Product Data Sheet

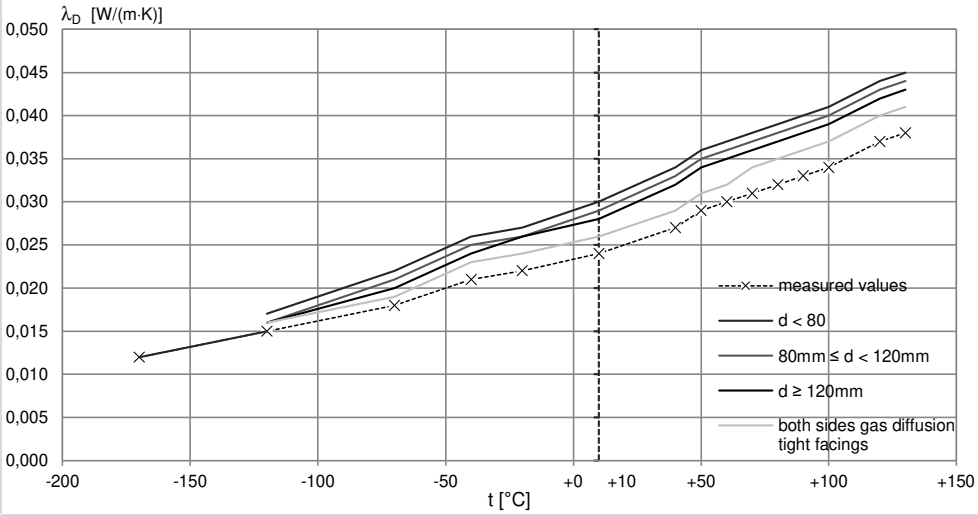
puren-PIR NE 80

EU / EN

thermoset high-performance insulating material

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

puren-PIR NE 80 — 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/m³	77 - 82		
Thermal conductivity					
Monitored limit value (fresh value) at 10°C mean temperature	EN 12667	W/(m·K)	0,024		
Nominal value (EU) λ_D		at thickness	d < 80 mm	80 ≤ d < 120 mm	d ≥ 120 mm
at 10°C application temperature	EN 13165 EN 14308	W/(m·K)	0,030	0,029	0,028
in the application temperature range -170 °C to +130 °C					

Thermal insulation resistance for thickness	mm	20	40	60	80	100	120	140	160	180	200
R_D	m²·K/W	0,65	1,30	2,00	2,75	3,40	4,25	5,00	5,70	6,40	7,10

Compressive strength				measured values 2)
Compressive stress at 10% compression	EN 826	kPa	650	650 - 750
E-modulus (compressive stress) 2)		MPa		17,0 - 24,0
Tensile strength perpendicular to panel plane				
Transverse tensile strength	EN 1607	kPa	150	720 - 850
E-modulus (transverse tensile stress) 2)		MPa		27,0 - 31,5
Bending strength 2)	EN 12089	kPa		1000 - 1200
Transverse strength 2)	EN 12090 (in compliance with DIN 53427)	kPa		360 - 420
Shear strength 2)	EN 12090 (in compliance with DIN 53294)	kPa		400 - 470
Designation (EU)	EN 13165	PU-EN 13165-T2-DS(70,90)3-DS(-20,-)2-CS(10\Y)650-TR150		
	EN 14308	PU-EN 14308-DS(TH)3-CS(10\Y)400-ST(+)160		
Fire behaviour	non-smouldering, non-melting, non-dripping			
Reaction to Fire Class / RtF (EU)	EN 13501-1		E	

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
20135.CPR.2020.10
puren-PIR NE 80
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CE
EN 13165:2012+A2:2016
EN 14308:2015
Verification authority: 0751 FIW München

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0751 FIW München

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puren-PIR NE 80 Characteristic		Technical data PU rigid foam Standard/test procedure	Unit	Indicator
Closed cell content [2)]		ISO 4590	%	90 - 95
Upper application limit temperature		EN 14706	°C	160
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}