

Fire-resistant glass

Appreciated by architects,
valued by investors



POLFLAM®
FIRE RESISTANT GLASS

THE COMPANY

POLFLAM has operated in the glass sector since 1992 and has specialised in the production and sale of fire-resistant glass since 2005.

We have thorough knowledge of both fire-resistant glass and fitting systems in use. Our achievements include hundreds of thousands square metres of glass panes and instalments delivered in Europe.

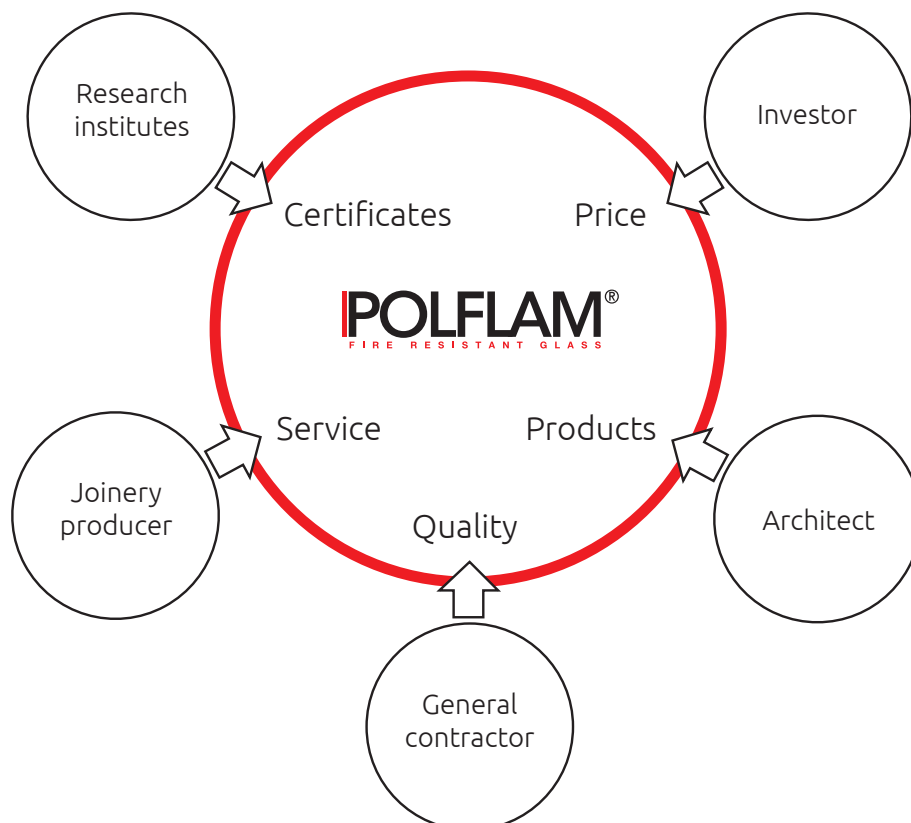
Today **POLFLAM** is an entirely independent fire-resistant glass manufacturer: beginning with technology – through testing – up to production.

We offer both the product and systematic service:

- laboratory facilities for the testing of glass and complete structures,
- advisory services and training.

The **POLFLAM** brand stands for product quality and reliable and comprehensive service at each stage of investment.

We co-operate with system providers of any type of joinery – aluminium, steel and wooden, as well as frameless systems.



TESTING LAB

POLFLAM is the sole glass manufacturer in the sector in Poland to own a fire-resistance testing furnace. We test random product batches leaving our factory and complex solutions based on **POLFLAM** glass. The testing follows most restrictive research regimes and is carried out in the temperature spread up to 1100°C.

Fire-resistance tests are run in compliance with the technical standard PN-EN 1363-1.

