically designed for embedding bars and bonding carbon fibre tapes in seismic structural reinforcement applications.

ANCORFIBER TIX ensures easy and complete impregnation of the fabric and excellent adhesion to any substrate, whilst maintaining cohesion and ease of use even in vertical and overhead applications.

FIELDS OF APPLICATION

- Bonding and impregnation of carbon fiber strips and fabrics for structural reinforcement.
- Seismic structural strengthening using FRP composite materials.
- Structural repair of concrete and timber structures (beam ends, etc.).
- Structural bonding in beton-plaque techniques.
- Anchoring of carbon fiber bars and for general anchoring applications.
- Can be used as an adhesive on vertical surfaces (consumption approximately 1–1.1 kg/m²) prior to the fresh-on-fresh application of the POLIGLASS MONO + aggregate system.

PACKAGING

Comp. A + B = 4 + 1 kg
or
Comp. A + B = 8 + 2 kg

CONSUMPTION

Installation of reinforcement fabrics or plates: The consumption of ANCORFIBER TIX is closely related to the characteristics of the substrate and the type of fabric. Generally speaking, on a flat surface, 1.1–1.5 kg/m² is recommended for bonding and impregnating a layer of carbon fibre fabric.

Installation of grouting bars: approximately 1.1 kg/dm³ depending on the porosity of the cavity to be grouted.

MIXING RATIO

Comp. A : Comp. B = 4 : 1 parts by weight.

FEATURES AND BENEFITS

- ANCORFIBER TIX provides structural bonding to building materials such as concrete, masonry, timber, steel and natural stone.
- Its fluid thixotropic gel consistency allows effective impregnation of carbon fiber while ensuring safe and convenient application on vertical and overhead surfaces.
- Suitable for application on damp substrates: ANCORFIBER TIX is relatively insensitive to substrate moisture, improving application stability.
- Easy to inject for the grouting of reinforcing bars. ANCORFIBER TIX offers mechanical performance characteristics such as adhesion, shear strength and compressive strength at the highest levels, whilst maintaining resistance to chemical and environmental attack and ea se of use.
- ANCORFIBER TIX has a formulation free from volatile organic compounds (VOC), nonylphenols, and other substances that are harmful to the environment or to the health of applicators.

CERTIFICATIONS

Quality management system certified to ISO 9001 (Certificate No. IT.17.0227.01.QMS).
APSE S.r.l. is an active member of CONPAVIPER.

APSE® S.r.l. – www.apsebg.it – Viale Friuli 22, 24049 Verdello (BG), Italia – Tel. 035 4191044 - info@apsebg.it

ANCORFIBER TIX

TWO-COMPONENT STRUCTURAL EPOXY RESIN FOR CARBON FIBER BONDING AND ANCHORING

SUBSTRATE PREPARATION

The anchoring holes must be clean. Pressurized water may be used to facilitate cleaning, provided that the substrate is not adversely affected. Then dry the holes using clean, dry, oil-free compressed air.
Remove all loose or detached parts from the area to be repaired, taking care not to damage the structures.
Remove stains, efflorescence, or any traces of oil, grease, paint, dust, dirt, release agents, etc.
The substrate must therefore be clean, free from loose materials and standing water, and must have a pull-off strength of at least 1.5 N/mm², with a moisture content not exceeding approximately 5%.
To ensure effective application in compliance with applicable standards, the substrate must also be regular and level, with surface deviations not exceeding ±2 mm over a length of 1 m. If the substrate does not meet these requirements, it must first be repaired and/or levelled.

Metal substrates

Metal plates must be sandblasted to an SA2 finish and degreased using suitable solvents.

Concrete substrates

Concrete substrates in good condition must be sandblasted or sanded before applying ANCORFIBER TIX.
In the case of deteriorated concrete substrates, proceed as follows:

- Remove the damaged layer by scarification or hydro-demolition.
- Subsequently, restore the substrate by treating the reinforcement bars with a passivating agent and rebuilding the concrete section using structural repair mortars.
- In the event of cracks or fissures, restore the load-bearing capacity and monolithic integrity of the structure by injecting a suitable resin. Before installing the fabrics, wait approximately 1–2 weeks, depending on the internal temperature and ventilation of the rooms.

Masonry substrates

Masonry substrates must be brushed clean and dust-free. Any cracks, fissures or repaired areas must be treated as follows:

- Before starting the reinforcement work, any existing cracks must be injected with a suitable product from the relevant product range.
  Cracks or fissures large enough to compromise the continuity of the masonry structure must be repaired using reinforced stitching with embedded carbon fiber bars.
- If the masonry shows surface weakness and/or powdering, a consolidating treatment is recommended.
- If necessary, repoint the joints.

Preparation of mortar strips for fabric installation

In all cases, in order to apply the strips onto a flat surface with adequate mechanical strength, it is advisable to create strips using non-shrink thixotropic mortar.

PRIMER APPLICATION

On a properly prepared surface, apply APSEFLOOR 150 primer using a brush or roller to a dry surface.

PRODUCT PREPARATION

Pour Component B into Component A and mix using a spatula, drill, or suitable low-speed mixer until a homogeneous mixture is obtained.
Avoid taking partial quantities from the containers, as this may result in incorrect mixing ratios and consequently improper curing of the product.

