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# FIRESWISS

Transparent fire protection.





Fire-resistant glass in this entrance area shows how aesthetic appeal can be combined with functionality.

# Highly efficient protection that brings transparency into buildings.

Now: fire-resistant glass with Glas Trösch quality

The Glas Trösch Group is one of the leading suppliers and manufacturers of insulation glass, safety glass (SWISSDUREX, SWISSLAMEX) and high-performance coatings for solar and heat protection (SILVERSTAR). Now, FIRESWISS – the new glass for transparent fire protection – offers further proof of Glas Trösch's expertise in special glass products. This group of products includes two lines – FIRESWISS (E30) and FIRESWISS FOAM (EI30 and EI60) – developed and manufactured in the Group's own research and production facilities. Our comprehensive trade network with various Glas Trösch locations throughout Europe will ensure that you benefit from the shortest possible delivery periods and the best possible advice.

Limitless design variety and maximum transparency

FIRESWISS and FIRESWISS FOAM: fire-resistant safety glass that offers maximum transparency to ensure efficient utilisation of daylight. Above-average plate dimensions mean that architects and planners can enjoy limitless design variety. The functionality and aesthetic appeal of these high-performance glass products are the convincing fruits of the Glas Trösch Group's dynamic and effective approach.

FIRESWISS – ideal for fire-resistant glazing both indoors and outside

The FIRESWISS and FIRESWISS FOAM product lines can be used both inside a building and on the façade. Fire protection glazing with these products is tested and approved to EN 1364-1 and to DIN 4102-13, with approval to the new pr EN 13501-2 – ensuring that the products can be used throughout Europe in the future, regardless of national borders.

Product combinations to give you even more possibilities

FIRESWISS and FIRESWISS FOAM can cope with the multi-functional challenges of contemporary architecture. And to meet requirements for personal protection, local/object protection, sound protection, solar protection and heat protection, other products from the Glas Trösch Group can easily be combined with types of glass in the FIRESWISS and FIRESWISS FOAM product lines.

Benefit from long service lifetimes and excellent functionality

Thanks to the FIRESWISS product group with the FIRESWISS and FIRESWISS FOAM product lines, you can enjoy all the benefits of glass as a material: it does not age, it is easy to maintain and hygienic. What is more, up to 100% of glass can be recycled at the end of its life cycle, so our raw materials are conserved: an aspect that is becoming more and more important.



Fire tests with FIRESWISS FOAM glass are carried out at international test centres in compliance with EN.

# FIRESWISS FOAM.

## Transparent EI30 and EI60 fire protection with the new TTS.

A new, innovative layer structure featuring the TTS thermo-transformation layer.

Glas Trösch AG has taken the tried-and-tested multi-layer structure as the basis for a new type of fire-resistant layer. Intensive development work has led to a major increase in the absorption level of the energy-consuming layers as compared with conventional multi-layer systems – so now an even higher level of passive safety can be guaranteed.

Security and reliability backed up by standardised test procedures

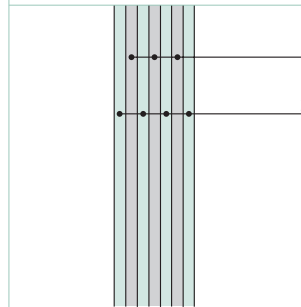
Glazing with FIRESWISS FOAM can be used in Germany, Switzerland and many other countries. Tests are carried out at ultra-modern European test institutes on the basis of EN 1363. So in future you can use Glas Trösch fire-resistant glass products anywhere in Europe, regardless of national borders.

The difference is clear

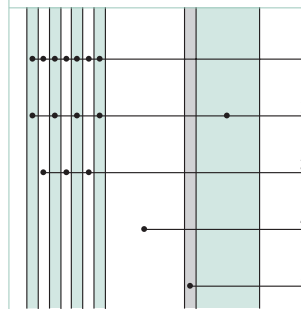
The main distinguishing feature between E and EI glass is the insulation against heat. If fire breaks out, FIRESWISS FOAM forms a "heat shield". Thanks to this characteristic, the side facing away from the seat of the fire only heats up by about 100 °K even with temperatures approaching 1000 °C in the fire zone. When FIRESWISS FOAM is installed, people escaping from the fire or rescue forces are safe to use the designated escape or rescue routes. FIRESWISS FOAM dependably prevents fire sparkovers, thus enabling the creation of reliable fire compartments.

Far more than fire protection

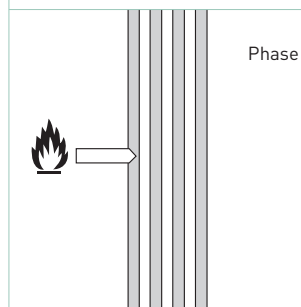
FIRESWISS FOAM is a good all-rounder – as well as fire protection, it offers a wide variety of other useful features. It can be converted into insulating glass, and when used to protect objects or people, added characteristics can prevent falls or breakthroughs. By applying SILVERSTAR coatings, FIRESWISS FOAM becomes a highly efficient heat and solar protection glass.



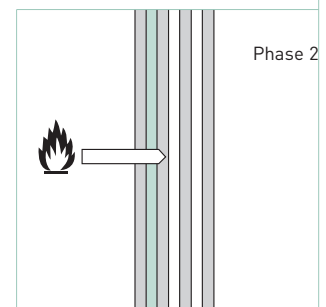
Multi-layer system with thermo-transformation coatings  
Float glass



1 FIRESWISS FOAM  
2 Float glass  
3 Thin thermo-transformation layer  
4 Air  
5 SILVERSTAR coating



Phase 1: heat is radiated from the fire



Phase 2: the first TTS layer foams up to consume energy

Size makes the difference

FIRESWISS FOAM can be manufactured in sizes of approx. 210 x 315 cm. State-of-the-art production plant ensures the highest quality standards in every respect. Optical quality is guaranteed by a special visualisation process for all our products. Here too, this product is setting new standards – and our ultra-short delivery periods are an added bonus.



