

# 3-LAYER WINDOW INSULATION AND SEALING SYSTEM



## SYSTEM DESCRIPTION



### INNOVATION FOR QUICK REPLACEMENT AND RENOVATION OF WINDOWS

WINS Fix is a rapid and easy to apply 3-layer insulation and sealing system for windows installed in walls with the jamb without damaging the external layer of the façade. Perfect for thermorenovation of window joinery in historic buildings. It provides weather-resistant tightness as well as thermal and acoustic insulation.







Air tightness

eather condition resistance

THE FEATURE OF THE WINDOW - REVEAL JOINT	REFERENCE DOCUMENT	CLASS/LEVEL/VALUE
Resistance to rainwater penetration	EN 1027	pressure 1200 Pa
Resistance to rainwater penetration	EN 12208	class E1200
Air permeability	EN 1026	pressure 600 Pa
Air permeability	EN 12207	class 4
Air permeability	EN 12207	$Q_{L} \le 0.46 \text{ m}^{3}/\text{hm}$
Air permeability	EN 1026	a ≤ 0.1 [m³/hm(daPa) <sup>2/3</sup> ]
Temperature coefficient value f <sub>Rsi</sub>	EN 13788	≥ 0.80
Linear thermal transmittance	EN ISO 14683	≤ 0.15 W/mK



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Thermal and acoustic insulation

Protection against mould and fungal

## APPLICATION

#### **Recommended uses**

Joinery insulation and sealing works in existing buildings and on historical sites

▶ three-layers walls with a jamb.

#### Possible uses

Insulation and sealing of joinery in new buildings in case of clinker façade wall with the jamb.



# WINS - NEW WINDOW INSULATION STANDARD BASED ON LIQUID FOILS



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# **3-LAYER WINDOW INSULATION AND SEALING SYSTEM**



## **3 AREAS OF WINDOW INSULATION AND SEALING**

EXTERNAL	Sd	< 0,5
1	Application temperature	+5°C to +30°C
	Acoustic insulation	59 dB
AREA	Thermal conductivity	0.046
	Fire reaction class	B1
	Thermal conductivity	0.036 W/mK
SULATION	Acoustic insulation	62 dB
2	Application temperature	+5°C to +35°C
AREA	Full cure time	1.5 h
	Yield	to 70 I
	Fire reaction class	B3
INTERNAL	Sd	≥ 30
7	Application temperature	+5°C to +30°C
3	Minimum coating layer thickness	2 mm
AREA	Minimum gap thickness	10 mm

#### **External area**

External sealing is responsible for protecting the joint between the frame and the reveal against external factors and weather conditions. The sealing function is performed by the external self-expanding tape WINS Fix.

#### Insulation area

Functional insulation area - is responsible for the required level of thermal and acoustic insulation of the joint between the frame and the reveal. The insulating function is performed by WINS Fast insulating foam.

#### Internal area

The internal sealing is the actual barrier separating the interior environment from the outdoor environment, preventing uncontrolled air infiltration through the frame to reveal joint. The sealing function is performed by WINS internal liquid foil.

### WINS FIX SYSTEM PRODUCTS

#### External self-expanding tape

Tytan Professional WINS Fast self-adhesive open-cell polyurethane foam based expansion tape for sealing between the window and the reveal or between the window and the plastered internal surface of the jamb. It is flexible and it compensates for the movement of the structure. Compatible with substrates made of aluminium, PVC, wood, silicates, concrete, cellular concrete, ceramic hollow bricks, brick, plaster, etc. Does not react with PU foam and MS Polymer based sealants.

#### FAST foam

Polyurethane insulation foam with very good thermal insulation, extremely fast curing time, reduced post-expansion as well as ultra high yield.

#### Internal, low vapour-permeability liquid foil

WINS internal liquid foil is a single-component compound, chemically neutral and adhesive to most construction materials. It creates a flexible, low vapour-permeability membrane.



### **CONDITIONS FOR APPLICATION**

TEMPERATURE	from +5°C to +30°C
PACKAGING TEMPERATURE APPLICATOR PACKAGING (OPTIMAL +20°C)	from +5°C to +30°C
SUBSTRATE TEMPERATURE	from +5°C to +30°C

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### INSTALLATION GUIDE

#### 1. PREPARATION OF THE SUBSTRATE AND WINDOW FRAME INSTALLATION

Clean the substrate with a wire brush from loose and unbound components of the construction material, then dust off with a vacuum cleaner. Large defects of the reveal should be filled with dedicated mortar. Fix the window frame mechanically to the reveal in accordance with the design guidelines of the window manufacturer or RAL technical guidelines. Wet the working surface with water using a suitable sprayer.

