



ReGenWall® is made from HIGH DENSITY POLYETHYLENE (H.D.P.E)

TYPICAL PHYSICAL PROPERTIES

Specific Gravity	0.99	c/cm ³
Fire Behaviour	H.B.	UL94
Water Absorption	<0.01	DIN 53495
Density [^]	0.953	g/cm ³

MECHANICAL

Yield Strength [^]	18.89 MPa with 0.2 MPa standard deviation	
Elongation at Yield	7.65 %	DIN 53455
Tensile Strength at Break [^]	12.4 MPa with 0.4 MPa standard deviation	ISO 527
Elongation at Break	72 %	DIN 53455
Tensile Modulus [^]	302 MPa with 234 MPa standard deviation	ISO 527
Flexural Modulus	.90 – 1.8 x 10 ^{^5} psi (620 – 1241 MPa)	ASTM D790
Hardness, Rockwell R	64.385	ASTM D785
Compressive Yield Strength [^]	23.4 MPa with 1.5 MPa standard deviation	ASTM D6641
Compressive Ultimate Strength [^]	18.6 MPa with 2.3 MPa standard deviation	ASTM D6641
Flexural Yield Strength - Y axis [^]	35.6 MPa with 1.3 MPa standard deviation	ISO 178
Flexural Yield Strength - X axis [^]	45.6 MPa with 1.5 MPa standard deviation	ISO 178
Flexural Ultimate Strength – Y axis [^]	31.5 MPa with 1.2 MPa standard deviation	ISO 178
Flexural Ultimate Strength – X axis [^]	35.6 MPa with 0.8 MPa standard deviation	ISO 178
3-Point Bend Test - HDPE only [^]	8.5 MPa with 0.1 MPa standard deviation	ISO 178
3-Point Bend Test - HDPE/Aluminium [^]	18.13 MPa with 0.02 MPa standard deviation	ISO 178
3-Point Bend Test - HDPE/Re-bar [^]	40 MPa with 10 MPa standard deviation	ISO 178

THERMAL

Thermal Conductivity (10 ⁻⁴ cal-cm/sec-cm ² -0C)	11.0 – 12.4	C 177
Coefficient of thermal expansion [^] at 50°C	143 µm/(m.°C)	ASTM E 831
Deflection Temperature (0F) @ 264 psi	110 - 130	D 648
Deflection Temperature (0F) @ 66 psi	140 - 190	

ELECTRICAL

Dielectric strength (V/mil) Short Time, 1/8 –in thk	450 – 500	D 149
Dielectric constant A 1kHz	2.3 – 2.35	D 150
Dissipation factor @ 1kHz	0.0003	D 150

This information is intended as a guideline for users, installers and architects regarding the ReGenWall® product. Because design and processing is complex, a set solution will not solve all problems. Observation on a “trial and error” basis may be required to achieve desired results. Items marked with ^ from JCU testing 10-Jan-2020.

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