

STEALTH Concealment Solutions

FRP Concealment Panel

DESCRIPTION ..Through testing and the experience of thousands of concealment sites constructed, Raycap has determined that the type and placement of materials used for concealing antennas play a vital role in their performance. All Raycap products allow for superior antenna signal transmission. Raycap products are engineered and manufactured to become part of the existing structure and withstand extreme weather conditions while maintaining their original appearance.

APPLICATIONS Raycap's STEALTH® FRP panels can be used to manufacture a variety of concealment products including boxes, screenwalls, chimneys, and more. The FRP panels can be factory painted/textured to customer specified color and texture requirements.

RECOMMENDED FREQUENCIES FRP generally recommends the FRP panel for frequencies up to 2GHz. Test results for specific applications is available upon request.

SIZES AND STYLES AVAILABLE FRP panels are available in the following thicknesses: 1/8", 3/16", 1/4", 3/8" and 1".

PHYSICAL PROPERTIES.. Physical properties are listed in the charts to the right.

FABRICATION/INSTALLATION FRP panels can be fabricated into various sizes to meet the demands of many concealment designs. Due to the critical design aspects of many applications, we recommend that qualified designers or consultants design a total concealment system to support the panels.

AVAILABILITY Raycap maintains inventory of some sizes of the FRP panel. Please contact us at 800-755-0689 for availability of panels.

TECHNICAL SERVICES Raycap can provide technical information and support to address questions when using our FRP panels.

PHYSICAL PERFORMANCE PROPERTIES OF SHEETS USED TO FORM FRP PANELS

			THICKNESS (METRIC) RESULTS		
PROPERTY	UNITS	TEST METHOD	1/8"	3/16"-1/4"	3/8"-1"
Tensile Stress, LW	psi-MPa	D-638	24,000 – 165.5	24,000 – 165.5	24,000 – 165.5
Tensile Stress, CW	psi-MPa	D-638	7,500 – 51.7	10,000 – 68.9	10,000 – 68.9
Tensile Modulus, LW	10 ⁶ psi – GPa	D-638	2.0 – 13.8	2.0 – 13.8	2.0 – 13.8
Tensile Modulus, CW	10 ⁶ psi – GPa	D-638	1.0 – 6.9	1.1 – 7.6	1.4 – 9.6
Compressive Stress, LW	psi-MPa	D-695	24,000 – 165.5	24,000 – 165.5	24,000 – 165.5
Compressive Stress, CW	psi-MPa	D-695	15,500 – 106.9	16,500 – 113.8	16,500 – 113.8
Compressive Modulus, LW	10 ⁶ psi – GPa	D-695	1.8 – 12.4	1.8 – 12.4	1.8 – 12.4
Compressive Modulus, CW	10 ⁶ psi – GPa	D-695	1.0 – 6.9	1.0 – 6.9	1.0 – 6.9
Flexural Stress, LW	psi-MPa	D-790	35,000 – 241.3	35,000 – 241.3	30,000 – 206.8
Flexural Stress, CW	psi-MPa	D-790	15,000 – 103.4	15,000 – 103.4	18,000 – 124.1
Flexural Modulus, LW	10 ⁶ psi – GPa	D-790	1.6 – 11.0	2.0 – 13.8	2.0 – 13.8
Flexural Modulus, CW	10 ⁶ psi – GPa	D-790	0.9 – 6.2	1.1 – 7.6	1.4 – 9.6
Perpendicular Shear Stress, LW	psi-MPa	D-3846	6,000 – 41.3	6,000 – 41.3	6,000 – 41.3
Perpendicular Shear Stress, CW	psi-MPa	D-3846	6,000 – 41.3	6,000 – 41.3	6,000 – 41.3
Bearing Stress, LW	psi-MPa	D-953	32,000 – 220.6	32,000 – 220.6	32,000 – 220.6
Notched Izod Impact, LW	ft-lbs/in-J/mm	D-256	18.5 0.99	20 – 1.1	20 – 1.1
Notched Izod Impact, CW	ft-lbs/in-J/mm	D-256	5 – 0.27	5 – 0.3	5 – 0.3

Flammability Properties for FR FRP

Tunnel Test	E-84	D-790
Flammability	D-635	D-790
UL	94	D-790
NBS Smoke Chamber	E-662	Smoke Density 600-700