

pressure resistant thermal insulation panels made of pressed polyurethane (PU) rigid foam material

pressure resistant, heat-insulating smart material for universal use in flat or pitched roofs and façade structures		- for low thermal bridge connection details - for installation of construction elements - as supporting material for composite constructions
Cover layers	double-sided	non-laminated
Edge formation	all round	blunt



Thickness	[mm]	20	30	40	50	60
Thermal resistance <sup>1)</sup>	R <sub>D</sub> [(m <sup>2</sup> ·K)/W]	0,20	0,30	0,40	0,50	0,60
Heat transition coefficient <sup>2)</sup>	U <sub>0</sub> [(m <sup>2</sup> ·K)/W]	2,94	2,27	1,85	1,56	1,35
Vapour diffusion resistance	S <sub>d</sub> [m]	0	0	0	0	0
Package content	Pieces	30	20	15	13	10

purenit C functional material		Technical data				
Characteristic		Standard/test procedure	Unit	Indicator	max	min
Material		highly compressed, heat-insulating smart material on the basis of rigid polyurethane foam (PU) acc. EN 13165, dimensionally stable, moisture-resistant, non-rotting, resistant to mildew and decay, recyclable, safe from biological and building ecology point of view, emission-free acc. to				
Bulk density		EN 1602	kg/m <sup>3</sup>	550	+40	-40
Dimensions						
	Length	EN 822	mm	2440		
	Width	EN 822	mm	1220		
	Available thicknesses	EN 823	mm	15 <sup>3)</sup> , 20, 30, 40, 50, 60		
				other thicknesses and formats on request		
Thermal conductivity		EN 12667				
	Nominal value ( EU )	λ <sub>D</sub> ETA-18/0604	W/(m·K)	0,096		
Compressive strength						
	Compressive stress at 10% compression	EN 826	MPa	7,1		
	Admitted long-term pressure load at < 2% compression		MPa	1,8		
Bending strength <sup>4)</sup>		EN 12089	MPa	4,5		
E-module (bending load) <sup>4)</sup>		EN 12089	MPa	30		
Transverse strength <sup>4)</sup>		EN 12090	MPa	1 - 1,5		
Shear strength <sup>4)</sup>		EN 12090	MPa	1 - 1,5		
Screw removal resistance <sup>4)</sup>				Screw woodscrew 6x60		
	Surface removal			11,35		
	Narrow edge removal	EN 14358	N/mm <sup>2</sup>	8,0		
	Head pull-through resistance			29,0		
European Technical Assessment ( EU )				ETA-18/0604		
Fire behaviour		non-smouldering, non-melting, non-dripping				
	Reaction to Fire Class / RtF ( EU )	EN 13501-1		B-s2,d0		
Temperature resistance			°C	-50 to +100, short-term to +250°C		
Moisture absorption		EN 12571	% by mass	≤ 3		
Water absorption		EN 1609	kg/m <sup>2</sup>	≤ 0,5		
Thickness swelling <sup>4)</sup>		EN 68763	%	≤ 0,8		
Water vapour diffusion resistance factor (PU)	μ	EN 12086		8		
Linear expansion coefficient <sup>4)</sup>		EN 1604	1/K	5 · 10 <sup>-5</sup>		
1) Thermal resistance of the insulation panel based on the thermal conductivity nominal values acc. to ETA-18/0604, in compliance with EN 13165. 2) Insulation element U value on the basis of the thermal conductivity nominal value acc. ETA-18/0604. Heat transfer resistances R <sub>si</sub> = 0,10 m <sup>2</sup> ·K/W and R <sub>se</sub> = 0,04 m <sup>2</sup> ·K/W (Heat flow upwards) are calculated; other component layers are not considered. 3) uncontrolled thickness range - we reserve the right to deviations from technical values 4) Lab values, not part of the factory production control and external supervision						

US Patent 10844189

Declaration of performance  
 40141.CPR.2018.10  
 purenit C  
[www.puren.com/download](http://www.puren.com/download)

ETA-18/0604  
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 EN 13501  
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