
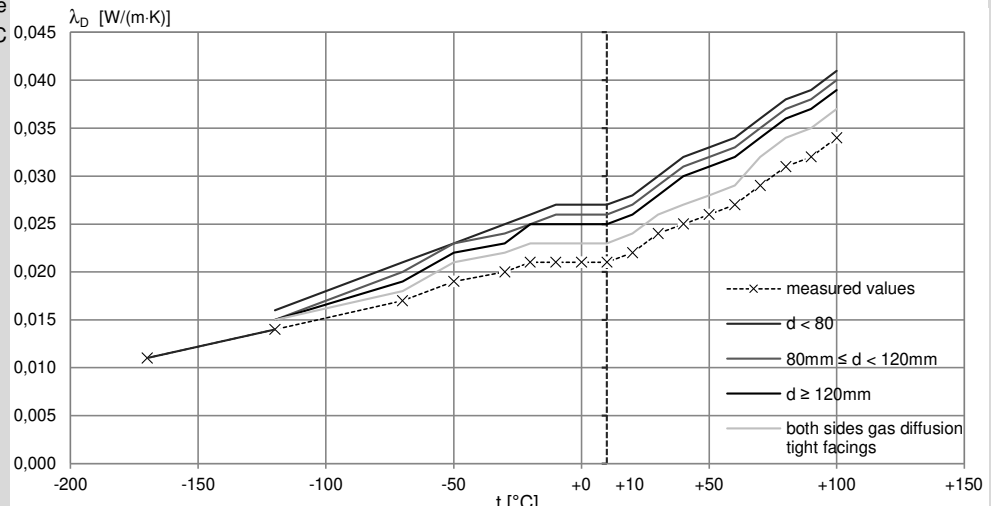


thermoset high-performance insulating material

application	for universal use in the insulation and construction area and thermal insulation of technical facilities	
assembly	unlaminated blocks, boards or pre-cut parts dimensions at customer's option upon request dimensional tolerances acc. to puren factory standard	

puren-PIR NE 40 **Technical data PU rigid foam**

Characteristic	Standard/test procedure	Unit	Indicator		
Material	Polyurethane rigid foam (PU) acc. to EN 13165 and EN 14308, quality-certified, harmless from a biological and building ecology point of view, recyclable, rotproof, resistant to mildew and decay.				
Bulk density	EN 1602	kg/m ³	37 - 42		
Thermal conductivity					
Monitored limit value (fresh value) at 10°C mean temperature	EN 12667	W/(m·K)	0,021		
Nominal value (EU) λ_D	at thickness				
			d < 80 mm	80 ≤ d < 120 mm	d ≥ 120 mm
	EN 13165				
at 10°C application temperature	EN 14308	W/(m·K)	0,027	0,026	0,025
in the application temperature range -170 °C to +100 °C					




Thermal insulation resistance for thickness	mm	20	40	60	80	100	120	140	160	180	200
R_D	m ² ·K/W	0,70	1,45	2,20	3,05	3,80	4,80	5,60	6,40	7,20	8,00

Compressive strength			measured values ²⁾	
Compressive stress at 10% compression	EN 826	kPa	250	260 - 320
E-modulus (compressive stress) ²⁾		MPa		6,5 - 8,5
Tensile strength perpendicular to panel plane				
Transverse tensile strength		kPa	150	230 - 280
E-modulus (transverse tensile stress) ²⁾	EN 1607	MPa		10,5 - 13,5
Bending strength ²⁾	EN 12089	kPa		350 - 450
Transverse strength ²⁾	EN 12090 (in compliance with DIN 53427)	kPa		150 - 200
Shear strength ²⁾	EN 12090 (in compliance with DIN 53294)	kPa		160 - 220


Designation (EU)	EN 13165	PU-EN 13165-T2-DS(70,90)3-DS(-20,-)2-CS(10/Y)250-TR150
	EN 14308	PU-EN 14308-DS(TH)3-CS(10/Y)250-ST(+)120

Fire behaviour	non-smouldering, non-melting, non-dripping		
Reaction to Fire Class / RtF (EU)	EN 13501-1	E	
Water-soluble chlorides	EN 13468	ppm	≤ 90 (100°C / 30 min)

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
 20131.CPR.2020.10
 puren-PIR NE 40
www.puren.com/download



EN 13165:2012+A2:2016
 EN 14308:2015
 Verification authority: 0751 FIW München



controlled by
 0751 FIW München

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puren-PIR NE 40		Technical data PU rigid foam		
Characteristic		Standard/test procedure	Unit	Indicator
Closed cell content ²⁾		ISO 4590	%	90 - 95
Upper application limit temperature		EN 14706	°C	120
Temperature resistance			°C	-30 bis +120, short-term to 250 °C
Moisture absorption ²⁾		EN 12087	Vol.-%	≤ 3
Specific heat capacity ¹⁾	C	EN 12524	J/(kg·K)	1400
Water vapour diffusion resistance factor ¹⁾	μ	EN 12086		40 - 200
Linear expansion coefficient ¹⁾		EN 1604	1/K	5 - 8 · 10 ⁻⁵