APSE®
floor products since 1964

N. 535 - REV. 08/2026

ANCORFIBER TIX

TWO-COMPONENT STRUCTURAL EPOXY RESIN FOR CARBON FIBER BONDING AND ANCHORING

APPLICATION METHOD

Apply ANCORFIBER TIX using a trowel within 24 hours of applying the APSEFLOOR 150 primer, spreading a first layer of bonding resin to a thickness of approximately 1 mm. Then position the carbon fiber strips on the treated surface according to the project specifications, applying gentle pressure by hand during installation. The strips must be laid straight and without wrinkles.
Proceed then to impregnate the fabrics by applying firm pressure with a metal roller specifically designed for the application of carbon fibre fabrics.

Installation of the anchoring bar

Use a pressure-plate injection pump designed for thixotropic fluids to extrude the product into the hole. Inject the resin starting from the bottom of the hole to prevent air entrapment, filling the cavity to approximately three-quarters full. Adjust the quantity of product injected to ensure the anchoring collar is filled. Then insert the bar and remove any excess resin.

Maximum application thickness: 1 mm

Apply the product at temperatures between +5°C and +35°C.

CURING

The curing time of ANCORFIBER TIX is affected by the ambient temperature.
For drying and curing times at 20°C, please refer to the table below.

Pot life	80 minutes
Full curing	10 days

WARNINGS

Moisture in the substrate may adversely affect the proper adhesion of the adhesive.
If the dimensions of the anchoring collar exceed 1 cm, use our APSESTUCK PASTA epoxy filler.

CLEANING OF TOOLS

The equipment used for preparation and application must be cleaned after use with DILUEPOX.

HEALTH AND SAFETY WARNINGS

For information on safety standards, hazard indications, and precautionary advice, refer to the latest Safety Data Sheet, available on request at: ufficiotecnico@apsebg.it

STORAGE

Shelf life: 12 months if stored in the original packaging, in a dry place free from moisture.
Store at temperatures between +10°C and +35°C.

DISPOSAL

Dispose of the contents and/or container in accordance with local regulations.

APSE®
floor products since 1964

N. 535 - REV. 08/2026

ANCORFIBER TIX

TWO-COMPONENT STRUCTURAL EPOXY RESIN FOR CARBON FIBER BONDING AND ANCHORING

TECHNICAL DATA

PHYSICAL CHARACTERISTICS OF THE TWO COMPONENTS (at +20°C)

CHARACTERISTICS	STANDARD	RESULT	
		Component A	Component B
Appearance	-	Pasty	Pasty
Specific gravity	EN ISO 2811-1	1.06 ± 0.02 g/cm^3	0.94 ± 0.02 g/cm^3

PHYSICAL CHARACTERISTICS OF THE MIXTURE (at +20°C)

CHARACTERISTICS	STANDARD	RESULT
Mixture density	EN ISO 1675	1.075 g/cm^3
Mixture viscosity	EN ISO 2555	164000 mPa s

PRODUCT PERFORMANCE IN USE

Tensile modulus of elasticity	EN ISO 527-1	2010 N/mm^2
Flexural modulus of elasticity (Test specimen: 4 mm x 10 mm x 80 mm)	EN ISO 178	1641 N/mm^2
Tensile strength	EN ISO 527-1	16.85 N/mm^2
Flexural strength	EN ISO 178	28.47 N/mm^2
Elongation at break	EN ISO 527-1	3.6 %
Adhesion to concrete	EN 12636	3.4 N/mm^2
Glass transition temperature	EN 12614	53°C
Service temperature limits	CNR DT200-R1/2013	-10/+38°C
Fire resistance	-	n.d.p.

APSE®
floor products since 1964

ANCORFIBER TIX

TWO-COMPONENT STRUCTURAL EPOXY RESIN FOR CARBON FIBER BONDING AND ANCHORING

PRODUCT PERFORMANCE IN SERVICE, IN ACCORDANCE WITH STANDARD EN 1504-4

CHARACTERISTICS	STANDARD	REQUIREMENTS	RESULT
Compressive modulus of elasticity	EN 13412	≥ 2000 N/mm²	3.2 GPa
Flexural modulus of elasticity *(test specimen: 8 mm thick × 15 mm × 160 mm)*	EN ISO 178	≥ 2000 N/mm²	2.1 GPa
Coefficient of thermal expansion	EN 1770	≤ 100 × 10-6 per K	25 × 10-6/K
Total linear shrinkage for structural bonding agents	EN 12617-1	≤ 0,1%	0.03%
Glass transition temperature	EN 12614	≥ 40°C	53°C
Shear durability (temperature-humidity cycles)	EN 13733	Shear compressive load > tensile strength of concrete. No failure of steel specimens.	Requirement met
Performance requirements for reinforcement using bonded metal plates			
Shear strength	EN 12188	≥ 12 N/mm²	20.3 N/mm²
Adhesion - oblique shear strength	EN 12188	50° ≥ 50 N/mm² 60° ≥ 60 N/mm² 70° ≥ 70 MPa	42 N/mm² 53 M N/mm² 78 N/mm²
Performance requirements for adhesive agents for mortar or bonded concrete			
Compressive strength	UNI EN 12190	≥ 30 N/mm²	80 N/mm²
Shear strength	EN 12615	≥ 6 N/mm²	> 6 N/mm²
Bond strength on concrete (0.40) - EN 1766	EN 12636	Cohesive failure of the concrete substrate	Requirement met
Open time on concrete (0.40) – EN 1766	EN 12189	Declared by the manufacturer	40 min.