

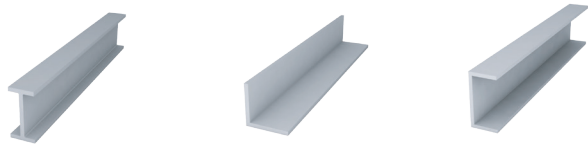


GRP STRUCTURES

 **TADIPOL_{sl}**

Since 1998 we manufacture and assemble GRP structures (plastic reinforced with fibreglass). Over twenty years of experience support us as specialized Company in southern Europe for this type of installation.

All the profiles used by TADIPOL are supplied by TECNIPUL, a company of the same Family Business Group, leader in Spain in the design and manufacture of fibreglass profiles using the pultrusion method.



GRP structures are suitable for chemical industry, mining industry, water treatment plants or marine environments due to the high corrosion resistance of GRP.

Traditional materials replacement by fibreglass reinforced polyester (GRP), makes easier the assembly of the installation, increases its useful life and reduces maintenance costs.



Main advantages to use of pultrusion profiles for the construction of structures:



Corrosion resistance: The durability of the material will not be affected by wet, saline, acidic or atmospheric pollution.



Light weight: The reduction of weight will facilitate the manipulation and the assembly of the material in reduced spaces of work.



Excellent mechanical properties: The flexibility and memory of the composites materials offer high resistance to impact and fatigue.



Fire-retardant properties: The composition of the material is adapted to the use and / or destination of the profile to achieve the fire regulations and more demanding fumes.



Electrical insulation: The GRP profiles use reduces drastically the risk of electric shock and does not produce electromagnetic fields.



No maintenance: The benefits of our profiles guarantee a long life of the vehicles, with no added costs.



Low coefficient of expansion: The profiles in GRP do not suffer changes in front of the thermal oscillations.



Structures

With TECNIPUL GRP profiles any type of structures can be built. Thanks to the wide range of structural profiles we have and the possibility of chose the resin or fiber, we can achieve any type of requirement, either structural or chemical.

Walkways and structures

GRP walkways and ladders are used as air and elevated access to different types of installations and are especially suitable for wet, saline or corrosive environments. We make the custom design of the leaders or walkways in polyester according to the needs of the client. GRP has excellent dielectric

properties that meet high safety standards against the risk of electric shock. The walkways and ladders that TADIPOL manufactures follow the UNE-EN ISO 14122 standard of permanent access to machines and industrial installations and the UNE-EN ISO 14396 standard of fixed ladders for manholes.



Handrails

Our handrails offer important advantages over conventional metal handrails. To its lightness and ease of assembly, is added a long service life thanks because of the qualities of the material.

GRP Tramex

GRP Tramex grates offer great performance even under the most demanding corrosion conditions.

The anti-slip properties are obtained with a finish with grit or lacquer that gives them a great roughness.

The **technical characteristics** of the GRP profiles can vary according to the geometry, thickness and profile type. Also orientation, weight of the fiber reinforcement used and the type of polymer matrix will influenced.

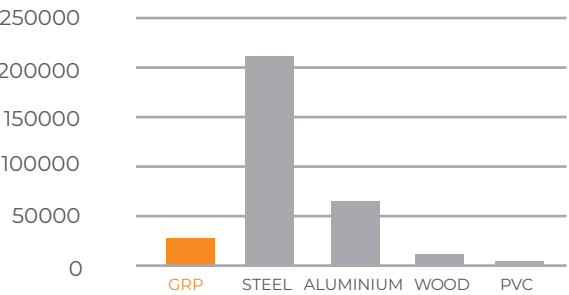
Physical properties

	VALUE	UNITS
DENSITY	1,8 - 2,0	gr/cm ³
GLASS CONTENT	45 - 80	%
WATER ABSORPTION	< 0,5%	by weight

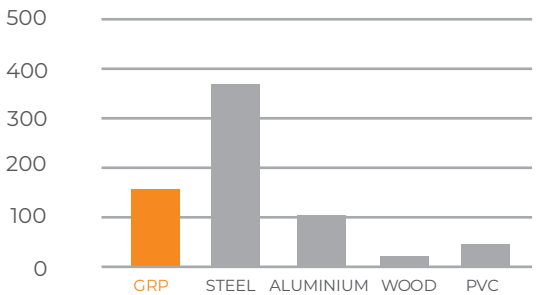
Mechanical Properties

	LONGITUDINAL	TRANSVERSAL	UNITS
TENSILE STRENGTH	200 - 550	10 - 70	MPa
COMPRESSIVE STRENGTH	170 - 300	10 - 70	MPa
BENDING STRENGTH	250 - 550	10 - 70	MPa
TENSILE MODULUS	20.000 - 42.000	6.000 - 12.000	MPa
COMPRESSION MODULUS	25.000 - 39.000	8.000 - 16.000	MPa
BENDING MODULUS	23.000 - 43.000	7.000 - 18.000	MPa
	VALUE	UNITS	
ELONGATION AT BREAK	1,5 - 2	%	
COEFFICIENT OF LINEAR EXPANSION	12 - 17	1/°C · 10-6	
HARDNESS BARCOL	> 40	-	
IMPACT STRENGTH IZOD	> 200	kJ/m ²	

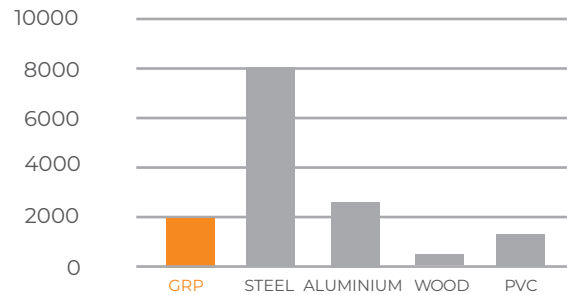
E-Modulus



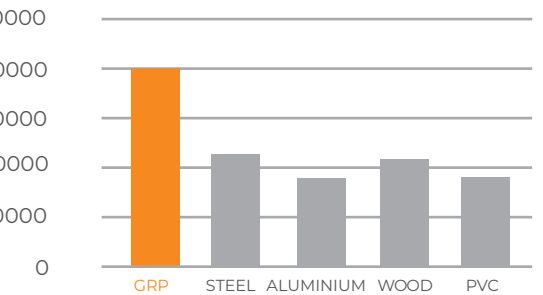
Tensile strength



Density



Specific strength



The freedom that gives us pultrusion in design, geometry and properties allows us to offer the most appropriate solution to the specific requirements that each client needs.



Custom Property - Pultrusion profiling. The manufacture of molds and profiles property of the client is a very common practice in Tecnipul. We provide customer with a highly qualified technical team in order to offer a product that meets the specifications and working conditions provided for each project.



Mechanization. The GRP profiles can be machined according customer needs. Conventional methods such as drilling, milling, cutting, etc. can be chosen. Or turn to machining by CNC numeric control if the project requires high precision.



Painting. The GRP profiles can be painted using polyurethane in two-component, been any RAL color obtained.

The technical characteristics of the GRP profiles can vary according to the geometry, thickness and profile type. Also the orientation, the weight of the fiber reinforcement used and the type of polymer matrix will influence it.



Profile measurements.

Maximum height: 600mm
Maximum width: 1500mm

Maximum thickness: 70mm
Minimum thickness: 2mm



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