


thermoset high-performance insulating material

application	for door and composite elements	
assembly	unlaminated blocks, boards or pre-cut parts dimensions at customer's option upon request dimensional tolerances acc. to puren factory standard	

Foradur® 50		Technical data PU rigid foam									
Characteristic	Standard/test procedure	Unit	Indicator								
Material	Polyurethane rigid foam (PU) acc. to EN 13165, quality-certified, harmless from a biological and building ecology point of view, recyclable, rotproof, resistant to mildew and decay.										
Bulk density	EN 1602	kg/m³	48 - 52								
Thermal conductivity											
Monitored limit value (fresh value) at 10°C mean temperature	EN 12667	W/(m·K)	0,022								
Nominal value ( EU )	EN 13165	W/(m·K)	at thickness		d < 80 mm			80 ≤ d < 120 mm		d ≥ 120 mm	
λ <sub>D</sub>			0,028	0,027		0,026					
Thermal insulation resistance for thickness	mm	20	40	60	80	100	120	140	160	180	200
R <sub>D</sub>	m²·K/W	0,70	1,40	2,10	2,95	3,70	4,60	5,35	6,15	6,90	7,65
Compressive strength			measured values <sup>2)</sup>								
Compressive stress at 10% compression	EN 826	kPa	350								
E-modulus (compressive stress) <sup>2)</sup>		MPa	10,0 - 13,0								
Tensile strength perpendicular to panel plane											
Transverse tensile strength	EN 1607	kPa	150								
E-modulus (transverse tensile stress) <sup>2)</sup>		MPa	350 - 450								
Bending strength <sup>2)</sup>	EN 12089	kPa	500 - 600								
Transverse strength <sup>2)</sup>	EN 12090 (in compliance with DIN 53427)	kPa	230 - 260								
Shear strength <sup>2)</sup>	EN 12090 (in compliance with DIN 53294)	kPa	240 - 300								
Designation ( EU )	EN 13165	PU-EN 13165-T2-DS(70,90)3-DS(-20,-)2-CS(10\Y)350-TR150									
Fire behaviour	non-smouldering, non-melting, non-dripping										
Reaction to Fire Class / RtF ( EU )	EN 13501-1	E									
Closed cell content <sup>2)</sup>	ISO 4590	%	90 - 95								
Temperature resistance		°C	-30 to +120								
Moisture absorption <sup>2)</sup>	EN 12087	Vol.-%	≤ 3								
Specific heat capacity <sup>1)</sup>	C	EN 12524	J/(kg·K)	1400							
Water vapour diffusion resistance factor <sup>1)</sup>	μ	EN 12086	40 - 200								
Linear expansion coefficient <sup>1)</sup>	EN 1604	1/K	5 - 8 · 10 <sup>-5</sup>								

1) Literature value, not part of the factory production control and external supervision.  
2) Average values calculated on a regular basis under production conditions as part of factory production control. It is ensured that mechanical characteristic values do not fall below their minimum level by more than 10%..



Declaration of performance  
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puren-PIR NE 50  
www.puren.com/download



EN 13165:2012+A2:2016  
Verification authority: 0751 FIW München



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