Ekoprodur® S10-HP

POLYURETHANE SPRAY SYSTEM

TECHNICAL DATA (TDS)

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CE

1. PRODUCT DESCRIPTION

EKOPRODUR S10-HP is a two-component polyurethane system for the production of open-cell semi-rigid foam .

POLY COMPONENT (polyol mixture)	EKOPRODUR S10-HP POLY
ISO COMPONENT (isocyanate)	ISO KOMPONENT B

2. APPLICATION

EKOPRODUR S10-HP is designed for internal thermal and acoustic insulation of roofs, attics, canopies, ceilings, walls in wooden, masonry, concrete, steel structures and in skeletal systems of residential, industrial and public buildings by spraying.

3. COMPONENT CHARACTERISTICS

POLY COMPONENT – prescription polyol mixture in the form of an oily liquid, colorless or yellow, without suspensions.
ISO COMPONENT – a mixture of aromatic polyisocyanates , mainly diisocyanate diphenylmethane . Brown liquid, without suspensions.

Parameter	POLY	ISO	Unit
Density at 20 ° C	1,10 ± 0,02	1,22 ± 0.02	g/cm^3
Viscosity at 20 ° C	450 ± 100	350 ± 100	mPa·s

4. FOAMING CHARACTERISTICS IN LABORATORY CONDITIONS

Reaction times and apparent core density were measured in laboratory conditions (at 20° C) for manual foaming in a laboratory vessel - stirrer approx. 7000 rpm .

Parameter	Value	Unit
The volume ratio of POLY:ISO components	**100 : 100**	
Cream time	4 ± 2	s
Gel time	11 ± 2	s
Tack free time	13 ± 3	s
Apparent core density	8,0 ± 1,5	kg/m^3

5. RECOMMENDED PROCESSING CONDITIONS

EKOPRODUR S10-HP is a system designed for spraying, which should be processed using specialized foaming units equipped with a spray head. Recommendations are based on experience spraying with a Graco Reactor H-XP3 machine with a FUSION AP gun (mix chamber 5252).

IMPORTANT: Both components must be heated to 30-40°C before use. In addition, the POLY component should be thoroughly mixed (approximately 1 hour before the start of application and continue mixing during spraying, with a barrel stirrer - recommended Graco Twistork agitator). The POLY component tends to slowly separation. The ISO component does not require mixing.

The volume ratio of POLY:ISO components	**100 : 100**	
Recommended machine settings		
Parameter	**Value**	**Unit**
POLY and ISO heating temperature	50 - 60	°C
Hose heating	50 - 60	°C
Component's pressure	80-110 (1160-1595)	Bar (psi)
Component's temperature in barrels	30 - 40	°C
Optimal processing conditions		
Ambient temperature	10-35	°C
Recommended substrate temperature	15 - 50	°C
Relative ambient humidity	< 70	%
Humidity of the porous substrate	< 15	%
Humidity of non-porous substrate	0	%

Insulated surfaces should be prepared in advance. They should not contain dust, water, oil, loose fragments and other substances that may reduce the adhesion of the foam.
Before spraying, carefully protect the surfaces of neighboring objects, windows, doors, floors, furniture, etc., to avoid accidental soiling during spraying - remember that the sprayed foam has very good adhesion and can be difficult to remove later from undesirable places.
The pressure settings for the POLY Component and the ISO Component should be the same.
Spraying should be done in such a way that the layers obtained are as thick as possible (>100mm).
After applying the EKOPRODUR S10-HP system, it is recommended ventilate the room until the smell disappears. In case of lack adequate ventilation, forced air movement must be provided using dedicated devices. If the foam is exposed to direct UV radiation (e.g. sunlight) it should be protected. Before starting work with the EKOPRODUR S10-HP system, read the Material Safety Data Sheets of both components.

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6. PERFORMANCE PROPERTIES

Usable properties of spray foam applied using a specialized machine.

