

CROSSIN ATTIC SOFT

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1. PRODUCT DESCRIPTION

CROSSIN ATTIC SOFT is a two-component spray polyurethane system used to produce **open-cell** semi-rigid foam with self-extinguishing properties.

- ☞ POLY COMPONENT: CROSSIN ATTIC SOFT POLY
- ☞ ISO COMPONENT: ISO KOMPONENT B

2. APPLICATION

CROSSIN ATTIC SOFT is designed for internal thermal and acoustic insulation by spraying. It is used to insulate roofs, attics, various types of roofing, ceilings, as well as walls in wooden, brick, concrete, steel and frame structures of residential, industrial and public facilities.

CROSSIN ATTIC SOFT polyurethane foam meets the requirements of national regulations on the emission of hazardous substances, in accordance with the Regulation of the Minister of Health and Social Welfare, and can be used without restrictions in category A and B⁽¹⁾ rooms.

The density of the sprayed foam core reaches 7 - 10 kg/m³ depending on the thickness of the layers and the execution of the application.

3. COMPONENT CHARACTERISTICS

POLY COMPONENT	
A formulated polyol mixture in the form of an oily liquid without suspension, pale yellow to orange in colour.	
Density at 20°C	1,09 ± 0,03 g/cm ³
Viscosity at 20°C	350 ± 100 mPa·s

ISO COMPONENT	
Mixture of aromatic polyisocyanates, mainly diphenylmethane diisocyanate; brown liquid, free of suspended solids.	
Density at 20°C	1,22 ± 0,02 g/cm ³
Viscosity at 20°C	350 ± 100 mPa·s

4. FOAMING CHARACTERISTICS UNDER LABORATORY CONDITIONS

Reaction times and apparent density obtained under laboratory conditions (at 20°C) when foaming by hand in a cup.

- ☞ Cream time: 4 ± 1 second
- ☞ Gel time: 10 ± 2 seconds
- ☞ Tack free time: 13 ± 3 seconds
- ☞ Coredensity: 8.1 ± 0.3 kg/m³

5. RECOMMENDED PROCESSING CONDITIONS

CROSSIN ATTIC SOFT is a system to be processed using specialised foaming units equipped with a spray head.

The recommendations are based on experience in applying spray foam using a Graco Reactor H-XP3 machine with a PROBLER P2 ELITE gun (mixing chamber 01).

- ☞ Volumetric ratio of **POLY : ISO** components - **100 : 100**
- ☞ Temperature settings on the machine:
 - Heating temperature of POLY and ISO components: 50 - 58°C
 - Hose heating: 50 - 58°C
 - Component pressure: 80 - 110 Bar (1160 - 1595 psi)
 - Temperature of ingredients in barrels: 30 - 40°C
- ☞ Ambient parameters:
 - Ambient temperature: 10 - 35 °C
 - Substrate temperature : 15 - 50 °C
 - Ambient relative humidity ≤ 70% RH
 - Moisture content of the porous substrate: ≤ 15% RH
 - Moisture content of non-porous substrate: dry

Surfaces to be insulated should be suitably prepared in advance. They should be free of dust, oil, loose fragments and other agents that may reduce the adhesion of the foam.

Before spraying, carefully protect the surfaces of adjacent objects, floors, furniture, etc. to avoid accidental contamination during spraying - bear in mind that sprayed foam has very good adhesion and can therefore be difficult to remove.

Spraying should be carried out using specialised spraying equipment. POLY and ISO components should be heated to 30 - 40°C before use.

Important: The POLY component should always be used before use be thoroughly mixed with a barrel stirrer (for a period of approximately 1 hour; Graco Twistork is recommended).

The temperature of the hoses should be 50 - 58 °C. The pressure setting for the POLY Component and the ISO Component should be the same and should be 80 - 110 Bar (1160 - 1595 psi).

After application with Crossin Attic Soft, it is recommended to ventilate the room until the odour disappears. In the absence of adequate ventilation, forced air movement should be provided using dedicated equipment. If the foam is exposed to direct UV radiation (e.g. sunlight) it should be protected.



Spraying should be carried out in such a way that the resulting layers are as thick as possible (> 100 mm).

When processing the system, the recommendations of the machine manufacturer should be taken into account, as well as the instructions and information contained in the Safety Data Sheets of both components.



