

PROPERTY	TEST METHOD	UNIT	STANDARD POLYESTER	SELF EXTINGUISHING POLYESTER	SELF EXTINGUISHING ACRYLIC
MECHANICAL PROPERTIES - MEAN VALUES					
Tensile strength LW	ASTM D638	MPa	400	400	300
Tensile modulus LW	ASTM D638	GPa	26	26	22
Tensile strength CW	ASTM D638	MPa	30	30	20
Tensile modulus CW	ASTM D638	GPa	8	8	7
Flexural strength LW	AST M D790	MPa	400	400	300
Flexural modulus LW	EN 13706	GPa	25	25	21
Flexural strength CW	ASTM D790	MPa	70	70	60
Flexural modulus CW	ASTM D790	GPa	7	7	6
Compressive strength LW	ASTM D695	MPa	250	250	160
Compressive modulus LW	ASTM D695	GPa	18	18	15
Compressive strength CW	ASTM D695	MPa	70	70	55
Compressive modulus CW	ASTM D695	GPa	7	7	6
In plane shear strength LW	ASTM D2344	MPa	30	30	20
Shear modulus LW	EN 13706	GPa	3	3	2,4
Impact strength (CHARPY)	ISO 179	kJ/m ²	170	170	140
Bearing strength LW	ASTM D953	MPa	170	170	130
Bearing strength CW	ASTM D953	MPa	80	80	50
Poisson's ratio LW	ASTM D3039	---	0,28	0,28	----
Poisson's ratio CW	ASTM D3039	---	0,12	0,12	----
PHYSICAL PROPERTIES- MEAN VALUES					
Barcol hardness	ASTM D2583	°B	45	45	50
Specific weight	ASTM D792	g/cm ³	1,8	1,8	2
Glass content by weight	ISO 1172	%	58	58	48
Water absorption	ISO 62	%	0,4	0,4	0,5
Coefficient of thermal expansion	ISO 11359-2	K ⁻¹	11 x 10 ⁻⁶	11 x 10 ⁻⁶	9 x 10 ⁻⁶
Thermal conductivity	EN 12667/ EN 12664	W/mK	0,3	0,3	0,35
ELECTRICAL PROPERTIES - MEAN VALUES					
Dielectric strength	ASTM D149	kV/mm	5	5	10
Dielectric constant @ 50HZ	ASTM D150	---	5	5	5
Loss factor at 50 HZ	ASTM D150	---	0,05	0,05	0,05
Surface resistivity	EN 61340	Ω	10 ¹²	10 ¹²	10 ¹²
Comparative tracking index	EN 60112	V	----	----	CTI 600

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FIRE REACTION PROPERTIES- MEAN VALUE					
"M" Classification	NF P 92-501	Class	—	M3/M2	M1
"F" Classification	NF F 16-101	Class	—	F2	F0
Surface flame propagation	BS 476 part 7	Class	—	3	1
Smoke density	BS 6853	Index	—	—	"A0 (On) = 9 A0 (Off) = 10"
Flame propagation, Smoke emission	ASTM E84	Class	—	/	1
Flammability Index (Glow wire)	IEC 695-2-1	°C	—	/	"960 (without drop)"
Halogen content	/	/	No	Yes	No
Flammability test (Horizontal sample)	UL 94	Grade	HB	V1/V0	V0
Toxicity Index	CEI 2037 part 2	/	—	<2	<1
Flammability test (Vertical sample)	UL 94	Grade	—	V1/V0	V0
Fire reaction test	UNI CEI EN 45545-2 for "R1"	Class	—	—	HL3
Fire reaction test	EN 130501	Class	—	—	B-s2-d0

MEAN VALUES REFER TO REINFORCED PROFILES WITH FIBREGLASS (CONTINUOUS FILAMENT MAT/ROVING) IN A **STANDARD POLYESTER - ACRYLIC PROFILES** WITH THICKNESS OVER 3 MM

Tolerance for mechanical properties refers to longitudinal direction: $\pm 10\%$

The data provided is accurate. However, Top Glass does not assume any liability as to its use.

MAIN CHARACTERISTICS OF RESINS	POLYESTER STANDARD	POLYESTER SELF EXTINGUISHING	ACRYLIC SELF EXTINGUISHING	VINYLESTER	EPOXY
Low cost	VERY GOOD	FAIR	LACKING	LACKING	LACKING
Processing versatility	VERY GOOD	GOOD	FAIR	GOOD	LACKING
Availability	EXCELLENT	GOOD	GOOD	VERY GOOD	FAIR
Fire reaction properties	LACKING	GOOD	EXCELLENT	GOOD	LACKING
Smoke emission	GOOD	FAIR	EXCELLENT	LACKING	LACKING
Chemical resistance	FAIR	FAIR	FAIR	EXCELLENT	VERY GOOD
Mechanical performances	GOOD	GOOD	FAIR	VERY GOOD	EXCELLENT
Creep & Fatigue performances	GOOD	GOOD	FAIR	VERY GOOD	EXCELLENT
Electrical insulation	GOOD	GOOD	VERY GOOD	GOOD	VERY GOOD