



# KLIMA-PUR® WINDOW SYSTEM

## Product description

KLIMA-PUR® is a high-performance window system made of bioPolyurethane (BioPUR), designed for energy-efficient and sustainable construction. The material combines outstanding thermal insulation ( $U_f \leq 0.8 \text{ W/m}^2\text{K}$ ) with excellent acoustic damping and high dimensional stability, outperforming traditional PVC, aluminium, and timber frames.

Its dense microcellular structure and low thermal conductivity result in superior envelope performance and long-term durability (30–40 years), while maintaining a lightweight design. KLIMA-PUR® profiles are fully recyclable, enabling circular manufacturing and reducing embodied carbon compared to fossil-based alternatives.

## Applications

Passive-House and nZEB buildings in residential and tertiary sectors.

Retrofit projects aiming to reduce heating and cooling demand.

New constructions requiring lightweight, highly insulating frames.

Façade systems and curtain-wall modules using prefabricated or hybrid envelopes.

The material's resistance to weathering, humidity and UV exposure allows outdoor installation in diverse European climates, ensuring high performance in both cold and warm-temperate regions.



## Safety data

- KLIMA-PUR® profiles are made of bioPolyurethane (BioPUR) material free from hazardous substances such as foaming agents, plasticizers, or heavy metals. The product is manufactured using aromatic isocyanates and renewable polyols, resulting in a low-VOC formulation that ensures safe indoor air quality and compliance with REACH and RoHS regulations.
- During handling and installation, no particular hazards are expected under normal conditions. Standard personal protective equipment (gloves and safety glasses) is recommended when cutting or machining the profiles.
- In case of fire, carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>) may be released as with any organic polymer. Firefighting measures should use foam, CO<sub>2</sub>, or dry chemical extinguishers.
- Waste and offcuts can be mechanically recycled or chemically reprocessed into new BioPUR components, contributing to circularity and minimising landfill disposal.



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## Technical data

Property	Test/Standard	Value
<b>Dimensions</b>	EN 822, EN 823, EN 824, EN 825	69x70 mm (WxH)
<b>Density</b>	EN 1602	450-500 Kg/m3
<b>Content of biobased</b>	Based on providers declarations	60-70% (considering mass balance isocyanate)
<b>Content of recycled material</b>	Based on % w/w	Up to 15%
<b>Tensile properties</b>	ISO 527-2:2012	Elasticity modulus 188 Mpa
		Tensile Resistance 4.61 MPa
		Deformation 3.1 %
		Stress at break 4.61 MPa
		Elongation at break 3.1 %
<b>Impact resistance</b>	UNE-EN ISO 179-1:2024	0.987 kJ/m2
		0.693 kJ/m2*
<b>Thermal Properties</b>	UNE EN 12667:2002	Thermal conductivity 0.04919 W/mK (25 °C)
		Thermal resistance 0.3391 m2K/W (25 °C)
		Specific Heat Capacity 1.452 J/g·K (20 °C)
<b>Calorimetric cone test</b>	ASTM E1354	Self-ignition Temp. 451°C
<b>Reaction to fire of the product as is placed on the market</b>	EN 13501-1, EN 15715	Self-extinguishing
<b>Flammability</b>	UL 94	Vertical - V0 Class Horizontal - HB
<b>Heat reversion</b>	UNE EN 479:2018	Max: 0.13% Min 0.08 %
<b>Heat behaviour</b>	UNE EN 478:2018	No significant changes in profile section
<b>Sound absorption</b>	EN ISO 354	--10 dB

\* Obtained value after accelerated aging tests for one month according to UNE-EN 12608-1.



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## CE marking window testing (window 2-leaf)



Property	Test/Standard	Value
<b>Air permeability</b>	UNE-EN 1026:2017. UNE-EN 12207:2017	Class 4
<b>Water tightness</b>	UNE-EN 1027:2017. UNE-EN 12208:2000	Class E750
<b>Wind load resistance</b>	UNE-EN 12211:2017. UNE-EN 12210:2017	Class C3
<b>Acoustic Damping</b>	Anex B. UNE-EN 14351:2006+A2:2017	40(-2;-6) dB
<b>Thermal Transmittance</b>	UNE-EN ISO 10077-1:2020	1.1 W/m <sup>2</sup> K

Glass type: LamiGlass 44.2sp. ClimaGuard Premium 2/ 18 Argón/ Float 4

## CE marking window testing (balcony door 1-leaf)

Property	Test/Standard	Value
<b>Air permeability</b>	UNE-EN 1026:2017. UNE-EN 12207:2017	Class 4
<b>Water tightness</b>	UNE-EN 1027:2017. UNE-EN 12208:2000	Class E1200
<b>Wind load resistance</b>	UNE-EN 12211:2017. UNE-EN 12210:2017	Class C5
<b>Static Torsion Resistance</b>	UNE-EN 14609:2004. UNE-EN 14609 ERRATUM:2010	Class C4 (350N)
<b>Burglar resistance</b>	UNE-EN 1627:2021. UNE-EN 1628:2021. UNE-EN 1629:2021. UNE-EN 1630:2021.	RC2 Grade
<b>Thermal Transmittance</b>	UNE-EN ISO 10077-1:2020	1.1 W/m <sup>2</sup> K

\* Glass type: LamiGlass 44.2sp. ClimaGuard Premium 2/ 18 Argón/ Float 4



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## CE marking window testing (balcony door 2-leaf)



Property	Test/Standard	Value
<b>Air permeability</b>	UNE-EN 1026:2017. UNE-EN 12207:2017	Class 4
<b>Water tightness</b>	UNE-EN 1027:2017. UNE-EN 12208:2000	Class 0A
<b>Wind load resistance</b>	UNE-EN 12211:2017. UNE-EN 12210:2017	Class C1 / A2
<b>Thermal Transmittance</b>	UNE-EN ISO 10077-1:2020	1.1 W/m <sup>2</sup> K

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