

4.4.2 Heat Transfer

The thermal performance of all premium panels is tested according to the standard DIN 52612-1. The tests are carried out with two identical specimens using a “guarded hot plate” apparatus. Please refer to section 3.3.2 for more information concerning these tests. Table 4.7 lists the tested heat transfer coefficients P_s , R and λ for any type of panel.

Table 4.7 - P_s , R and λ values of panels

Panel / material	Total panel thickness t_p [mm]	P_s [W/m ² K]	R [m ² K/W]	λ [W/mK]	k^* [W/m ² K]
PP Multipower	50	3.745	0.267	0.187	1.746
PP Lightweight	50	4.137	0.242	0.207	1.827
PP Lightweight	35	4.446	0.225	0.156	1.885
PP Lightweight	20	5.295	0.189	0.106	2.023
PP Antislip 5 bars	50	3.646	0.274	0.181	1.725
PP Antislip 5 bars	35	4.081	0.245	0.142	1.816
PE Multipower	50	4.235	0.236	0.212	1.846
PE Lightweight	50	4.498	0.222	0.225	1.894

*The heat transfer coefficient k is calculated for a vertical wall in which the convection coefficient is 4 W/m²K at the inside of the wall (value valid for a wind velocity of 0.5 m/s) and 18 W/m²K at the outside of the wall (value valid for a wind velocity of 3 m/s).