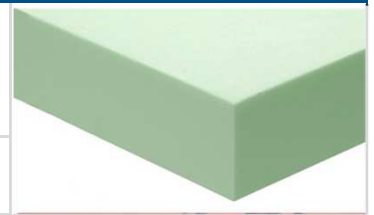


thermoset high-performance insulating material

application	for thermal insulation of technical facilities and other applications in increased temperature range
assembly	unlaminated blocks, boards or pre-cut parts dimensions at customer's option upon request dimensional tolerances acc. to puren factory standard

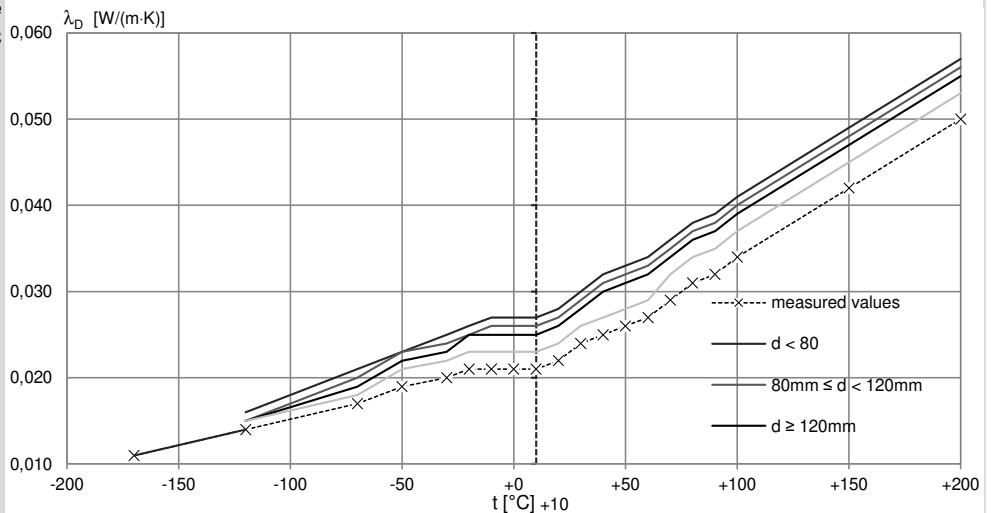


puren-PIR NE 40 HT

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, for application temperatures up to 200°C.		

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 +200 °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		250 - 300
E-modulus (compressive stress) ²⁾						MPa			4,7 - 7,0
Tensile strength perpendicular to panel plane									
Transverse tensile strength						kPa	150		220 - 260
E-modulus (transverse tensile stress) ²⁾	EN 1607					MPa			10,0 - 13,0
Bending strength ²⁾	EN 12089					kPa			250 - 300
Transverse strength ²⁾	EN 12090 (in compliance with DIN 53427)					kPa			120 - 150
Shear strength ²⁾	EN 12090 (in compliance with DIN 53294)					kPa			150 - 190

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(+)-200

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
 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

thermoset high-performance insulating material

puren-PIR NE 40 HT		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	200
Temperature resistance			°C	-80 bis +200 ³⁾ , 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
3) Anwendungstemperatur abhängig von Dauer und Intensität (Medium) der Temperatureinwirkung sowie der Wärmeübertragung (konstruktive Gegebenheiten, Wandungsmaterialien).				