Polychem Systems

Technical Data Sheet EN

PUREX NG 0808 NF B2 P

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Product description

Two-component system for making semi-rigid open-cell polyurethane foam applied by spraying.

It contains no CFC, HCFC and HFC.

It is recommended for thermal and sound insulation making in spraying process using specialist high-pressure devices.

The product obtained can be used as wall, ceiling and floor insulation, and also as loft or garret insulation.

In consideration of its open-cell structure the system has to be used in the way providing the insulation made is not exposed to long-lasting mechanical stresses, moisturizing, steam condensation and weather conditions influence during exploitation.

It is also necessary to provide suitable thermal and anti-ignition barriers assembly (12 mm gypsum boards, for example), that can separate insulation from the building interior; fire-control requirements are then fulfilled.

The foam is resistant to mould growth (confirmed by ITB).	
The product marketed in accordance with Regulation (EU) No 305/2011, with the assessment of the performance made in accordance with the European harmonized standard	**EN 14315-1:2013**

The product has CE marking and Declaration of Performance has been issued for it.

The foam has to be protected with UV radiation resisted layer.

Two components:	Component A	Component B
Component name	PUREX NG 0808 NF B2 P A	PUREX NG B
State of aggregation	liquid	liquid
Colour	orange to brown	brown
Viscosity at 25°C [mPas]	100 ± 60	150 - 250
Density at 25°C [g/cm³]	1,12 ± 0,02	1,23 ± 0,01

Application method recommended

Before using component A (polyol) of the system must be thoroughly stirred with a mechanical stirrer.

Mixing before application is particularly important if there is a risk of the polyol component having a temperature drop below 15°C. In this case, mix and warm it up to the recommended temperature.

NOTE: The long-term processing insufficiently mixed polyol component will result in irreversible loss of its properties.

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

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 some coated plastic surface must be prepared in order to obtain a good adhesion of the coating.

The material final properties after [h]	24
Recommended raw materials temperature in the packages [°C]	20 - 30
Raw materials temperature at the head inlet recommended [°C]	45 - 55
Ambient temperature during application [°C]	5 - 30
The surface coated temperature recommended [°C]	5 - 40

Technological properties*

Component A:B ratio - by weight	100 : 108
Component A:B ratio - by volume	100 : 100
Raw materials temperature [°C]	20
Cream time [s]	3 - 5
Tack-free time [s]	7 - 11
Free rise density [kg/m³]	8 - 9

Physical and mechanical product properties*

Density of the foam core in the product acc. to EN 1602 [kg/m³]	7 - 10
Thermal conductivity at 10°C - mean value [W/mK]	0,0340
Thermal conductivity at 10°C - declared value [W/mK]	0,037
Maximum application temperature [°C]	100
Short-term water absorption by partial immersion acc. to EN 1609 (foam without skin) [kg/m²]	6 - 12
Coefficient of water vapor diffusion resistance μ acc. to EN 12086	3 - 4
Dimensional stability acc. to EN 1604 (at 80°C, 10% relative humidity) maximum deformation after 48h	≤ 1,5%
Dimensional stability acc. to EN 1604 (at 70°C, 90% relative humidity) maximum deformation after 48h	≤ 3%
Weighted sound absorption coefficient αw acc. to EN ISO 11654	0,50 (LH)
Sound absorption class acc. to EN ISO 11654	D
Sound absorption rating acc. to VDI 3755/2000	absorptive
The classification of the reaction to fire foam covered with a lining of gypsum plasterboards used without substrate or on the substrate both combustible and non-combustible according to EN 13501-1	B-s1, d0
Class of reaction to fire acc. to EN 13501-1	E
Class of reaction to fire acc. to DIN 4102	B2
Resistance to moulds by CUAP/ETA No. 12.01/21:2007 annex B (in both variants: without and after spraying spores of moulds according to EN ISO 846)	0 (no apparent growth of mycelium)

Transport and storage

Store in dry, well ventilated room, in tightly closed containers. Protect against moisture access and direct exposure to sunrays. Store away from heat sources, in the container originally packaged in a vertical position.

The products should be transported in tightly closed containers.

Permissible temperature during transport [°C]	5 - 25
Recommended storage temperature [°C]	15 - 25
Storage life from manufacture date, if stored in recommended conditions and in original containers:	**6 months**

*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.

The viscosity test was performed according to the internal procedure.

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.

