

Conductance and Resistance Values for Sheathing and Building Paper

Material	Description	Conductivity <i>k</i> , Bm/(h) (ft²) (°F/in.)	Thickness (in.)	Conductance <i>C</i> , Btu/(h) (ft²) (°F)	Resistance <i>R</i> , 1/[Btu/ (h) (ft²) (°F)]
Gypsum		1.11	$\frac{3}{8}$	3.10	0.32
			$\frac{1}{2}$	2.25	0.45
			$\frac{5}{8}$	1.75	0.57
Plywood		0.80	$\frac{1}{4}$	3.20	0.31
			$\frac{3}{8}$	2.13	0.47
			$\frac{1}{2}$	1.60	0.62
			$\frac{5}{8}$	1.28	0.78
			$\frac{3}{4}$	1.07	0.93
Nail-base sheathing		0.44	$\frac{1}{2}$	0.88	1.14
Wood sheathing	Fir or pine	0.80	$\frac{3}{4}$	1.06	0.94
Sheathing paper	Vapor-permeable			16.70	0.06
Vapor barrier	2 layers mopped 15-lb felt			8.35	0.12
	Plastic film			Negl.	Negl.

Source: Courtesy of Johns-Mansville, Denver, CO.