

Technical Data Sheet
PUREX NG-0428

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1. Product description

Two-component rigid polyurethane foam for the production of thermal insulation by spraying on specialized high-pressure equipment. Especially recommended for insulating and sealing the surface of ceilings and walls both inside and outside the isolated area. It can be used for insulation of industrial halls and warehouses, sheds, and cold storage of food products and others. It contains HFC-type blowing agent with zero ozone depletion potential ODP = 0.

The product introduced to the market in accordance with Regulation (EU) No 305/2011, with an assessment of the performance made in accordance with the European harmonized standard EN 14315-1:2013.

The product has CE marking and issued Declaration of Performance No. EN-1/S/2014.

Two-component system	Component A (POLY)	Component B (PUREX B - ISO)
State of aggregation	liquid	liquid
Colour	green to brown	brown
Odour	amine-like	characteristic
Viscosity at 25°C [mPas]	450 ± 150	max 250
Density at 20°C [g/cm ³]	1,15	1,23

2. Application method recommended

The system application should be made using specialist foaming unit provided with spraying head. The unit and parameters (heaters and hoses temperatures, operating pressure) set have to enable of reaction mixture good intermixing and uniform spraying. The sprayed surface should be completely dry and degreased. For single layer of the foam thickness in the range of 15 – 25 mm is recommended. Time between spraying of the following layers should be 5 – 10 minutes. In the case of outdoor use the foam layer has to be protected with UV radiation resisted layer. The foam gets its final properties after 24 hours.

Detailed warnings and recommendations for the system processing are given in the Application Instruction of the system.

Raw materials temperature at the head inlet recommended	40 – 45°C
Ambient temperature	15 – 30°C
The surface coated temperature recommended	20 – 40°C

3. Technological properties*

Component A:B ratio	[by weight]	100 : 110
Component A:B ratio	[by volume]	100 : 100
Cream time	[s]	2 – 5
Gelling time	-----	-----
Tack-free time	[s]	6 – 12
Free rise density	[kg/m ³]	26 – 28

4. Physical and mechanical foam properties*

Minimum required foam core density	[kg/m ³]	34
Compression strength acc. to EN 826	[kPa]	min. 150
Short-term water absorption by partial immersion acc. to EN 1609	[kg/m ²]	≤ 0,20
Dimensional stability acc. to EN 1604:1999 – maximum deformation after 24 h At:		
+ 85°C with no determined humidity		max. 3%
+ 70°C i 95% relative humidity	[-]	max. 5%
Closed-cell content EN 4590	[-]	min. 95%
Initial thermal conductivity at +10°C acc. to EN 12667– mean value	[W/mK]	0,0220

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Initial thermal conductivity at +10°C acc. to EN 12667:2001 – declared value	[W/mK]	0,0226
Aged thermal conductivity and aged thermal resistance acc. to EN 14315-1 Annex C	[W/mK]	see Annex No. 1
Water vapour diffusion resistance coefficient μ acc. to EN 12086	[-]	70 ÷ 90
Self-extinguishing property acc. to PN 88/C-89297	[-]	self-extinguishing
Reaction to fire acc. to EN 13501+A1	[-]	class E
Flammability acc. to DIN 4102	[-]	B2
Service temperature range	[-]	-30°C ÷ 100°C

5. Transport and storage

The system components need to be transported and stored in tightly closed containers at 5 – 25°C temperature. Protect against moisture access.

Storage life for both of the system components is 6 months from manufacture date, if stored in recommended conditions and in original containers.

*Notes

Data presented in this information have been obtained during the system foaming in model conditions. The results obtained when foaming in other conditions can be slightly different from published. Safety Data Sheet is available for the product. The system application instruction is available if requested. Polychem Systems company offers its assistance at the system implementation and application in client's manufacture. Every time the user is obliged to check the product and auxiliary agents usefulness for his intentional use.

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Annex No. 1.
Z1.1. Thermal performance chart for PUREX NG-0428 acc. to EN 14315-1 Annex J – for application with one or two diffusion open face.

Thickness [mm]	Declared aged thermal conductivity λ_D [W/m·K]	Thermal resistance level R_D [m ² ·K/W]
40	0,029	1,38
45	0,029	1,55
50	0,029	1,72
55	0,029	1,90
60	0,029	2,07
65	0,029	2,24
70	0,029	2,41
75	0,029	2,59
80	0,028	2,86
85	0,028	3,04
90	0,028	3,21
95	0,028	3,39
100	0,028	3,57
105	0,028	3,75
110	0,028	3,93
115	0,028	4,11
120	0,027	4,44
125	0,027	4,63
130	0,027	4,81
135	0,027	5,00
140	0,027	5,19
145	0,027	5,37
150	0,027	5,56

Z1.2. Thermal performance chart for PUREX NG-0428 acc. to EN 14315-1 Annex J – for application with two diffusion tight faces*.

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Thickness [mm]	Declared aged thermal conductivity λ_D [W/m·K]	Thermal resistance level R_D [m ² ·K/W]
40	0,024	1,67
45	0,024	1,88
50	0,024	2,08
55	0,024	2,29
60	0,024	2,50
65	0,024	2,71
70	0,024	2,92
75	0,024	3,13
80	0,024	3,33
85	0,024	3,54
90	0,024	3,75
95	0,024	3,96
100	0,024	4,17
105	0,024	4,38
110	0,024	4,58
115	0,024	4,79
120	0,024	5,00
125	0,024	5,21
130	0,024	5,42
135	0,024	5,63
140	0,024	5,83
145	0,024	6,04
150	0,024	6,25

*acc. to PN-EN 14315-1 p. C.5.1 diffusion tight facings shall consist a metal sheet with thickness not less then 50 μ m lor facings with equivalent performance; the diffusion tight property of a facing can be also proven if the oxygen diffusion level is less than 4,5 ml per 24h per m² at 20°C in accordance with ASTM 3985.