

- R-value = The ability of a product to resist the transfer of heat.
- The higher the R-value the more effective the insulation
- R-value = Thickness of the Insulation / Thermal conductivity (k)



According to National Building Regulations 10400 XA efficiency Act, implemented 11 Nov 2011 the minimum requirement R-Value for construction walls is 0.35

ISOTHERM

Thickness	Thermal Resistance "R" Value
40mm	0,82
50mm	1,02
75mm	1,53
100mm	2,04
100mm ²	2,33
135mm ²	3,14
145mm ²	3,37

ISOFER CAVITY BAT

Thickness	Thermal Resistance "R" Value
102mm	2,68
63mm	1,66
51mm	1,34

AEROLITE (Think Pink)

Thickness	Thermal Resistance "R" Value
50mm	1,25
75mm	1,88
100mm	2,50
135mm	3,38

XPS POLYSTYRENE

Thickness	Thermal Resistance "R" Value
25mm	0,83
30mm	1,00
40mm	1,33
50mm	1,67

EPS POLYSTYRENE

Thickness	Thermal Resistance "R" Value
25mm	0,71
30mm	0,86
40mm	1,14
50mm	1,43
60mm	1,71
70mm	2,00
80mm	2,29
90mm	2,57
100mm	2,86
110mm	3,14
120mm	3,43
130mm	3,71
140mm	4,00
150mm	4,29

LAMDABOARD

Thickness	Thermal Resistance "R" Value
25mm	1,04
30mm	1,25
35mm	1,45
40mm	1,67
50mm	2,08
60mm	2,50
70mm	2,91
80mm	3,33
90mm	3,75
100mm	4,17

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The Importance and Benefits of R-Value in a Building

The R-value measures a material's ability to resist heat flow, which is crucial for energy efficiency in buildings. A higher R-value indicates better insulation, reducing heat loss in winter and keeping interiors cool in summer. Here's why it's important:

1. **Energy Efficiency:** Proper insulation minimizes the need for heating and cooling, lowering energy bills and reducing carbon footprints.
 2. **Comfort:** By maintaining a stable indoor temperature, buildings with good R-value insulation ensure a more comfortable living or working environment.
 3. **Noise Reduction:** Insulation with a high R-value can also help reduce external noise, creating quieter interiors.
 4. **Durability:** Well-insulated buildings experience less stress on HVAC systems, prolonging their lifespan and reducing maintenance costs.
 5. **Compliance:** Meeting or exceeding R-value requirements is often necessary to comply with local building codes and energy efficiency standards.
- Investing in high R-value materials ensures long-term savings, improved comfort, and environmental benefits.