## Abodo Vulcan thermal conductivity

After correspondence with Passive House Institute in Darmstadt we've agreed to use 0.12 W/(mK) for ABODO Vulcan timber in window frames being calculated to ISO10077-2. We will accept this in Certified Passive House submissions and for use in Passive House products (window frames).

Timber window frame manufacturers do not need to redo their frame calculations which have been done with timber thermal conductivities of 0.11 and 0.13 W/(mK). I will accept a simple linear interpolation between these existing frame performance calculations. I'd expect approximately 8% reduction in frame thermal transmittance (U<sub>f</sub> 8% smaller); In NZ building code that would be a frame R-value that is 8% better (higher R-value is better).

Conductivity of timber according to ISO 10077-2:2018-01 table D.1 Material Density Lambda [kg/m³] [W/(mK)] Soft wood 450 500 0.13 Hard wood 700 0.18 447 0.11948216 0.12 0.28 0.26 0.24  $y = 0.00000020x^2 + 0.00001000x + 0.07500000$ R<sup>2</sup> = 1.00000000 0.2 N 18 0.16 0.12 0.12 0.119482161 600 900

If you have any questions feel free to ring me to discuss.

Regards,

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