6. PHYSICAL AND MECHANICAL PROPERTIES OF THE SPRAYED FOAM

Measurements were carried out on foam cut from a sample made using a specialised spray machine:

Parameters	Result	Standard
Core density	$\geq 7 \text{ kg/m}^3$	PN-EN 1602:2013-07
Reaction to fire classification:	E	PN-EN 13501-1:2019-02
	B-s₁, d₀⁽²⁾	
	NRO^(2,3)	-
Fire resistance	REI 30⁽⁴⁾	PN EN 13501-2:2016-07
Short-term water absorption by partial immersion	At_p ≤ 0.85 kg/m²	PN-EN 14315-1:2013-06
Coefficient of thermal conductivity	λ_{mean,i} = 0.036 W/(m·K)	PN-EN 12667:2002-12
	λ_{90,90} = 0.037 W/(m·K)	PN-EN 12667:2002-12
Declared value	λ_D = 0.037 W/(m·K)	PN-EN 12667:2002-12
Thermal conductivity coefficient under high humidity conditions (50°C, 90% relative humidity)	λ_{50c,90%rh} = 0.0370 W/(m·K)	PN-EN 12667:2002-12
Compressive stress at 10% relative strain	σ₁₀ ≥ 5 kPa	PN-EN 826:2013-07
Resistance coefficient of water vapour diffusion	μ = 3	PN-EN 12086:2013-07
Single figure sound absorption coefficient	α_w = 0,50	PN-EN ISO 11654:1999
Sound absorption class	D	PN-EN ISO 11654:1999
Dimensional stability:		
 70°C, 90% RH, after 48h	DS(90,70)4	PN-EN 1604:2013-07
 -30°C, after 48h	DS(-20,-)4	PN-EN 1604:2013-07
Foam adhesion perpendicular to the substrate/tensile strength	> 34 kPa	PN-EN 1607:2013
Foam adhesion perpendicular to the substrate of fiber-cement board	> 20 kPa	PN-EN 1607:2013
Interlayer adhesion	> 40 kPa	PN-EN 1607:2013
Contents of closed cells	≤ 10 %	PN-EN ISO 4590:2016-11
Resistance to mould Method A	0 - no growth	PN-EN ISO 846:2002
Volatile organic compound emissions – French VOC regulation	Class A+	PN-EN 16516

Full mechanical properties of the foam obtains after 24 h of seasoning.

7. INFORMATION ON PACKAGING

The CROSSIN ATTIC SOFT system is packaged in 216 dm³ metal drums or 1000 dm³ IBC containers.

sunlight. The shelf life of the POLY component in the manufacturer's original sealed packaging, stored under the recommended conditions, is **6 MONTHS** from the date of manufacture. For special shipments, please contact the relevant person in the logistics department directly for the correct choice of packaging (other requirements).

8. TRANSPORT AND RECOMMENDED STORAGE CONDITIONS

Both components of the system should be stored in tightly closed packaging in dry rooms at 15 - 25°C. Protect from moisture and direct

9. REGULATIONS AND CERTIFICATES

- CROSSIN ATTIC SOFT does not contain ozone-depleting foaming agents, in accordance with the European Union (EU) regulations on the trade and use of controlled substances – Regulation (EU) No 2024/590 of 7 February 2024.
- The CROSSIN ATTIC SOFT polyurethane system has been placed on the market in accordance with the European Union Regulation No. 305/2011, together with the assessment of performance carried out in accordance with the European harmonized standard PN-EN 14315-1:2013.
- The product has the CE marking and the Declaration of Performance No. 05DOP-2019-PL has been issued for it.
- ⁽¹⁾Category A – buildings: residential, healthcare, educational and rooms intended for food storage. Category B – buildings: intended for human habitation, public use and other than those classified as category A rooms, as well as ancillary rooms in dwellings.
- ⁽²⁾Concerns the arrangement of layers consisting of CROSSIN ATTIC SOFT foam on combustible or non-flammable primers, covered with plasterboard cladding, on a wooden or metal structure with a thickness of G-K 12.5 mm, the classification of the product placed on the market is the responsibility of its manufacturer
- ⁽³⁾DZ.U. ANNOUNCEMENT OF THE MINISTER OF INFRASTRUCTURE AND DEVELOPMENT of 17 July 2015 on the publication of a uniform text of the Regulation of the Minister of Infrastructure on the technical conditions to be met by buildings and their location SECTION VI Fire safety Chapter 1 General principles requirements defined in the regulation as non-spreading fire in accordance with Annex 3 to the regulation
- ⁽⁴⁾Classification of systemic attic construction in the REI fire resistance class of 30 wooden roofs with Norgips enclosures according to classification report No LBO-077-KZ/21
- The polyurethane system has a hygienic certificate of PZH (Państwowy Zakład Higieny) B-BK-60211-0251/24

10. ADDITIONAL INFORMATION

The data contained in this Technical Information are based on the results of tests performed in our laboratory and on practical experience. These data do not constitute a guarantee of the properties of the final finished product. The results obtained may differ from those given when the product is used under conditions other than those assumed.

At the same time, we would like to inform you that we provide assistance in the implementation and application of our CROSSIN ATTIC SOFT system, and if necessary, we help in the selection of system parameters. In all matters related to the purchase and use of CROSSIN ATTIC SOFT, please contact our technical and sales representatives.