



“GRG” (GLASS FIBER REINFORCED GYPSUM / PLASTER)
MATERIAL PROPERTIES – TECHNICAL SPECIFICATIONS

MATERIALS: Multiple layers of continuous strand fiberglass mat cast into a matrix of high density gypsum cement plaster. Materials are polymer free. Shell thickness is a function of the number of fiberglass layers and the type of fiberglass used. Thicker laminates as req'd.

EMBEDMENT/CORE: Plywood and/or metal at attachment/hanging flanges for fastener support. Foam and/or wood “ribs” back-laminated into “field” areas of large profile/flat shaped parts for additional rigidity/flatness.

FINISHING: “GRG” is supplied as an unfinished white plaster surface, ready for field application of patching/floats compounds and decorative coatings. Further information on both procedures is provided in the GRG INSTALL-1 Data Sheet.

PHYSICAL CHARACTERISTICS: (minimum as per ASTM C1355 / C1381)

Shell Thickness: 1/4” Nominal Standard (+/-1/8” / Unit) [6mm (+/-3mm) {1/2” min. at edges}]

Glass Fiber: 6% min. (by Weight) (Volumetric measurements not valid)

Weight: 1.5 – 2.0 (lbs/ft²) [7 – 10 (kg/m²)] (varies with embedment/reinforcement)

Strength: *Flexural:*

Modulus of Rupture (MOR) 3200 – 3500 (PSI) [22 - 24 (Mpa)]

Flexural Modulus of Elasticity 1.3 – 1.9 x 10⁶ (PSI) [1.3 - .9 x 10⁷ (kPa)]

Tensile:

Ultimate Tensile (UTS) 1800 – 2000 (PSI) [12 - 14 (Mpa)]

Modulus of Elasticity 2.7 – 3.8 x 10⁶ (PSI) [1.9 - 2.6 x 10⁷ (kPa)]

Compressive Strength 7200 – 8300 (PSI)

Heat: Thermal Conductivity 4.0 – 4.2 (BTU/in/hr/ft²/°F) [22.7 - 23.8 (W/m²°C)]

Thermal Expansion Coefficient 8 x 10⁻⁶ (in/in/°F) [14 x 10⁻⁶ (mm/mm/°C)]

Fire: ASTM E84-80 (Incombustible Building Material) Flame, Fuel = 0, Smoke = 0

Toxicity: (NBS Certification MEA 42-82) = 0

Density: (Dry) 105 – 114 (PCF) [1680 – 1826 (kg/m³)]

Hardness: 95 RH (min.) (Rockwell Scale)

Tolerances: Fabrication: Dimensional – all directions +/- 1/8”

Warpage or Bowing +/- 1/16” /foot

Square / Skew /Diagonal +/- 1/8” in 10’

Out of Round +/- 1/16” / foot of diameter

Installed: Humidified Deflection: 1/8” max (Industry standard)

(See “GRG- Install 1” for additional product information)