

Resin Type	Resin Base	Description	Corrosion Resistance	Standard Color	Max Temp.
VEFR-25	Vinyl Ester	Superior Corrosion Resistance and Fire Retardant	Excellent	Orange	82°C
VEFR-10	Vinyl Ester	Superior Corrosion Resistance and Fire Retardant	Excellent	Dark Grey	82°C
IFR-25	Isophthalic Polyester	Industrial Grade Corrosion Resistance and Fire Retardant	Very Good	Green	65°C
IFR-10	Isophthalic Polyester	Industrial Grade Corrosion Resistance and High Fire Retardant	Very Good	Dark Grey	65°C

TYPICAL COUPON PROPERTIES

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Mechanical Properties	ASTM	UNITS	VALUE
Tensile Strength LW	D-638	Mpa	207
Tensile Strength CW	D-638	Mpa	48
Tensile Modulus LW	D-638	Gpa	17.2
Tensile Modulus CW	D-638	Gpa	5.5
Compressive Strength LW	D-695	Mpa	207
Compressive Strength CW	D-695	Mpa	103
Compressive Modulus LW	D-695	Gpa	17.2
Compressive Modulus CW	D-695	Gpa	6.9
Flexural Strength LW	D-790	Mpa	207
Flexural Strength CW	D-790	Mpa	69
Flexural Modulus LW	D-790	Gpa	12.4
Flexural Modulus CW	D-790	Gpa	5.5
Modulus of Elasticity E	Full Section	Gpa	19.3
Shear Modulus	/	Gpa	3.1
Short Beam Shear	D-2344	Mpa	31
Punch Shear	D-256	Mpa	69
Bearing Strength LW	D-953	Mpa	207
Notched Izod Impact LW	D-256	KJ/m	1.33
Notched Izod Impact CW	D-256	KJ/m	0.21
Physical Properties	ASTM	UNITS	VALUE
Bracol Hardness	D-495	/	45
24 Hours Water Absorption	D-570	% max	0.45
Density	D-792	g/cm ³	1.72~1.94
Coefficient of Thermal Expansion	D-696	10 ⁻⁶ in/in/°C	8
Electrical Properties	ASTM	UNITS	VALUE
Arc Resistance LW	D-485	Seconds	120
Dielectric Strength LW	D-149	Kv/in	35
Dielectric Strength CW	D-149	Volts/mil	200
Dielectric Strength PF	D-150	@60hz	5

Polyester and Vinyl Ester Fire Retardant Structural Profiles

Flammability Properties	ASTM	UNITS	VALUE
Tunnel Test	E-84	Flame Speed	25 max
Flammability	D-635	/	Nonburning