In the company's lab, **POLFLAM** glass undergoes the following resistance testing:

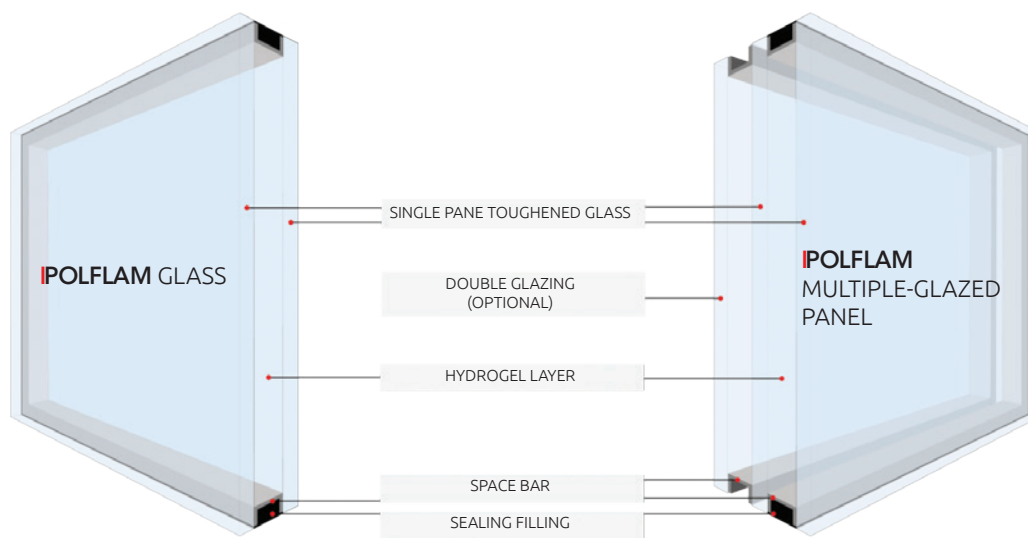
- UV radiation resistance,
- critical temperatures resistance,
- mechanical resistance.

The results of the research done in our **POLFLAM** lab have been confirmed through testing by accredited European laboratories.



THE TECHNOLOGY

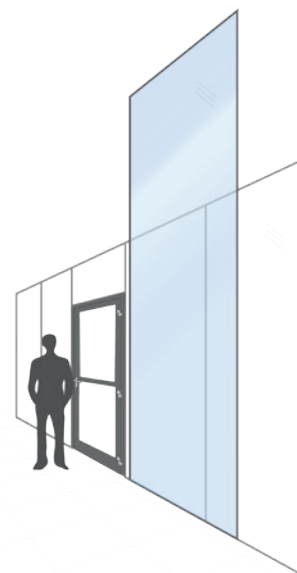
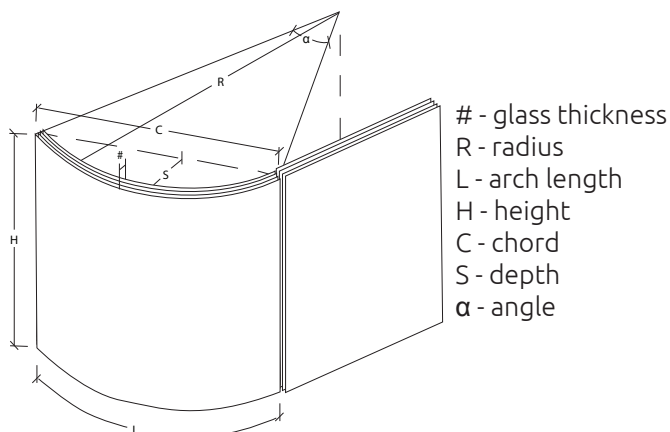
POLFLAM fire-resistant glass is state-of-the-art technology. We have managed to link the glass and the hydrogel joining it with a space bar. We produce the hydrogel according to our own formula developed by **POLFLAM**. Currently, we are the sole hydrogel producer for that type of glass in Poland. The **POLFLAM** fire-resistant glass meets fire-insulation and fire-resistance criteria in compliance with the technical standard PN-EN 1363-1.



POLFLAM offers fire-resistant curved glass and this large-sized float panels.

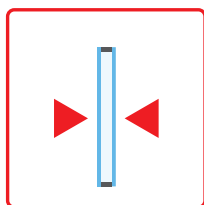
Having a curved glass of varied depth, it is feasible to create glazings of nonstandard shape. The curved glass retains all the fire-resistance parameters of float glass.

POLFLAM technology allows for much larger glass panels to be made than before – even **as large as 2420 x 4620 mm** (the EI 60 class).

