

ENHANCED STEALTHSKIN™ V (ESSV) CONCEALMENT PANEL

PRODUCT INFORMATION SHEET

DESCRIPTION Through testing and the experience of thousands of concealment sites constructed, STEALTH® Concealment Solutions, Inc. has determined that the type and placement of materials used for screening antennas play a vital role in their performance. All STEALTH® concealment panels allow for superior antenna signal transmission compared to fiberglass without the durability problems of fiberblooming or cracking over time. STEALTH® panels are engineered and manufactured to become part of the existing structure and withstand extreme weather conditions while maintaining their original appearance.

APPLICATIONS STEALTH® ESSV panels are generally specified for dark color and desert climate applications. STEALTH® ESSV panels can be used to manufacture a variety of rooftop and tower type concealment products including screenwalls, wall replacements, side mounted boxes, clock towers and bell towers. The panel can be factory textured to match most existing architectural appearances, such as brick, stucco, aggregate and split face block as well as custom applications.

RECOMMENDED FREQUENCIES STEALTH® generally recommends ESSV panels for frequencies up to 3GHz. STEALTH® has testing currently in process for higher frequency applications.

SIZES AVAILABLE STEALTH® ESSV panels are available in 4' x 8' and 4' x 10' standard sizes. Custom sizes are available upon request. Nominal panel thickness is 2.18". Panel weight is 1.5 lb/sf for a smooth/painted texture.

PHYSICAL PROPERTIES STEALTH® ESSV panels are manufactured with a sandwich panel geometry. FRP (fiberglass reinforced plastic) skins are laminated to an extruded polystyrene core using an ICBO approved adhesive. Physical performance properties of the skins and core are listed to the right.

FABRICATION/INSTALLATION STEALTH® ESSV panels can be fabricated into various sizes and shapes. Due to the critical design aspects of many of its applications, STEALTH® recommends that qualified designers or consultants design a total concealment system to support the panels.

AVAILABILITY STEALTH® maintains limited inventory of ESSV panels and has custom manufacturing capability in its facilities in California and South Carolina. Please contact us at (843) 207-8000 for sales information.

TECHNICAL SERVICES STEALTH® can provide technical information and support to address questions when using ESSV panels. Technical personnel are available via telephone at (843) 207-8000.

PHYSICAL PERFORMANCE PROPERTIES OF FRP SKINS			
PROPERTY	UNITS	TEST METHOD	RESULT
Coefficient of Linea Thermal Expansion	10 ⁻⁵ /IN/IN/°C	ASTM D-696	3.46
Water absorption (24 Hour)	%	ASTM D-570	0.27
Tensile Modulus	psi x 10 ⁶	ASTM D-638	0.803 / 0.651 (Transverse)
Tensile Strength, Yield	psi	ASTM D-638	12288 / 8679 (Transverse)
Elongation, Yield	%	ASTM D-638	1.88 / 1.87 (Transverse)
Flexural Modulus	psi x 10 ⁶	ASTM D-790	0.735 / 0.432 (Transverse)
Flexural Strength	psi	ASTM D-790	25602 / 15712 (Tranverse)
Compressive Strength	psi	ASTM D-695	18043 / 13042 (Transverse)
Compressive Modulus	psi x 10 ⁶	ASTM D-695	0.783/0.508 (Transverse)
IZOD Impact	Ft/lbs Inch Notch	ASTM D-256	10.32

PHYSICAL PERFORMANCE PROPERTIES OF EXTRUDED POLYSTYRENE CORE			
PROPERTY	UNITS	TEST METHOD	RESULT
Density	lb/ft ³	ASTM D 1622	1.5
Compressive Strength	lb/in ²	ASTM D1621, vertical	20
Tensile Strength	lb/in ²	ASTM D1623, vertical	50
Shear Strength	lb/in ²	ASTM C273	25
Shear Modulus	lb/in ²	ASTM C273	330
Flexural Strength	lb/in ²	ASTM C203	50
Flexural Modulus	lb/in ²	ASTM C203	1600
Water Absorption	% by vol.	ASTM C272	.5
R-Value per Inch	F-ft-h/Btu	ASTM C518	5.0
Surface Burning Characteristics (Flame Spread/Smoke Developed)	-	ASTM E84	15/165

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STEALTH Concealment Solutions, Inc.
6549 Fain Boulevard, North Charleston, South Carolina 29406
toll-free 800.755.0689 www.stealthsite.com