

Technical Reinforcements for

Closed Mould Applications

Saint-Gobain Technical Fabrics produce a comprehensive range of technical reinforcements ideally suited to Closed Mould applications.

Whether single skin, soft-top, or closed mould, with positive pressure or vacuum, these processes all have the same basic requirements from their reinforcements. They need to be easy to pre-form, quick to load into the tool, and must allow the resin to flow through and wet-out the fibres quickly and completely.

No single reinforcement suits every application, which is why we offer a wide range to cover every requirement:

MULTIMAT - CSM/knitted glass/CSM

A 100% glass, cold performable material, produced by stitching chopped glassfibres on both sides of a highly drapeable knitted glassfibre core. Gives very high laminate properties for a single-layer 3D high-loft reinforcement.

MULTIMAT-LITE - CSM/knitted glass+PE/CSM

Similar to MULTIMAT, but with a knitted glass/PE core. Foregoes some performance advantages for lighter weight. Very fast impregnation, and a good surface finish.

MULTICORE - CSM/PP veil

Chopped glassfibres stitched to a PP veil. Fast flow and good surface finish.

MULTIFILO - CSM/Unifilo/CSM or CSM/Unifilo/Fabric

Chopped glassfibres stitched either side of Unifilo CFM, or a combination of CSM, Unifilo and fabrics for high performance with fast flow and a good surface finish.

MULTILOOP - CSM/3D glass loops or WR/3D glass loops

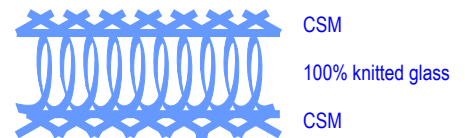
3D glass loop fabrics with either a CSM or WR backing. The mechanical bonding is ideal for Urethane foam or SRIM.

MULTIAXIALS

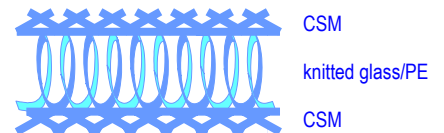
The straight, uncrimped and parallel fibres in multiaxial fabrics enhance the resin flow in up to 8 directions around the clock-face (in the case of a quadriaxial fabric). The ultimate in terms of laminate performance. Ideal as strategic reinforcement in combination with one of the high-loft reinforcements above.



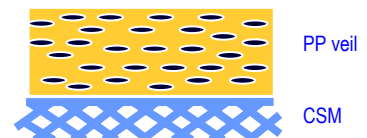
MULTIMAT



MULTIMAT-LITE



MULTICORE



MULTIFILO



MULTILOOP



Glass loops

CSM or WR backing



Closed Mould Applications

Some typical products for closed moulds

The above represents only a small proportion of our standard product range.

REFERENCE	WIDTH cm	THICKNESS RANGE	RECOMMENDED USE
MULTIMAT - CSM/knitted glass/CSM			
S300/G500/S300	125 or 250	1.5-3.0	With RTM - pressure & vacuum injection, and compression moulding. Where structural strength with high mechanical properties are required. 100% glass is ideal for when there are flame, smoke and toxicity requirements. Extremely drapeable - up to 60% elongation without tearing.
S450/G500/S450	125 or 250	2.0-4.0	
S600/G500/S600	125 or 250	2.3-5.0	
S900/G500/S900	125 or 250	3.0-6.3	
S300/G900/S300	125 or 250	2.0-4.5	
S450/G900/S450	125 or 250	2.5-5.0	
S500/G900/S500	125 or 250	2.5-5.5	
S600/G900/S600	125 or 250	3.0-6.0	
S750/G900/S750	125 or 250	3.5-7.0	
S900/G900/S900	125 or 250	3.7-7.5	
MULTIMAT-LITE - CSM/knitted glass+PE/CSM			
S300/GP135/S300	125 or 250	1.3-2.7	With RTM - pressure & vacuum injection, infusion and compression moulding. Glass /PE core gives good mechanics with light weight, good drape characteristics, and allows very fast impregnation of resin. Good surface finish.
S450/GP135/S450	125 or 250	1.8-3.8	
S600/GP135/S600	125 or 250	2.3-4.9	
S300/GP170/S300	125 or 250	1.3-3.0	
S450/GP170/S450	125 or 250	2.0-4.25	
S600/GP170/S600	125 or 250	2.4-5.5	
S300/GP210/S300	125 or 250	1.4-3.0	
S450/GP210/S450	125 or 250	1.9-4.1	
S600/GP210/S600	125 or 250	2.4-5.2	
MULTICORE - CSM/PPveil			
S300/V180	125 or 250	1.1-2.6	With RTM - pressure & vacuum injection, infusion and compression moulding. Lightweight, good flow and good surface finish.
S450/V180	125 or 250	1.3-3.3	
S600/V180	125 or 250	2.0-4.1	
S300/V250	125 or 250	1.5-3.0	
S450/V250	125 or 250	1.8-3.8	
S600/V250	125 or 250	2.2-4.5	
MULTIFILO - CSM/Unifilo/Fabric combinations			
<i>examples include</i>			With RTM - pressure & vacuum injection, infusion and compression moulding. Where a mix of good mechanical properties are required, along with a good surface finish and fast flow.
S450/UF300/S450	125 or 250	-	
S450/UF300/R600	125 or 250	-	
S300/UF450/EBX800	125 or 250	-	
MULTILOOP - 3D glass loop with CSM or WR			
R420/L500-6	125	6.0	Offers structural reinforcement for vacuum laminating, injection laminating, Urethane injection foaming and SRIM structural reaction injection moulding.
S600/L900-8	125	8.0	
S900/L1000	125	9.0	
MULTIAXIAL a few examples			
U1140/R17/50/S50	60/50/40/30	1.3	With hand lay-up, infusion and vacuum compression moulding. When low labour is required for use in large structural parts. These fabrics build up thickness fast with extremely high structural properties. No loft, so may require other layers such as Unifilo.
EBXhd 936	125	0.9	
EBXM 602/225	125 or tapes	1.0	
EBXM 936/100	125 or tapes	1.1	
ELTM 1700/300	125 or 250	2.2	

Other weights and variations are available – please contact us for more details.
11/05


SAINT-GOBAIN
TECHNICAL FABRICS

SGTF Composites Europe
Drukkerijstraat 9
B-9240 Zele
Belgium

T+32 (0) 52 45 76 11
F+32 (0) 52 44 95 02
sales.eu.sgtfc@saint-gobain.com