HEAT TRANSFER RESISTANCE OF DIFFERENT PARQUETS

Multi-layer wooden flooring swells and shrinks much less than solid wooden floors. In general, all glued and floating parquet floors by Bauwerk are suitable for use with underfloor heating. Flooring with a heat transfer resistance of R≤0.15 m²K/W is suitable without needing special adjustments.

The latest results of research done by TKB (Technical Commission on Construction Adhesives) demonstrate the improved heat transfer resistance of fully glued parquet, as opposed to floating parquet: as a rule, gluing reduces this value by about 0.023 m² K/W. This is a 20% improvement in heat conductivity, which does not depend on the thickness of the parquet in question. This means that heating systems under glued parquet can be operated at a flow temperature that is approximately 2 °C lower than with floating parquets, without losing the heating capacity.

Heat transfer resistance and heat conductivity

Product	Wood type	Heat transfer resistance (m² • K)/W	Heat conductivity (W/m • K)
Solid parquet			
Solid parquet 8 mm	Oak	0.048	0.166
	Oak smoked	0.048	0.166
	Ash	0.056	0.144
On-Edge 160 mm	Oak	0.139	0.166
Prepark	Oak	0.048	0.166
	Ash	0.056	0.144
Prepark Comfort	Oak	0.102	0.098

➔ Table continued on the next page.

Heat transfer resistance and heat conductivity

Product	Wood type	Heat transfer resistance ($m^2 \cdot K)/W$	Heat conductivity $(W/m \cdot K)$
2-layer parquet			
Multipark 10	Oak	0.075	0.133
	Beech unsteamed	0.074	0.135
Multipark 9.5	Oak	0.064	0.146
Multipark Silente	Oak	0.074	0.172
Solopark	Oak	0.075	0.133
	Ash	0.078	0.127
Unopark 11 mm	Oak	0.082	0.133
	Oak smoked	0.082	0.133
	Ash	0.086	0.128
	Beech unsteamed	0.081	0.136
	Maple Canadian	0.086	0.128
	Acacia steamed	0.082	0.134
Unopark 12.5 mm	Oak	0.091	0.137
Trendpark	Oak	0.082	0.133
	Oak smoked	0.082	0.133
Monopark	Oak	0.066	0.146
	Oak smoked	0.066	0.146
	Ash	0.068	0.141
	Beech unsteamed	0.065	0.149
	Maple Canadian	0.068	0.141
	Cherry American	0.072	0.134
	Walnut American	0.065	0.149
Studiopark	Oak	0.064	0.146
	Oak smoked	0.064	0.146
Formpark 780/520 & Formpark Quadrato	Oak	0.082	0.133
	Oak smoked	0.082	0.133
Formpark Mini 570/380 & Formpark Rombico	Oak	0.064	0.146
	Oak smoked	0.064	0.146
Silverline Edition	Oak	0.082	0.133
Monopark Comfort	Oak	0.098	0.110
Villapark	Oak	0.064	0.146
	Oak smoked	0.064	0.146
	Walnut American	0.063	0.148
Cleverpark	Oak	0.064	0.146
	Oak smoked	0.064	0.146
	Maple Canadian	0.067	0.141
	Cherry American	0.070	0.134
	Walnut American	0.063	0.148
Cleverpark Silente	Oak	0.074	0.172
	Oak smoked	0.074	0.172
Prontopark	Oak	0.079	0.132
3-layer parquet			
Casapark 139/181/209 & Triopark	Oak	0.109	0.129
	Maple Canadian	0.112	0.125
	Ash	0.112	0.125
	Cherry American	0.117	0.120
	Walnut American	0.107	0.131
Unicopark	Oak	0.156	0.128

Source: Niemz Peter. «Untersuchungen zur Wärmeleitfähigkeit ausgewählter einheimischer und fremdländischer Holzarten.» Bauphysik 29.4 (2007): 311–312 and EN ISO 10456: 2010-05, table 3.