

### Thermal conductivity and resistance

Certified thermal conductivity:  $\lambda = 0.038 \text{ W/m.K}$

Fibrexpan® thickness applied (mm)	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240
R (m².K/W)	2,60	2,85	3,15	3,40	3,65	3,90	4,20	4,45	4,70	5,00	5,25	5,50	5,75	6,05	6,30

Fibrexpan thicknesses to apply depending on the thickness of the reinforced concrete slab and the desired heat transfer coefficient U, taking surface resistances into account, for a downward flow and a wall facing a closed, unheated room.

(Rs = 0.21 m².K/W):

Reinforced concrete:  $\lambda = 2 \text{ W/m.K}$

Fibrexpan:  $\lambda = 0.038 \text{ W/m.K}$

Slab thickness in mm	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240
Thermal resistance of concrete slab in m².K/W	0,050	0,055	0,060	0,065	0,070	0,075	0,080	0,085	0,090	0,095	0,100	0,105	0,110	0,115	0,120
Heat transfer coefficient U in W/m².K	0,17	215	215	215	215	215	215	215	215	215	215	215	215	215	215
	0,19	195	190	190	190	190	190	190	190	190	190	190	190	190	190
	0,21	175	175	175	170	170	170	170	170	170	170	170	170	170	170
	0,23	155	155	155	155	155	155	155	155	155	155	155	155	155	155
	0,25	145	145	145	145	145	140	140	140	140	140	140	140	140	140
	0,27	130	130	130	130	130	130	135	130	130	130	130	130	130	130
	0,29	120	120	120	120	120	120	120	120	120	120	120	120	120	120
	0,31	115	115	115	115	110	110	110	110	110	110	110	110	110	110
	0,33	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	0,35	100	100	100	100	100	100	100	95	95	95	95	95	95	95
	0,37	95	95	90	90	90	90	90	90	90	90	90	90	90	90
	0,39	85	85	85	85	85	85	85	85	85	85	85	85	85	85
	0,41	80	80	80	80	80	80	80	80	80	80	80	80	80	80
	0,43	80	80	80	75	75	75	75	75	75	75	75	75	75	75
	0,45	75	75	75	75	75	75	75	75	70	70	70	70	70	70
	0,47	70	70	70	70	70	70	70	70	70	70	70	70	70	70
	0,49	65	65	65	65	65	65	65	65	65	65	65	65	65	65
	0,51	65	65	65	65	65	65	65	60	60	60	60	60	60	60
	0,53	60	60	60	60	60	60	60	60	60	60	60	60	60	60
	0,55	60	60	60	60	55	55	55	55	55	55	55	55	55	55
0,57	55	55	55	55	55	55	55	55	55	55	55	55	55	55	
0,59	55	55	55	55	55	50	50	50	50	50	50	50	50	50	
0,61	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
0,63	50	50	50	50	50	50	50	50	50	45	45	45	45	45	
0,65	45	45	45	45	45	45	45	45	45	45	45	45	45	45	
0,67	45	45	45	45	45	45	45	45	45	45	45	45	45	45	
0,69	45	45	45	45	45	45	45	40	40	40	40	40	40	40	
0,71	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
0,73	40	40	40	40	40	40	40	40	40	40	40	40	40	40	

For example, to obtain a heat transfer coefficient U = 0.30 W/m².K with a slab 180 mm thick, 120 mm of Fibrexpan must be sprayed on.