

DSM 3.4.2

Glass Reinforced Plastic (GRP)

General:

Contact moulding is the most commonly used method for the manufacture of both small and large reinforced polyester products such as boat hulls, vehicle bodies, GRP building panels and cladding, ducts and tanks and many other mouldings where small production runs are required.

A single mould is used, with the laminate applied to the suitably prepared mould surface. The result is a moulding with only one smooth surface, that in contact with the mould. Moulding thickness is generally in the range 2-10 mm although there is basically no upper limit.

The mould is frequently made from GRP using one of the specifically developed tooling grade polyester resins. Such moulds generally have a life of between 500 to 1000 releases. Other mould materials include tooling grade epoxy resin systems, plaster of paris supported on a suitable framework. A metal mould will give the greatest number of releases and provide the longest working life but will be the most expensive to produce.

Two fabrication methods are used: **Hand** Lay- up or **Spray** Lay-up

Benefits:

- Simple technique.
- Low capital cost (cheap moulds).
- Large complex shapes can be produced.
- Can be painted.

Limitations:

- High labour content.
- Low production speed.
- Quality is dependent on operator skill.

Application:

Hand lay- up fabrication: Covers & Housing

These values are representative. For critical applications, refer to data-sheet.

MECHANICAL PROPERTIES					
	HARDNESS Shore A	TENSILE STRENGTH:	YOUNGS MODULUS:	POISSONS RATIO:	DENSITY:
GRP	---	100 MPa	80 GPa	0.22	2600 Kg/m³

Alternatives:

Alternatives are allowed only with the express written permission of ASMPT. Please email details of your request to engineering_enquiries@asmpt.com

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DCR				7135	44832				