

GRC is real freedom of designing  
and joy of building, experience  
them with **GRC Beton Poland**



GRC  
**Beton**

[www.GRCbeton.com](http://www.GRCbeton.com)

## Unusual span of facade cladding:

Adding fiberglass and a mixture of special chemicals to reinforced concrete give possibility to produce light, lasting elements in any color, texture, shape, and span which was previously unknown in modern architecture:

- Facade cladding 400 x 200 cm – thickness 25 mm
- Facade cladding 240 x 120 cm – thickness 15 mm
- facade panel 120 x 80 cm – thickness 12 mm

## Fastening systems:

Basic fastening systems are analogical as in another elevations:

- invisible mechanical system - for ventilated elevations as well as for another ones – it is based on a substructure, anchors or lifting slings sunken in GRC panels.
- visible systems: anchors, screws, rivets
- invisible chemical system: glue

## Freedom of shaping the surface:

Four basic methods of manufacturing products from the GRC concrete provide freedom in fields like:

- Color: every available colour of the concrete
- Texture and structure: smooth, mat, polished, corrugated, openwork etc.
- Spatial panels: L-profile C- profile U-profile, curved, spherical etc.

## GRC application range:

Fibreglass reinforced concrete (GRC) can be used in very different architectural areas such as: small architecture, ceilings, acoustic walls, flagstones, acoustic barriers, renovation of sewers, sinks, windowsills, baths, roofing, restoration of monuments, or curtain channels for installation.

## Specifications:

Parameter	Unit	Spraying method	Mixture casting method	Traditional concrete
Fiberglass content in concrete mass	%	5%	3%	0%
Density in the dry state	g/cm <sup>3</sup>	1,8 - 2,2	1,8 - 2,0	2,2 - 2,5
Thermal conductivity	W/m*K	0,9 - 1,5	0,9 - 1,5	1,0 - 1,6
Thermal expansion	X10 -6/°C	7 - 12	7 - 12	10 - 14
Frost resistance	Cycle	150	150	<100
Attenuation of sounds (flat plate 9,3mm)	dB	31,2	31,2	31,2
<b>Bending:</b>				
Destructive tension (MOR)	MPa	20 - 30	10 - 14	-
Limit of proportionality (LOP)	MPa	7 - 13	5 - 8	2 - 6
Young's modulus	GPa	15 - 25	13 - 21	27 - 35
<b>Extension:</b>				
Destructive tension	MPa	8 - 11	4 - 7	-
Limit of proportionality	MPa	5 - 7	4 - 6	1 - 4
<b>Shearing:</b>				
Shearing	MPa	8 - 11	4 - 7	3 - 5
Compressive strenght	MPa	50 - 80	40 - 60	15 - 60
Toughness	kJ/m <sup>2</sup>	10 - 25	10 - 15	0,05
Modul of elasticity	GPa	10 - 20	10 - 20	20 - 40
D rying shrinkage	%	0,6 - 1,2	0,1 - 0,2	-



Visit [www.GRCbeton.com](http://www.GRCbeton.com) to find freedom and happiness of space creation a new – without limiting yourself and your investments.



The architectural, fibreglass reinforced concrete (GRC) is available on the polish market from today. Discover dozens ways of its use in modern public and industrial space. Find out how spectacular can be objects with the GRC application. Design with us your own, unique building or object etc.

Guarantee of success in non-conformist architectural projects is given by strength of fiberglass, beauty of concrete and its elasticity, full 3D, arbitrariness of colour and structure and years of our experience. GRC gives also a number of solutions for transport and municipal infrastructure and also a restoration of monuments.