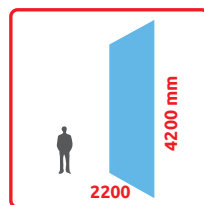


ADVANTAGES

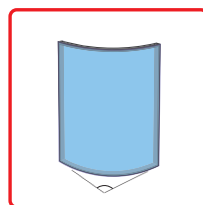
Fire-resistant glass POLFLAM	EI 30			EI 60		EI 90		EI 120		EI 180
Thickness [mm]	20	25	28	32	35	35	40	55		
Weight [kg/m ²]	38	45	49	52	57	57	64	83		
Light transmittance [Lt %]	87	87	86	85		85		85		
Sound reduction R _w [dB]	42	44	45	44	47	45	48	45		
Safety class	1/B/1									
Reaction to fire	Class B-s1, d0									
Operating temperature range	-40°C/+50°C									
Bent glass possible	yes									



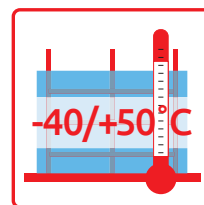
simmetrical design



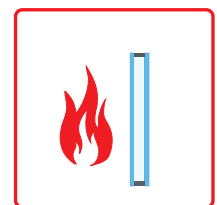
large glass sheets



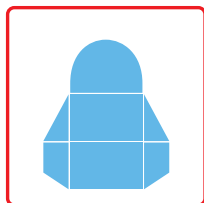
bent glass



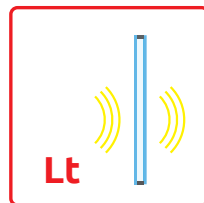
resistance to temperature



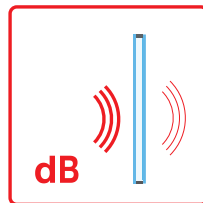
reaction to fire: B-s1, d0



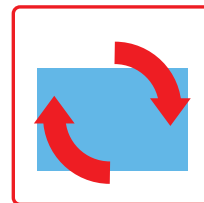
different shapes



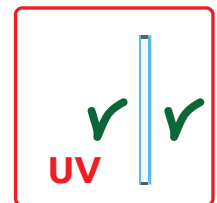
Lt – up to 87,6%



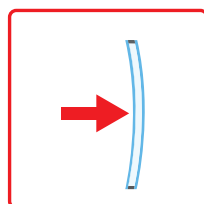
R_w – up to 48 dB



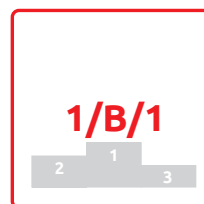
no need of positioning



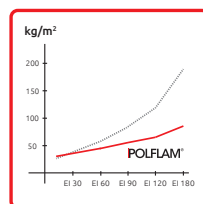
UV radiation resistance



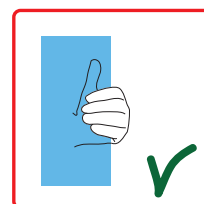
resistance to damage



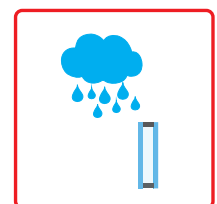
highest safety class



low weight



blunted edges



water resistance

INTERIORS



The **POLFLAM** fire-resistant glass is used inside buildings as:

- partitions,
- ceilings and platforms.

We install **POLFLAM** glass in the following systems:

- frameless systems,
- joinery made of aluminium, wood or steel.

The strengths of **POLFLAM** glass in indoor applications:

- sound control factor R_w up to 48 dB,
- capability of producing curved glass,
- available in any colour of RAL and NCS palettes.



Extra functionality of partitions can be achieved through double glazing using:

- anti-burglary and bulletproof glass,
- opaque glass,
- colour and ornamental glass,
- reflective glass.



WINDOWS AND DOORS



POLFLAM fire-resistant glass in windows and doors can be used with different joinery systems:

- aluminium,
- wooden,
- steel.

