

1. PRODUCT DESCRIPTION

CROSSIN TITAN X35 is a two-component spray-applied polyurethane system used for the production of self-extinguishing **closed-cell** rigid polyurethane foam.

 COMPONENT POLY:	CROSSIN TITAN X35 POLY
 COMPONENT ISO:	ISO KOMPONENT B

2. APPLICATION

CROSSIN TITAN X35 is intended for internal and external thermal insulation applications using the spray method. It can be used for the insulation of walls, ceilings, attics, basements, tanks, pipelines, and other components with complex geometries. The CROSSIN TITAN X35 polyurethane system is used in residential and commercial construction, agriculture, and industry.

3. COMPONENT CHARACTERISTICS

COMPONENT POLY	
A formulated polyol blend in the form of an oily yellow-green liquid; may contain suspended solids.	
Density at 20°C	1,19 ± 0,01 g/cm ³
Viscosity at 20°C	1200 ± 300 mPa·s

COMPONENT ISO	
Mixture of aromatic polyisocyanates, principally diphenylmethane diisocyanate; brown color liquid, without suspensions.	
Density at 20°C	1,22 ± 0,02 g/cm ³
Viscosity at 20°C	350 ± 100 mPa·s

4. FOAMING CHARACTERISTICS IN LABORATORY CONDITIONS

Reaction times and apparent density obtained in laboratory conditions (at 20°C) with manual foaming in a laboratory vessel, at a stirrer speed of approx. 7000 rpm

 Cream time:	4 ± 2 seconds
 Gel time:	10 ± 3 seconds
 Tack free time:	13 ± 4 seconds
 Core density:	36 ± 3 kg/m ³

5. RECOMMENDED PROCESSING CONDITIONS

CROSSIN TITAN X35 is a system that should be processed using specialized foaming units equipped with a spray head. Recommendations are based on spray foam experience using a Graco Reactor H-XP3 machine with a FUSION AP gun (5252 mixing chamber).

 Volumetric components ratio	POLY : ISO - 100 : 100
 Temperature settings of the machine:	
Heating of the components	POLY and ISO: 54 - 56°C
Heating of the hoses	54 - 56°C
Component's pressure	75 - 85 Bar (1088-1233 psi)
Component's temperature in drums	30 - 40°C

Pressure settings for the POLY and ISO components should be identical. The recommended ambient temperature range is from 15°C to 35°C. The recommended substrate temperature range is from 15°C to 50°C, with a maximum ambient relative humidity of 70% and a maximum moisture content of 15% for porous substrates. Non-porous substrates must be dry.

IMPORTANT: Before use, both components must be heated to a temperature of 30-40°C. In addition, the POLY component must be thoroughly mixed (for approximately 1 hour prior to application and continuously during spraying, using a drum mixer – the Graco Twistork mixer is recommended). The ISO component does not require mixing.

Insulated surfaces should be prepared in advance. They should not contain dust, oil, loose fragments and other substances that may reduce the adhesion of the foam.

Before spraying, carefully protect the surfaces of adjacent objects, floors, furniture, etc., to avoid accidental soiling during spraying - remember that the sprayed foam has very good adhesion, so it can be difficult to remove.

To achieve an effective insulation layer, at least two uniform foam layers should be spray-applied so that the total insulation thickness is not less than 60 mm. It is recommended to allow each insulation layer to stabilize before applying the next one (the layer temperature should be below 30°C). All insulation layers should be applied within a single day.

After application of the CROSSIN TITAN X35 system, the area should be ventilated until any odor has dissipated. If adequate natural ventilation is not available, forced air circulation should be provided using suitable ventilation equipment. If the foam is exposed to direct UV radiation (e.g. sunlight), it must be protected with an appropriate UV-resistant coating or covering.

When processing the CROSSIN TITAN X35 system, the recommendations of the equipment manufacturer, as well as the guidelines and information provided in the Safety Data Sheets (SDS) for both components, must be followed.

IMPORTANT: It is recommended that the thickness of each individual layer falls within the range of 30–35 mm.

6. PHYSICAL AND MECHANICAL PROPERTIES OF SPRAYED FOAM

The measurements were carried out on a foam cut from a sample made using a specialized spray machine:

Parameter	Result	Standard
Apparent core density	$\geq 33 \text{ kg/m}^3$	EN 1602:2013
Reaction to fire classification:	F	EN 13501-1:2019
Short-term water absorption with partial immersion	$W_p \leq 0,20 \text{ kg/m}^2$	EN ISO 29767:2019
Thermal conductivity coefficient	$\lambda_{\text{mean,i}} = 0,026 - 0,028 \text{ W/(m}\cdot\text{K)}$	EN 12667:2002
	$\lambda_{90,90} = 0,029 \text{ W/(m}\cdot\text{K)}$	EN 12667:2002
Thermal conductivity coefficient λ_D taking ageing into account	$\lambda_D = 0,033 \text{ W/(m}\cdot\text{K)}$	EN 12667:2002
Compressive stress at 10% relative strain	$\sigma_{10} \geq 150 \text{ kPa}$	EN 826:2013
Water vapor diffusion resistance factor	$\mu \geq 50$	EN 12086:2013
Dimensional stability:		
 70°C, 90% RH, po 48h	DS(70,90)3	EN 1604:2013
 -20°C, po 48h	DS(-20,-)3	EN 1604:2013

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

7. PACKAGING INFORMATION

CROSSIN TITAN X35 system is supplied in 216 dm³ steel drums.

8. TRANSPORT AND RECOMMENDED STORAGE CONDITIONS

The CROSSIN TITAN X35 system should be stored in a dry area at temperatures between 10°C and 25°C. It must be protected from moisture and direct sunlight at all times. The system components should be stored in tightly sealed containers.

The shelf life of the POLY component in the manufacturer's original unopened packaging, when stored under the recommended conditions, is **2 MONTHS** from the date of manufacture.

Transport regulations shall be applied in accordance with Section 14 of the product Safety Data Sheet (SDS).

9. LEGAL REGULATIONS AND CERTIFICATES

- CROSSIN TITAN X35 does not contain ozone-depleting blowing agents, in accordance with European Union regulations on the marketing and use of controlled substances – Regulation (EU) No. 2024/590 of February 7, 2024.
- Polyurethane system EKOPRODUR G-PUR 35 has been placed on the market in accordance with European Union Regulation (EU) No. 305/2011, with the assessment of its performance carried out in accordance with the harmonized European standard EN 14315-1:2013.
- The product is CE marked and a Declaration of Performance (DoP) has been issued for it.

10. ADDITIONAL INFORMATION

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

At the same time, we would like to inform you that we provide assistance in the implementation and use of our CROSSIN TITAN X35 system and, if necessary, we help in the selection of system parameters. In all matters related to the purchase and use of CROSSIN TITAN X35, please contact our technical and sales representative.