



“FRP” (FIBERGLASS REINFORCED POLYESTER) – “PLASTICS”

MATERIAL PROPERTIES – PHYSICAL SPECIFICATIONS

GELCOAT: NPG (Neopentyl Glycol) based gel coat modified and/or filled as required to meet specified characteristics. Nominal 20 mil film thickness on all visible surfaces.

RESIN: Iso-phthallic resin. Class A Fire Retardant

REINFORCEMENT: “E” type fiberglass. Typical sprayed or chopped strand mat of varying weights to meet application and loading requirements.

CORE: Non-woven felt type fabrics, honeycomb, wood, foam, etc. as required to achieve design criteria and/or flatness.

FINISHES: Gel coats are inherently integrally colored. Standard for field painted parts is white. Other custom colors, to match selected paint chip samples are available. Light, neutral shades are the best selections for ease of field patching fastener holes and for long term appearance. Dark or primary colors, while possible, are problematic due to a tendency to scratch. Darker colors can be supplied as base coats for field paint.

In-Mold or post applied textures / aggregates (for aesthetic reasons) if needed. Paint coating to be as specified. Latex with primer or Urethane base recommended.

PHYSICAL CHARACTERISTICS: (CLASS A)

Shell Thickness: 3/16” Nominal (+/- 1/16”) (can vary with the application)

Glass Fiber Content: 25 – 35 % (by Weight)

Strength:

Flexural, ASTM D-790	20,000 – 30,000 (PSI)
Flexural Modulus, ASTM D-790	1.0 – 1.3 x 10 ⁶ (PSI)
Tensile , ASTM D-638	12,000 – 18,000 (PSI)
Tensile Modulus, ASTM D-638	1.1 – 1.4 x 10 ⁶ (PSI)
Tensile Elongation, Nominal	1.4%
Compressive, Nominal	18,000 (PSI)
Barcol Hardness, ASTM D-2583	Min. 40 – 60

Heat: Heat Deflection, ASTM D-648 150° – 250° F

Thermal Expansion Coefficient 1.1 – 1.7 (x 10⁻⁵ in./in/°F) (+/-1/8”-10’-100°)

Fire: Flame Spread Rating, ASTM E-84 10 – 25 (Smoke approx. 450)
Self Extinguishing

Tolerances (Non-cumulative):

Fabrication: Length / Width 1/8” in 10’
Square / Skew /Diagonal 1/8” in 6’, 1/4” Total

Installed: Joint Face Width +/-3/16” in 10’
Warp – One Corner / Other Three 1/16” in 12” to Nearest Corner, 1/4” Total