The user is obligated to have a valid technical data sheet and safety data sheet of the product, which is provided by the manufacturer during the sale and every time on the customer's request.
Prior to processing the user must carefully read aforementioned documentation and follow the rules of procedure for product use.

Annex

Z1. Thermal performance chart for PUREX NG 0808 NF B2 P acc. to EN 14315-1 Annex J

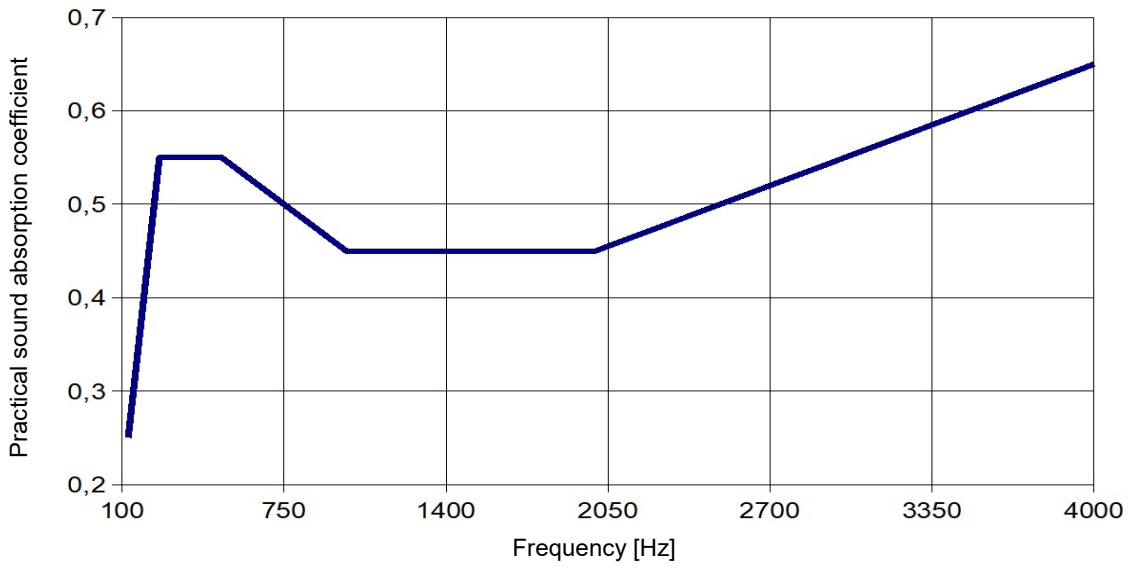
Thermal resistance	Insulation thickness [mm]	Declared aged thermal conductivity λ_D [W/m·K]	Aged thermal resistance level R_D [m²K/W]
	40	0,037	1,08
	45	0,037	1,22
	50	0,037	1,35
	55	0,037	1,49
	60	0,037	1,62
	65	0,037	1,76
	70	0,037	1,89
	75	0,037	2,03
	80	0,037	2,16
	85	0,037	2,30
	90	0,037	2,43
	95	0,037	2,57
	100	0,037	2,70
	105	0,037	2,84
	110	0,037	2,97
	115	0,037	3,11
	120	0,037	3,24
	125	0,037	3,38
	130	0,037	3,51
	135	0,037	3,65
	140	0,037	3,78
	145	0,037	3,92
	150	0,037	4,05
	155	0,037	4,19
	160	0,037	4,32
	165	0,037	4,46
	170	0,037	4,59
	175	0,037	4,73
	180	0,037	4,86
	185	0,037	5,00
	190	0,037	5,14
	195	0,037	5,27

200	0,037	5,41
205	0,037	5,54
210	0,037	5,68
215	0,037	5,81
220	0,037	5,95
225	0,037	6,08
230	0,037	6,22
235	0,037	6,35
240	0,037	6,49
245	0,037	6,62
250	0,037	6,76
255	0,037	6,89
260	0,037	7,03
265	0,037	7,16
270	0,037	7,30
275	0,037	7,43
280	0,037	7,57
285	0,037	7,70
290	0,037	7,84
295	0,037	7,97
300	0,037	8,11

Z2. Sound-absorbing properties of PUREX NG 0808 NF B2 P acc. to EN ISO 11654

Measurements were made for the foam sprayed in two layers with a total thickness of 18 cm.

Frequency [Hz]	Practical sound absorption coefficient αP
125	0,25
250	0,55
500	0,55
1000	0,45
2000	0,45
4000	0,65



Weighted sound absorption coefficient αw = 0,50 (LH)

Product class: D

Description acc. to VDI 3755/2000: „absorptive”