



# GREENSMART MANUFACTURING LTD.



## What is the R-Value of Greensmart Panels?

**There are three methods of heat transfer – convection, conduction and radiation. R-value is the measure of resistance to heat loss by conduction only. The most important factor in thermal efficiency is the continuity of the insulation. The Greensmart system results in a solid envelope of rigid foam insulation. Therefore, a Greensmart structure has the ability to resist heat transfer by conduction AND convection (air movement). See attached 3<sup>rd</sup> party evaluations of SIPS using type 1 EPS. Greater R-Values can be increased by increasing higher density EPS.**

### Oak Ridge National Laboratory – Stick versus SIP – [www.ornl.gov](http://www.ornl.gov)

System Description	Clear wall R-Value		Whole wall R Value		(R <sub>ww</sub> / R <sub>cw</sub> ) x 100%
	hft 2/F/Btu	m 2/ K/W	Hft 2/F/Btu	m 2/ K/W	
2x6 wood stud wall 24 in. (60-cm.) o.c., R-19 batts, 0.5-in. (1.3-cm) plywood-exterior.,-in.(1.3-cm) gypsum board – interior	16.4	2.88	13.7	2.41	83.7
Structural Insulated Panel Wall, 6 in. (15-cm.) thick foam core + 0.5-in. (1.3-cm.) OSB boards, 0.5-in. (1.3-cm.) Plywood cladding-exterior., 0.5-in. (1.3cm.) gypsum board – interior.	24.7	4.35	21.6	3.8	87.5

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