



COMPARISON OF COMPOSITES

	GRG	FORTON MG	GFRC	FRP
Environmental Hazards VOC's	None	None	None	Yes
Fire Classification ASTM E-84	Class I 0,0	Class I 25, 45	Class I 0, 0	Class I 25, 150
Application	Interior	Interior Exterior	Interior Exterior	Interior Exterior
Demolding Cycles	> 1 hour	> 1 hour	16 hours	2 -4 hours
Clean Up	Water	Water	Water	Regulated Solvents
Dimensional Behaviour During Cure	Expands	Slight Expansion	Shrinkage	Noticable Shrinkage

Typical Properties of Composites

Density		pcf	95-100	95-100	120-140	80-110
Compressive	C-109	psi	6,000	6-9,000	7-10,000	15-25,000
Flexural Yield	C-947 Dry	psi	1,200	1,800-2,900	900-1,500	
Flexural Ultimate	C-947 Dry	psi	2,500	3,500-9,400	2,500-4,000	
Strain to Failure	C-947 Dry	%		2	0.5	
Modulus of Rupture	D-790	psi				16-32,000
Modulus of Elasticity		psi		8*10 ⁶	1.5-2.9*10 ⁶	.8-1.4*10 ⁶
Tensile Yield		psi	1,200-1,400		700-1,000	
Tensile Ultimate		psi		3,500-5,100	1,000-1,600	9-18,000
Impact Strength	D-256	in.lb/in ²	3	170	55-140	4-12
Shear: Interlaminar		psi			400-800	
Shear: In-plane		psi			1,000-1,600	
Thermal Expansion		in/in/deg F	11.1*10 ⁻⁶	11*10 ⁻⁶	12*10 ⁻⁶	12-20*10 ⁻⁶
Thermal Conductivity		Btu/hr/ftF/in ²			3.5-7	
Moisture Movement				<1 0/00		
Equilibrium Moisture Content						
	65% RH			max.0.5 wt%		
	85% RH			max.1.2 wt%		
Water Vapor Diffusion				250		
Freeze-Thaw Resistance			None	Excellent	Excellent	Excellent
Hardness	Barcol		50			

Zoho Stone Architectural Products LLC

34318 US Hwy 19 North, Palm Harbor, Florida 34684 – Office: 727.230.6956 Fax: 727.230.9716

www.ZohoStone.com