Innovative multi-layer structure.  
Flexible, extendable combinations.



Heat protection with TTS thermo-transformation layers.

# An overview of the FIRESWISS product line

Name of glass	Structure in mm	Largest tested glass size in mm	Max. plate production dimensions in mm	Min. plate production dimensions in mm	Weight in kg/m <sup>2</sup>	Ug factor in W/m <sup>2</sup> K	Light permeability, %	Sound insulation factor, R <sub>w</sub> [dB]	Janisol 2	Janisol 3	Jansen Viss	Jansen Economy	Forster Presto	Forster Fuego	Forster Vario	Steel – other
FIRESWISS 30-6	6	1250 x 2000	2000 x 3500	100 x 280	15	5,8	88	30				CH				
FIRESWISS 30-8	8	1650 x 2500	2500 x 4500	100 x 280	20	5,8	87	32					D,CH			
FIRESWISS 30-10	10	1650 x 2840	2500 x 5000	100 x 280	25	5,8	86	34					D,CH			
FIRESWISS 30-12 VSG	12	1200 x 2140	2000 x 3500	100 x 280	30	5,6	86	36								D,CH
FIRESWISS 30-20 ISO K	6/8L/6	1250 x 2000	2000 x 3500	300 x 700	32	2,4	74	32								CH
FIRESWISS 30-22 ISO V	6/10L/6	1500 x 2500	2000 x 3500	300 x 700	31	1,8	69	32					D,CH			
FIRESWISS 30-22 ISO C	6/10L/6	1500 x 2500	2000 x 3500	300 x 700	31	1,6	68	32					x,CH			
FIRESWISS 30-22 ISO N	6/10L/6	1500 x 2500	2000 x 3500	300 x 700	31	1,6	74	32					x,CH			
FIRESWISS FOAM 30-15	15	1540 x 2840	2100 x 3150	100 x 100	37	5,2	85	38	D,CH		x			x	x	
FIRESWISS FOAM 30-19	19	1500 x 2500	2100 x 3150	100 x 100	45	5,2	85	38	x		x			x	x	
FIRESWISS FOAM 30-16 O	16	1560 x 2500	1560 x 2500	100 x 100	40	5,2	83	38	x							
FIRESWISS FOAM 30-20 O	20	1560 x 2500	1560 x 2500	100 x 100	50	5,2	83	38	x							
FIRESWISS FOAM 30-30 ISO VSG	15/8L/7	1500 x 2500	2100 x 3150	300 x 700	55	1,6	66	40	x		x			x	x	
FIRESWISS FOAM 60-19	19	1500 x 2500	2100 x 3150	100 x 100	47	5,2	85	38		x						

Key:

CH approved in Switzerland

D approved in Germany

x Tested to EN 1364-1, or approval in Germany or Switzerland applied for

# FIRESWISS. E30 transparent fire protection.

## Efficient performance thanks to our special finishing process

FIRESWISS is a thermally treated soda-lime glass that features some truly amazing properties. In Switzerland, it ranks as one of the leading types of fire-resistant glass, and even a thickness of 6 mm will ensure reliable protection against spreading fires. FIRESWISS is also highly resistant to temperature changes, so it can effectively seal rooms off against flames and smoke for at least 30 minutes.

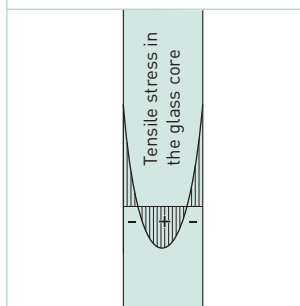
## Security and protection

It is very difficult for rescue forces to use escape routes if they are filled with smoke. FIRESWISS impedes the spread of toxic smoke gases so that life and limb can be protected. Another benefit: there are no wire inserts to impair vision, so maximum transparency is guaranteed.

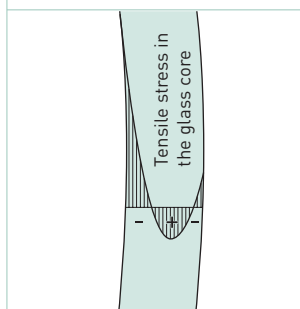
The result: FIRESWISS gives an unimpeded view of the seat of a fire, so the right action can be taken to fight the blaze.

## Extra functions and wider application areas

FIRESWISS not only functions as fire-resistant glass: it is also ideal for applications in sectors such as building protection, personal protection, sound protection and solar/heat protection. If FIRESWISS is converted into insulating glass, it offers highly efficient protection against heat. Coatings of SILVERSTAR and SILVERSWISS can be effectively used to control the heat/cold economy. Layers of SILVERSTAR 1.1 or SILVERSTAR Selekt can be added as well. FIRESWISS can also be combined with our SWISSLAMEX and SWISSDUREX products to protect buildings against unauthorised intrusions or to safeguard people against falling.



A special finishing process creates compressive stress on the surface of the glass.



This surface tension prevents premature malfunctions if fire breaks out.



In conventional float glass, the stress is distributed uniformly.



Thanks to the thermal finishing process, FIRESWISS offers far greater bending tensile strength and resistance to temperature changes.