

STYLIGHT – PRODUCT PROPERTIES

			StyLight Aesthetic S			StyLight Structural S	
Product name			G290-1*	G615-2*	C200-1	G580-1	G600-3
MATERIAL DESCRIPTION	Standard	Unit					
Fibres			Glass	Glass	Carbon	Glass	Glass
Textile			Fabric: Twill 2/2	Non Crimp Fabric: +/-45°	Fabric: Twill 2/2	Fabric: Twill 2/2	Non Crimp fabric: 0°/90°
Area weight		g/m²	290	615	200	580	600
Yarn		tex	204	300	3k	1200	1200/300
Weight rate		%	50/50	50/50	50/50	50/50	80/20
Polymer			Modified SAN	Modified SAN	Modified SAN	Modified SAN	Modified SAN
Fibre content		vol-%	45	48	45	45	47
Thickness per layer		mm	0.25	0.5	0.25	0.5	0.5
MECHANICAL PROPERTIES							
Tensile Modulus, 23°C	[ISO 527-4]	MPa	23900	24500	53900	22600	32700
Tensile Strength, 23°C	[ISO 527-4]	MPa	490	450	520	450	760
Tensile Elongation, 23°C	[ISO 527-4]	%	2.6	2.4	1.0	2.4	2.5
Flexural Modulus, 23°C	[ISO 527-4]	MPa	25500	34900	45900	27400	37400
Flexural Strength, 23°C	[ISO 527-4]	MPa	720	880	770	590	1100

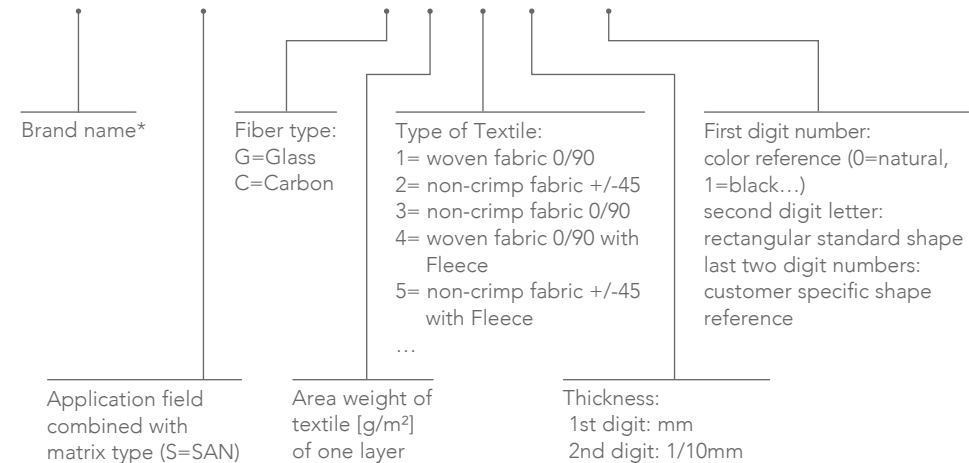
* exist with or without Fleece

NOMENCLATURE

StyLight Aesthetic S
Thermoplastic composite based on modified SAN matrix optimized for semi structural aesthetic application

StyLight Structural S
Thermoplastic composite based on modified SAN matrix optimized for structural application

StyLight Aesthetic S G300-2-20-XXXX



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Product name		G290-1	G615-2	C200-1	G580-1	G600-3
PROCESSING	Unit					
Sheet temperature range at heating	°C	240-280* (< 4min)	240-280* (< 4min)	240-280* (< 4min)	220-240* (< 4min)	220-240* (< 4min)
Sheet temperature range before mold closing	°C	200	200	200	180	180
Mold closing speed (speed for draping)	mm/s	> 5	> 5	> 5	> 5	> 5
Consolidation pressure	MPa	0.5-2**	0.5-2**	0.5-2**	0.5-2**	0.5-2**
Mold temperature range	°C	120-200***	120-200***	120-200***	60-80	60-80
Demolding temperature	°C	< 95	< 95	< 95	< 95	< 95
Drying		not necessary	not necessary	not necessary	not necessary	not necessary

*depending on transport time to the mold; **highly depending on shape; ***variotherm process recommended

MATERIAL FOR BACK INJECTION

For three-dimensional parts used for automotive or sports applications, the back injected molding material plays a key role in the finished part performance. For that purpose different glass fiber reinforced injection molding materials have been developed to

offer a range of structural stiffness combined with high surface adhesion on the StyLight sheet. These special grades are identified with the suffix "SL" (for StyLight).

			Validated for StyLight Aesthetic		Validated for StyLight Structural	
Product name			Terblend N NG-02EF SL	Terblend N NG-04EF SL**	Novodur BX64137**	Terblend N NG-06EF SL**
MATERIAL FOR BACK INJECTION	Standard	Unit				
Base resin			ABS/PA GF	ABS/PA GF	ABS GF	ABS/PA GF
Fiber content		%	8	20	16	30
Melt volume rate, 240°C/10 kg		cm³/10min	40	30	18*	8
Tensile modulus, 23°C	ISO 527	MPa	3100	5300	5600	7500
Tensile stress at yield, 23° C	ISO 527	MPa	55	80	65	90
Heat deflection temperature B (annealed; 0.45 MPa)	ISO 75	°C	130	174	106	188
Density	ISO 1183	kg/m³	1120	1200	1190	1270
Linear mold shrinkage	ISO 294-4	%	0.6	0.4	0.3	0.2

* test method: 220 °C/10 kg; ** product in development phase