Parameter	Value	Unit	Standard
Apparent core density	≥ 6,5	kg/m^3	EN 1602
Flammability class:	F	-	EN 13501-1
	Bs_1d_0[1]	-	EN 13501-1
Short-term water absorption at partial immersion , W_P	≤ 1,5	kg/m^2	EN 1609
Thermal conductivity coefficient $\lambda_{mean,i}$	0,037	W/(m·K)	EN 12667
Thermal conductivity coefficient, $\lambda_{90,90}$	0,038	W/(m·K)	EN 12667
Aging value , λ_D	0,038	W/(m·K)	EN 12667
Compressive stress at 10% relative strain, σ_{10}	≥ 5	kPa	EN 826
Diffusion resistance coefficient water vapor, μ	6	-	EN 12086
Water vapour diffusion-equivalent air layer thickness for the foam–membrane joint[2], S_d	≤ 0,2	m	EN ISO 12572:2004
Dimensional stability: 70 °C, 90% RH, after 48 hours	DS(70,90)4	-	EN 1604
Dimensional stability: -20 °C, after 48 h	DS(-20,-)4	-	EN 1604
Foam adhesion perpendicular to the ground	≥ 20	kPa	EN 1607
Closed cell content	≤ 10	%	EN ISO 4590
Resistance to mold fungi - Intensity of growth	0	-	EN ISO 846
Emission of volatile organic compounds - French Regulation VOC	A+	-	EN 16516
Acoustics – class of sound absorption	D	-	EN ISO 354

Full mechanical properties of the foam are achieved after 48 hours of seasoning.

7. PACKAGING

Metal barrels with a volume of 216 dm^3.

8. RECOMMENDED STORAGE CONDITIONS

Both components of the system should be stored in tightly closed packages in dry rooms at a temperature of 10 - 25°C. Protect against moisture and direct sunlight. The shelf life of the component POLY in the manufacturer's original sealed packaging, stored under recommended conditions, is **6 MONTHS** .

9. LEGAL REGULATIONS

- EKOPRODUR S10-HP does not contain ozone-depleting foaming agents, in accordance with European Union regulations on the marketing and use of controlled substances – Regulation (EU) No. 2024/590 of 7 February 2024.
- Ekoprodur S10-HP polyurethane system has been placed on the market in accordance with Regulation of the European Union No. 305/2011, along with the assessment of performance made in accordance with the European harmonized standard EN 14315-1:2013.
- The product has the CE marking and a Declaration of Performance No. 33DOP-2023-EN has been issued for it.
- The product has a hygienic certificate PZH (*Państwowy Zakład Higieny*) B.BK.60111.0801.2022.
- Transport regulations applied in accordance with the information contained in section 14 of the product safety data sheet.

10. ADDITIONAL INFORMATION

The data contained in this technical information is based on the results of our laboratory tests and practical experience and does not constitute a guarantee of the properties of the final finished product. The results obtained may differ from those given in the case of using the product in conditions other than those assumed. Therefore, we recommend carrying out your own tests to check the suitability of the product for a given application. The use of the foam and the conditions of its application are not controlled by the manufacturer, the contractor is responsible for their correct selection. The guidelines for the use of the system are contained in the Technical Information (TDS) and Safety Data Sheets (SDS). Failure to comply with the conditions recommended by the manufacturer may adversely affect the foam application process and its parameters.

IMPORTANT: We are happy to provide technical and substantive assistance in the implementation and use of the EKOPRODUR S10-HP polyurethane system. At the same time, when necessary, we help in adjusting and selecting important parameters. In all matters related to the purchase and use of the EKOPRODUR S10-HP polyurethane system, we encourage you to contact your technical and commercial representative directly or by writing to prodex@pcc.eu .

[1] Applies to the layer system of EKOPRODUR S10-HP foam on combustible or non-combustible surfaces, covered with plasterboard lining, on a wooden or metal structure with a 12,5 mm thickness gypsum cardboard, the product manufacturer is responsible for the classification of the product placed on the market.
[2] The measurement was carried out for the IDEA 175 membrane

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