Thermische waarden Quad Core IND paneel volgens Nederlandse norm NEN 1068

Dikte [mm]		40	60	80	100	120	140	170	200	220	ΔU = 2%	R_{si}	R_{se}
Weight (2*0,5mm skins) [kg/m²]		9,92	10,72	11,52	12,32	13,12	13,92	15,12	16,32	17,12	1,02		
$R_{Quad\ Core}$ [m².K/W]		2,23	3,37	4,51	5,66	6,80	7,94	9,66	11,37	12,51			
R_{metal} [m².K/W]		0,00021											
($R_{quad\ Core}$+R_{metal}+R_{se}+R_{si}) Buitenwand R_T [m².K/W]		2,40	3,54	4,68	5,83	6,97	8,11	9,83	11,54	12,68		0,13	0,04
($R_{Quad\ Core}$+R_{metal}+2*R_{si}) Binnenwand R_T [m².K/W]		2,49	3,63	4,77	5,92	7,06	8,20	9,92	11,63	12,77		0,13	
($R_{Quad\ Core}$+R_{metal}+2*R_{si}) Geventileerd plafond R_T [m².K/W]		2,43	3,57	4,71	5,86	7,00	8,14	9,86	11,57	12,71		0,10	
$U_T = 1/R_T$	Buitenwand U_T [W/m².K]	0,42	0,28	0,21	0,17	0,14	0,12	0,10	0,09	0,08			
	Binnenwand U_T [W/m².K]	0,40	0,28	0,21	0,17	0,14	0,12	0,10	0,09	0,08			
	Geventileerd plafond U_T [W/m².K]	0,41	0,28	0,21	0,17	0,14	0,12	0,10	0,09	0,08			
$U_c = U_T + \Delta U = U_T * 1,02$	Buitenwand U_c [W/m².K]	0,43	0,29	0,22	0,18	0,15	0,13	0,10	0,09	0,08			
	Binnenwand U_c [W/m².K]	0,41	0,28	0,21	0,17	0,14	0,12	0,10	0,09	0,08			
	Geventileerd plafond U_c [W/m².K]	0,42	0,29	0,22	0,17	0,15	0,13	0,10	0,09	0,08			
$R_c = (1/U_c) - R_{se} - R_{si}$ or 2*R_si depending of the use of the panel	Buitenwand R_C [m².K/W]	2,18	3,30	4,42	5,54	6,66	7,78	9,46	11,15	12,27		0,13	0,04
	Binnenwand R_C [m².K/W]	2,18	3,30	4,42	5,54	6,66	7,78	9,46	11,14	12,26		0,13	
	Geventileerd plafond R_C [m².K/W]	2,18	3,30	4,42	5,54	6,66	7,78	9,46	11,14	12,27		0,10	

This calculation is based on the thermal conductivity coming from our CE labels as $\lambda_{declared}$ of an ageing value of 0,0175 W/m.K. $\lambda_{declared}$ is equal to λ_{design}.
Calculation is made with steel skins thicknesses 2*0,5mm as nominal
value.
Core thickness = panel thickness - steel skins thicknesses

$R_{Quad\ Core}$ = Core thickness / $\lambda_{declared}$

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Aged Core Thermal Conductivity for 100mm ^{IPN}QuadCore^{TM} (EN 14509:2013)

1. Introduction

This report provides the aged core thermal conductivity for the core material of 100mm ^{IPN}QuadCore^{TM} (Kingspan CFC/HCFC/HFC Free hybrid insulation) in accordance with EN 14509:2013.

2. Measured accelerated aged value of thermal conductivity of 100mm ^{IPN}QuadCore^{TM} Foam at 10^{o}C

Aged Core Thermal Conductivity W/mK
0.0175

This report was sponsored by - Kingspan Limited, Greenfield Business Park No. 2, Greenfield, Holywell, Flintshire, North Wales, CH8 7GJ.

A. Simpson