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Very  
High  
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Systems

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Certified Quality System since **FEBRUARY 1993**

## Adhesives– Restoration by structural reinforcement with composite materials.


# Tecnoepo 701/L HTG


**GREY**


HIGH GLASS TRANSITION TEMPERATURE ADHESIVE FOR STRUCTURAL REINFORCEMENT


For reinforcement with steel plate

**CE** approved – Certificate n. 1305 - CPD - 0808  
**EN 1504-4 table ZA.1a**

**Description**  Two-component product based on epoxy-amines, charged with fillers and pigments, formulated as adhesive, cures in ambient conditions.

**Characteristics**  High reactivity  
Highly thixotropic  
Very high mechanical resistances  
Medium-high glass transition temperature

**Use**  As adhesive for the repair or restoration of structural characteristics with reinforcement technique making use of fabrics or laminates in carbon, glass fibre or various hybrid fibres, steel plates (béton plaque).

**Application**  *Tools:* trowel  
*Temperature of application:* 5 ÷ 35 °C and relative humidity of max 60 % .  
*Applied on primer:* Tecnoepo 700 primer (see relative Technical Datasheet)  
*Clean tools with:* MEK or acetone or diluents for epoxy.

## METHOD OF USE

### PREPARATION OF THE SUBSTRATE

Prior to proceeding with the application of the adhesive, it is necessary to verify the condition of the cementitious substrate: verifying in clean and absent of oil traces, greases, delaminating particles, free from cracks and discontinuities. Continue with the preparation of the substrate choosing the best suited procedure accordingly:

- Elimination with proper equipment of the superficial dust when the substrate seems in good condition. Recommended are vacuum aspiration and/or watching with pressured water;
- Repair or level with cement based mortars or resin based materials, when the substrate has cracks or anomalies. In any case, work only on de-dusted and cohesive substrates;
- Sandblast or grinding in case of un-cohesive parts.

Avoid the application on substrates contaminated with oil and/or greases.

### APPLICATION

Make sure the room is well ventilated and follow the recommendations stated in the Material Safety Data Sheet on the use of PPE (Personal Protective Equipment).

After the drying of the applied primer, proceed with the application of **Tecnoepo 701/L** as follows:

- With the aid of a spatula, take out the component B and transfer it to the tin of component A
- Mix the two components until complete homogenization of the mixture (uniform color)
- Apply the product evenly by trowel on a reinforcement plate at a rate of 1 to 1.5 kg/m<sup>2</sup>;
- Apply the laminate to the support previously treated with Tecnoepo 700 primer exerting a slight pressure so as to facilitate gripping of the adhesive and block it till hardened (at least 24 hours at 20°C).



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**IMPORTANT:** If the ambient temperature and that of the support are less than 10°C is necessary to heat separately the two components of the product to a maximum temperature of 30°C (example by bain marie) in order to keep the material soft to obtain a better applicability.

### APPLICATIVE CONDITIONS

Substrate temperature : +5°C / +35°C  
 Substrate humidity : ≤ 3%  
 Ambient temperature : +5°C / +35°C  
 Relative ambient humidity : max 60%  
 Dew point : the substrate and the product shall be at a temperature minimum 3°C higher than the dew point to avoid the risk of condensation.

### PACKAGING

supply - kg

component	a	b	a+b
pail	2.25	0.75	3

### STORAGE

Store the original and unopened packaging at a temperature between + 5°C and + 35°C. Product can be kept 12 months from the production date.

### TECHNICAL CHARACTERISTICS

APPLICATIVE CHARACTERISTICS at 20 ± 2°C	Test method	Unit of measurement	Typical values
Mixing ratio in weight	-	A : B	3 : 1
Solid content in weight on total.	-	%	≈ 100
Consumption	-	kg/m <sup>2</sup>	1±1.5
Specific weight	EN ISO 2811-1	kg/l	ca 1,58
Potlife	EN ISO 9514	Minutes	40±5
Workability time of the mix	EN ISO 9514	Minutes	~ 35



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PERFORMANCE CHARACTERISTICS	Test method	Unit of measurement	Typical values	Threshold value according EN1504-4
Open time	EN12189	minutes	~60	-
Coefficient of thermal expansion	EN 1770	per °C	~34 x 10 <sup>-6</sup>	≤ 100 x 10 <sup>-6</sup>
Total shrinkage	EN 12617-1	%	0,09	≤ 0,1
TG – glass transition temperature (48 h at 23 °C)	EN 12614	°C	46,3	≥ 40
TG – glass transition temperature (24 h at 23 °C + 24 h at 60 °C)	EN 12614	°C	77	-
Resistance slant shear strength in compression (steel)	EN 12188	N/mm <sup>2</sup> at 50°	> 100	≥50
		N/mm <sup>2</sup> at 60°	> 100	≥60
		N/mm <sup>2</sup> at 70°	> 100	≥70
Adhesion by direct pull-off		N/mm <sup>2</sup>	> 19	≥14
Flexural strength at 28 days	EN 12190	N/mm <sup>2</sup>	> 35	-
Compression strength at 28 days	EN 12190	N/mm <sup>2</sup>	> 90	≥30
Elasticity modulus in compression	EN 13412	N/mm <sup>2</sup>	~ 8000	≥2000
Durability	EN 13733	-	passing	Pass/not passing

The above data are based on our actual and most experienced practical and laboratory knowledge and the results are collected from application of the product in different situations. Tecnochem Italiana does not assume any responsibility regarding inadequate or negative performance as a result of improper use of the product or for defects deriving from factors or elements other than the quality of the product including improper storage. The technical characteristics and performance mentioned in this datasheet are updated periodically. The revision dates and number of revision of the datasheets are listed in the table below. Eventual variations are traceable on our website [www.tecnochem.it](http://www.tecnochem.it) where the most updated datasheets can be retrieved.

Edition: 03/2012

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