#### 2. WINS FAST INSULATING FOAM APPLICATION IN AREA 2

The recommended can temperature is room temperature. During application, the can should be positioned in the "valve down" position. The foam should always be applied from the bottom in the upwards direction, filling the gap with fresh foam always in 100% of the section, gradually in layers of about 4 cm deep. WINS Fast foam full cure time is 1,5 h (+23°C / 50% RH). When the WINS system foam has completely cured, cut off the excess foam with a sharp knife evenly to the frame surface.

#### 3. WINS FAST LIQUID FOIL APPLICATION IN AREA 3

Before applying the liquid foil, after opening the bucket the product should be stirred. For its application from the bucket use a dedicated Tytan silicone applicator or an appropriate brush. When using liquid films available in 600 ml sausage packs, a suitable manual or electric caulk gun must be used. The anthracite-coloured WINS internal liquid foil should be applied on the internal side and the coating thickness should be min. 2 mm (while wet). The coating should be applied over the entire surface of the cut-off PU foam and should overlap at least 3 mm on the surface of the joinery frame and at least 5 mm on the reveal surface. The full curing time depends on the ambient (air temperature and relative humidity) as well as on the thickness of the liquid foil layer applied.

#### 4. WINS SELF-EXPANDING TAPE APPLICATION IN AREA 1

In case of using WINS expansion tape, the sealing of the joint should be started by sticking it to the surface of the jamb. The width of the tape is selected according to the width of the joint. All damages, cavities and unevenness of the surface of the jamb must be eliminated. Before starting to install the tape, always cut off the first and the last two centimetres from the roll.

AMBIENT TEMPERATURE	CURING TIME RECOMMENDED THICKNESS 2 MM
+5°C	> 5 h
+23°C	≈ 2.5 h
+30°C	≈ 2 h

AMBIENT TEMPERATURE	CURING TIME RECOMMENDED THICKNESS 1 MM
+5°C	≈ 5 h
+23°C	≈1h
+30°C	<1h

#### STORAGE AND TRANSPORTATION

Do not freeze. Do not store or transport at negative temperatures. Transport and storage from +5°C to +30°C. The product should be transported and stored in dry conditions and in original, undamaged packaging at temperatures from +5°C to +25°C. Storage at the temperature exceeding +30°C shortens the shelf life of the product, adversely affecting its parameters. Protect against negative temperature and direct sunrays. After opening, close the package tightly and use the remaining contents as soon as possible. Shelf life of the product stored according to the above guidelines is 12 months.





Faster

application

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Easy application

Weather conditions

resistance



Air tightness



Passive fire protection



No frames

deformation

installations

For new



5-30°C

Application temperature 5℃ - 30℃



For replacement and renovation



UV resistance



Without interfering with the external facade



Energy efficiency of the building





Thermal and acoustic insulation



High yield over 70l



Indoor air quality



Protection against mould and fungal



Independently of the joint's width



Neutral smell

FAS

PIANA PISTOLETOWA

## STANDARDS AND CERTIFICATES

Polish Standard PN-EN 12591:2007 "Windows and doors - terminology".

Polish Standard PN-EN 1027:2016-4 "Windows and doors. Watertightness. Test method".

Polish Standard PN-EN 12208:2001 "Windows and doors - Watertightness - Test method".

Polish Standard PN-EN 12207:2017-01 "Windows and doors - Watertightness - Test method".

Polish Standard PN-EN 13788:2013-05 "Humidity and heat properties of construction components and elements of the building. Internal surface temperature necessary to avoid critical surface humidity and interlayer condensation. Calculation methods".

PN-EN 6946 "Construction components and elements of the building. Thermal resistance and heat transfer coefficient. Calculation methods".

PN-EN ISO 14683 "Thermal bridges in the building. Linear heat transfer coefficient".



A building project in which WINS systems were used in accordance with the Sealing and insulation standard for joints between the reveal and the frame developed by Selena, carried out by Certified WINS Contractors, may be covered by a 20-year tightness guarantee.





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