Key qualities of **POLFLAM** glass used with windows and doors:

- high light transmittance factor
 - Lt up to 87.6%,
- resistance to UV radiation,
- top safety class 1/B/1,
- high acoustic insulation index R_w
 - up to 45 dB,
- resistance to temperatures from
 - 40°C to +50°C,
- capability of producing fire-resistant bent glass in the form of arches, circles and irregular-edge shape.

Further functionality of fire-resistant glass can be obtained through putting in extra-function sheets in multiple-glazed units*:

- thermalproof glass,
- solar control glass,
- anti-burglary and bulletproof glass.

* **POLFLAM** glass catalogue with multiple-glazing options is available for reference.



FACADES AND SKYLIGHTS



POLFLAM fire-resistant glass in facades and skylights can be used with different joinery systems:

- aluminium,
- steel.

The parameters of **POLFLAM**-glass are perfectly suitable for outdoor applications:

- high acoustic insulation index R_w
– up to 45 dB,
- high light transmittance factor
– L_t up to 87.6%,
- resistance to UV radiation – no need of PVB film,
- resistance to temperatures from -40°C to $+50^{\circ}\text{C}$,
- high mechanical resistance,
- safety class 1/B/1.

Performance of the glass can be increased by means of putting in extra-function sheets in multiple-glazed units*:

- thermalproof glass,
- solar control glass,
- anti-burglary and bulletproof glass.

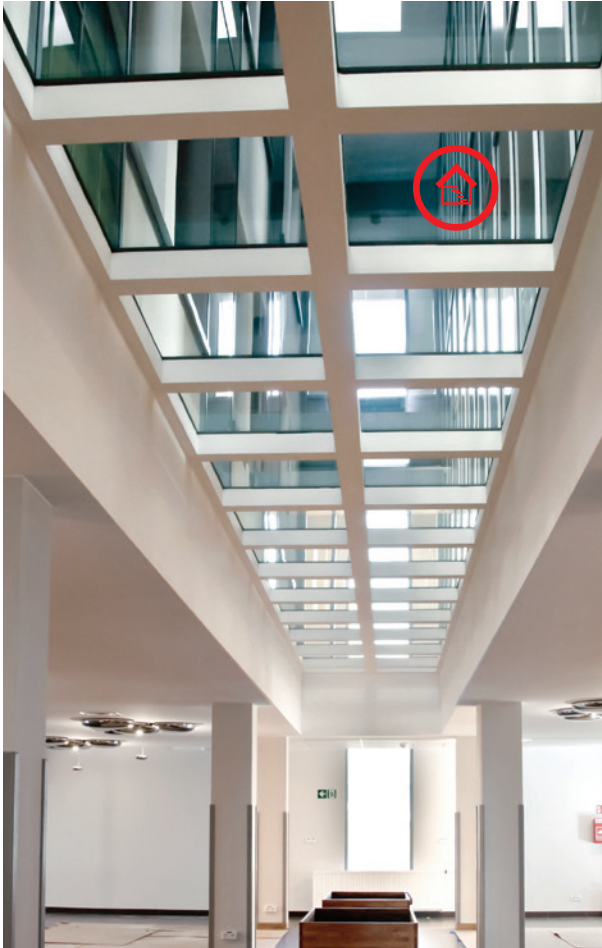
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Curtainwall, class EI 60 at the Pomorski Science and Technology Park in Gdynia



CEILING AND STAIRS



POLFLAM F fire-resistant glass is used for ceilings and stairs. It is available in the fire-resistance classes REI 30, 45, 60, 90, 120.

We are capable of making **POLFLAM F** glass of various shapes within the outline of a rectangle of the maximum dimensions 2200 x 1650 mm. The thickness of the glass, subject to the dimensions of the form, varies from 46 mm to 110 mm.

Fire-resistant glazed ceilings provide for more daylight saturation while giving the users of the building maximum protection in an incident of fire.

POLFLAM offers glass for glazed ceilings of the maximum load-bearing capacity of 5 kN/m².

POLFLAM F glass can be covered with antiskid screen print.



Ceilings with **POLFLAM F** glass of the REI 60 class applied in the two landings of the staircase at Oskar Kolberg Music School in Szczecinek.



POLFLAM®

Technical specification of the products and details regarding projects delivered are available from www.polflam.com

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