

## REFOR-tec® GF 8 / ST - HS

**HPFRC - High Performance Fibre Reinforced Concretes**

**ANTISHRINKAGE, ANTICORROSION FOR  
STRUCTURAL POURABLE MICRO-CONCRETE**

**Description** REFOR-tec® GF 8/ ST - HS is a three-component formulation to use in adequate proportions and with preselected and prequalified local aggregates to obtain auto levelling (S5) super concrete with high physical mechanical values.

Proportions, how to use	Indicative proportions* in Kg/m <sup>3</sup>	Packaging
<b>REFOR-tec® GF 8/ ST - HS</b> <b>COMP. A</b> POWDER	500÷650	- Big bags of 500÷650 Kg. - Bags of 20 Kg.
<b>REFOR-tec® GF 8/ ST - HS</b> <b>COMP. B</b> LIQUID	16÷21	- Barrels of 220 Kg. - IBC of 1.000 Kg.
<b>REFOR-tec® GF 8/ ST - HS</b> <b>COMP. C</b> FIBRE <b>FIB-energy® ST - HS</b>	36÷46	- Boxes of 25 Kg.

Local aggregates ** from 0÷6 mm MIN to 0÷10 mm MAX	c.ca 1.800÷1.600
Active water (W/powder ≤ 0,3)	c.ca 150÷190

**NOTE\*** : the proportioning and the final consumption must be calculated on the jobsite with the prequalified local aggregates and depending on the particular design specifications.

**NOTE\*\*** : the local aggregates must be adequately preselected and prequalified on the jobsite for the final proportioning.

**How to apply** Predefine the proportioning.

Mix starting with the aggregates + part of water + comp. A powder + comp. B liquid +rest of water until homogeneous paste + gradually mixing comp. C fibres.

The conglomerate is pumpable.

- Applications**
- For structural repairs casting in mould or in confined spaces
  - For structural repair at low thickness on floors
  - For seismic retrofitting and repair with absorption and transfer of shear or tensile stresses in case of events with high dynamic stresses.
  - For the structural repair of pillars and beams resistant to fire.
  - For the repair of floors with request for increased resistance to static and dynamic loads and exceptional shocks and impacts.

**Technical characteristics (typical values)** Using an aggregate 0 – 8 mm (river sand – Ticino)

DENSITY	c.ca 2450 Kg/m <sup>3</sup>
W/C ACTIVE	< 0,30
CONSISTENCY	S5/SCC
COMPRESSION RESISTANCE EN 12190	1 d ≥ 35 MPa    28 d ≥ 65 MPa
FLEXION RESISTANCE EN 196-1	1 d ≥ 6 MPa    28 d ≥ 13 MPa
FLEXURAL RESISTANCE UNI EN 11039	$f_{eq(0,6-3,0)}$ [MPa] > 7.5 MPa
FRACTURE ENERGY	9.000 N/m
HYGROMETRIC SHRINKAGE 90 DAYS IN OPEN AIR	≤ 0,015%
Elastic modulus EN 13412	c.ca 36 GPa
Adhesion to concrete EN 1504-3 (direct traction EN 1542)	> 3 MPa
Thermal compatibility freeze/thaw EN 13687-1	> 2 MPa
Capillary absorption EN 13057	≤ 0,25 m <sup>-2</sup> h <sup>-0,5</sup>
Carbonation depth	≤ 0,5 mm (25 years)

### PARAMETRI DI NORMATIVA UNI 11039

	$f_{fr}$ [MPa]	$f_{eq(0-0,6)}$ [MPa]	$f_{eq(0,6-3,0)}$ [MPa]	$D_0$ [-]	$D_1$ [-]
<b>MIX 13.1</b>	7.12	9.49	10.28	1.33	1.08
<b>MIX 13.2</b>	7.07	10.08	10.30	1.43	1.02
<b>MIX 13.3</b>	6.77	7.71	7.60	1.14	0.99
$f_{media}$	6.99	9.09	9.39	1.30	1.03

**resistenza a compressione media ottenuta su 4 cubetti 15x15x15 cm: 67 MPa**

**Remarks** Information according to 2003/53/CE:

**Storage:** 12 months in original packaging, unopened, stored protected and dry, +5°C and +35°C. Do not use the content of opened bags if you notice lumps. Avoid the freezing of the liquid component.

**Safety indications** Read carefully the indications on the packaging, or request the relative Material Safety Datasheet of this product.

The above information is based on our best experiences and lab results and on results of the application of the product in various fields. Tecnochem Italiana is not responsible for negative performances due to not proper use of the product or for defects due to elements not connected with the quality of the product included wrong storage. Technical characteristic in this technical data sheet are up-to-dated periodically. Revision date of this technical data sheet is indicated below.

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