

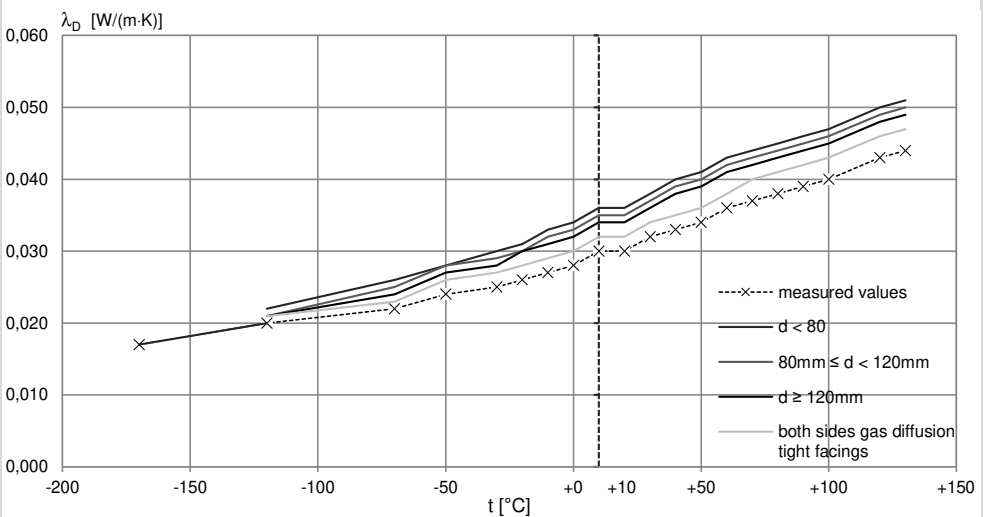
thermoset high-performance insulating material

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 145 **Technical data PU rigid foam**

Characteristic	Standard/test procedure	Unit	Indicator		
Material	Polyurethane rigid foam (PU) in compliance with EN 13165 acc. to 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	135 - 145		
Thermal conductivity					
Monitored limit value (fresh value) at 10°C mean temperature	EN 12667	W/(m·K)	0,030		
Nominal value (EU) λ_D at 10°C application temperature			at thickness		
in the application temperature range -170 °C to +130 °C	EN 14308	W/(m·K)	d < 80 mm	80 ≤ d < 120 mm	d ≥ 120 mm
			0,036	0,035	0,034



Thermal insulation resistance for thickness	mm	20	40	60	80	100	120	140	160	180	200
R_D	m ² ·K/W	0,55	1,10	1,65	2,25	2,85	3,50	4,10	4,70	5,25	5,85

Compressive strength						measured values ²⁾					
Compressive stress at 10% compression	EN 826		kPa	1700	1700 - 2000						
E-modulus (compressive stress) ²⁾			MPa		50,0 - 60,0						
Tensile strength perpendicular to panel plane											
Transverse tensile strength	EN 1607		kPa	150	1400 - 1600						
E-modulus (transverse tensile stress) ²⁾			MPa		55,0 - 61,0						
Bending strength ²⁾	EN 12089		kPa		2300 - 3000						
Transverse strength ²⁾	EN 12090 (in compliance with DIN 53427)		kPa		700 - 820						
Shear strength ²⁾	EN 12090 (in compliance with DIN 53294)		kPa		850 - 950						
Designation (EU)	EN 14308	PU-EN 14308-DS(TH)3-CS(10\Y)1600-ST(+)160									
Fire behaviour	non-smouldering, non-melting, non-dripping										
Reaction to Fire Class / RtF (EU)	EN 13501-1										E
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							

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
 30138.CPR.2020.10
 puren-PIR NE 145
www.puren.com/download

EN 14308:2015
 Verification authority: 0751 FIW München

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 0751 FIW München

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Characteristic		Standard/test procedure	Unit	Indicator
Upper application limit temperature		EN 14706	°C	160
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