

GRP PRODUCTS

GRP: Glass Fiber Reinforced plastics



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What is GRP

GRP is a composite material that consists of a polymer matrix and glass fibers. The polymer matrix is usually an epoxy, vinylester, or polyester thermosetting resin. The resin brings the environmental and chemical resistance to the product, is the binder for the fibers in the structural laminate and defines the form of a GRP part. The glass fibers add strength to the composite. They may be randomly arranged, or conveniently oriented. The most common type of glass fiber used for GRP is E-glass, which is aluminon-borosilicate glass. E-CR-glass (Electrical/Chemical Resistance) is also commonly used in applications that require particularly high protection against acidic corrosion.

It can range from a tensile strength of 44-2358MPa, and a compressive strength from 140-350Mpa while only weighing a quarter of the weight of steel. The woven material can be hardened with a thermosetting polymers such as epoxy, resin or thermoplastics.

As with many other composite materials, the two materials supplement each other to form a stronger compound. Plastic resins are strong in compressive loading; the glass fibers are very strong in tension. By combining the two materials, GRP becomes a material that resists both compressive and tensile forces very well. Production methods of GRP include filament winding, centrifugal casting, hand lay-up and spray lay-up, and pultrusion.

GRP features many beneficial characteristics. It comes with low weight at high mechanical strength, resistance against chemicals and corrosion (thanks to its non-conductive properties also electrolytic corrosion), UV radiation and temperature stability, and environmental friendliness. GRP is waterproof, making it ideal for all outdoor applications. It can be customized to be fire-retardant by using non-flammable resins. GRP is a highly durable material with a very long lifetime expectancy, ideally suited for a wide range of applications in various industries.

RCR has developed a series of products according to the characteristics of GRP, mainly including the reception desk, sofas, chairs, landscape greening base, etc.







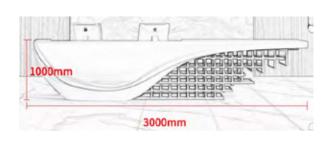


















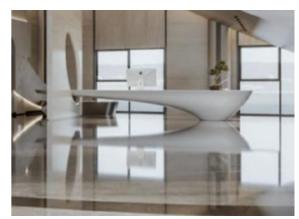














GRP SOFA







GRP CHAIR











GRP TEA TABLE









GRP PLANT POOL & REST BENCH











GRP FLOWERPOT



