



DURABLE EXCELLENCE AND COMFORT BY NATURE

SPECIFIC INFORMATION ABOUT THERMAL CONDUCTIVITY

Some interesting figures:

- The thermal conductivity of Asian teakwood = 0,38 W/m.K at 12% MC (moisture content)
- The measured conductivity of MARINEDECK® **exterior** is: 0,057 W/m.K.
- The general MC (moisture content) of natural teakwood is about 80%.
- The natural MC (moisture content) of Cork is 0%.
- 1st. conclusion: when measuring teakwood with a MC of 12%, the thermal conduction of MARINEDECK® **exterior** compared to teakwood would be: $0,38/0,057 = 6,66$ times better. In other words the thermal conductivity of 1 mm MARINEDECK® **exterior** is equal to 6,66 mm of teakwood.
- 2nd. conclusion: however when measuring with a MC (moisture content) of 80% being the general natural moisture content of teakwood, the thermal conductivity of MARINEDECK 2000® **exterior** would be substantially better compared to teakwood than the 6,66 times better as the thermal conductivity of water is 0,58 W/m.K
- Some other interesting information is that frozen water (ice) has got a thermal conductivity of 2,18 W/m.K. Taking this into consideration the theoretical outcome of the thermal conduction of frozen teakwood with a MC of 80% would be: $80\% \text{ of } 2,18 \text{ W/m.K} = 1,744 \text{ W/m.K}$. Taking into account cork has a MC of 0%, you theoretically might say $1,744 : 0,057 = 30,52$. This theoretically would mean that the thermal conductivity of MARINEDECK® **exterior** would be 30,52 better in the Antarctic than teakwood.**

HIGH PERFORMANCE COMPOSIT SHIPS DECKS BY ECO CORK