

# Product Information Bulletin

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## ENERGREEN® Insulation - ASTM C578 Material Properties

**ENERGREEN®** insulation board is a moulded expanded polystyrene (EPS) insulation that meets ASTM C578, **Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation**. The addition of a laminated film to the top and bottom surfaces of **ENERGREEN** insulation provides a more durable product that is less susceptible to handling damage.

Material Property	Units	ENERGREEN Insulation ASTM C578 Types						
		XI	I	VIII	II	IX	XIV	
<b>Nominal Density</b>	pcf	0.75	1.00	1.25	1.50	2.00	2.50	
<b>Compressive Resistance</b> <sup>1</sup> <i>Minimum @10% deformation</i> ASTM D1621	psi	5.0	10.0	13.0	15.0	25.0	40.0	
<b>R-value</b> <sup>2</sup> <i>per inch thickness at mean temperature</i> ASTM C518	40 °F	ft <sup>2</sup> •hr•°F	3.4	4.2	4.3	4.6	4.8	4.8
	75 °F	Btu	3.2	3.9	3.9	4.2	4.4	4.4
<b>Water Vapour Permeance</b> <i>Maximum</i> ASTM E96	Perm	5.0	5.0	3.5	3.5	2.5	2.5	
<b>Flexural Strength</b> <i>Minimum</i> ASTM C203	psi	10.0	25.0	30.0	35.0	50.0	60.0	
<b>Dimensional Stability</b> <i>Maximum</i> ASTM D2821	% linear change	2.0	2.0	2.0	2.0	2.0	2.0	
<b>Water Absorption</b> <sup>3</sup> <i>Maximum</i> ASTM D2842	% by volume	4.0	4.0	3.0	3.0	2.0	2.0	
<b>Oxygen Index</b> <i>Minimum</i> ASTM D2863	volume %	24	24	24	24	24	24	
<b>Density</b> <i>Minimum</i>	pcf	0.70	0.90	1.15	1.35	1.80	2.40	
<b>Flame Spread Index</b> ASTM E84		<25	<25	<25	<25	<25	<25	
<b>Smoke-Developed Index</b> ASTM E84		<450	<450	<450	<450	<450	<450	

<sup>1</sup> Compressive resistance measured at 10 percent strain is not intended for use when ENERGREEN insulation will be used to support long-term compressive loads. Contact your Plasti-Fab technical representative for additional information.

<sup>2</sup> For additional information on thermal resistance requirements refer to ASTM C578.

<sup>3</sup> ASTM Test Method C272 water absorption requires 24 hours submersion of specimen under water. The water absorption values above are applicable to specific end-use design requirements only to the extent that the end-use conditions are similar to requirements stated in the test method.