

RESIN SYSTEM

| 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 |