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Tradical® Hemcrete®

U-values

Hemcrete® is a highly insulating material with a combination of good thermal conductivity, excellent thermal inertia and inherent air-tightness – a rare combination of properties in one material.

Tests carried out at the National Physics Laboratory and in France have established a direct link between thermal conductivity (k or λ) and Hemcrete density.

Hemcrete® is specified as three product densities:

- Standard 275
- Hi Strength 330
- Hi Insulation 220

The higher the density, the stronger the Hemcrete® mix, the higher the thermal mass (thermal capacity) and the lower the insulation value. The thermal inertia (diffusivity or resistance to temperature change) remains approximately the same for all mixes.

The Hemcrete® mix ratios are usually specified as follows:

Mix	Bag to bale ratio	Thermal conductivity W/m.k	Application or Wall system
Hemcrete® Standard 275	3:2	0.06	Single internal board, timber frame on inside – standard construction detail
Hemcrete® Hi Strength 330	2:1	0.07	Central timber frame Restoration of old timber frame buildings and thick (+150mm) floor elements
Hemcrete® Hi Insulation 220	1:1	0.05	roof and loft insulation and loose fill into suspended floors or walls

Hemcrete® Standard 275 is the most commonly used mix that provides an excellent combination of insulation, thermal mass and thermal inertia.

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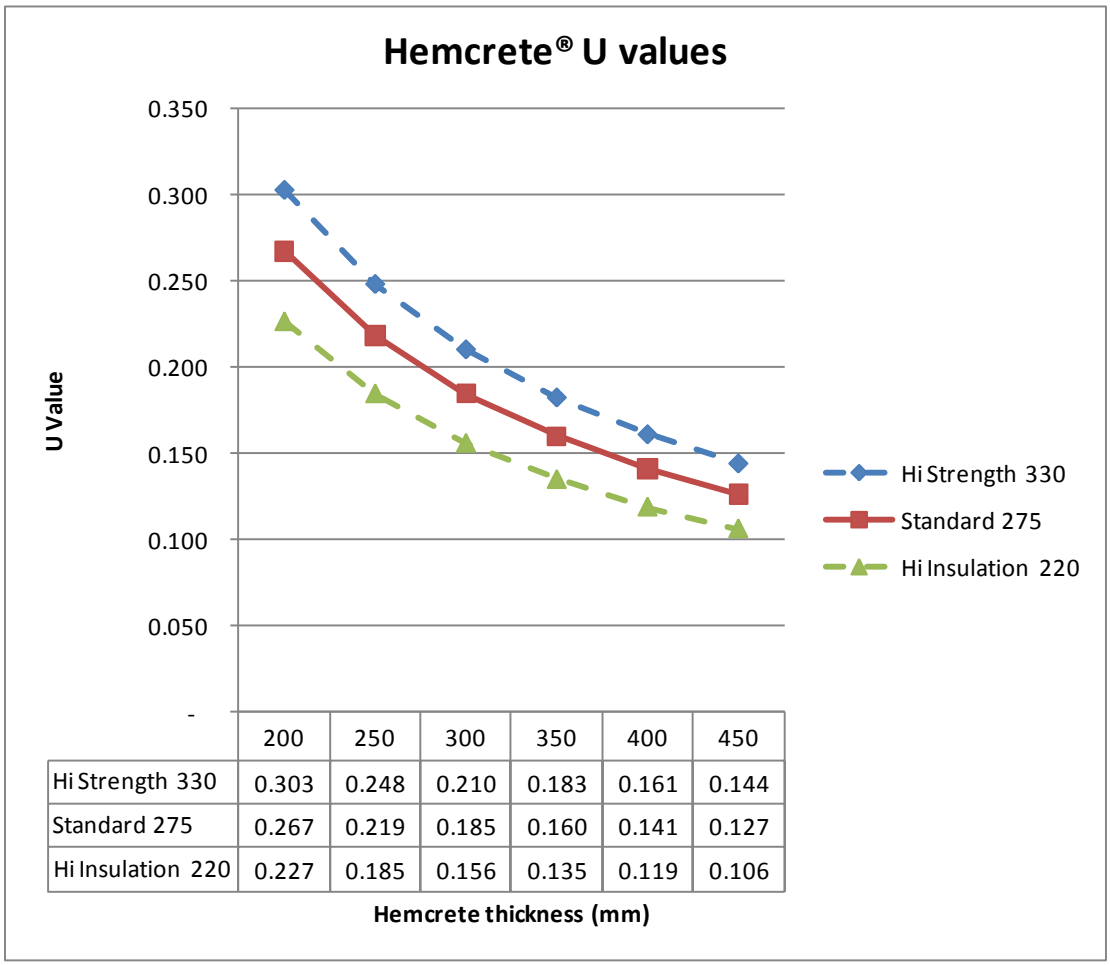
The graph outlines the U values for different wall thicknesses for each of the three binder mix ratios.



	200	250	300	350	400	450
Hi Strength 330	0.303	0.248	0.210	0.183	0.161	0.144
Standard 275	0.267	0.219	0.185	0.160	0.141	0.127
Hi Insulation 220	0.227	0.185	0.156	0.135	0.119	0.106

For more information on specifying Hemcrete® for thermally efficient, high code level buildings please contact our technical advisors below.

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