



Fire-rated Glass

Protecting your investment





"Integrity & Insulation"



GUENIS Products **INTERFLAM** and **INTERFIRE** offer a combination of fire protection and excellent safety characteristics with a fire resistance time up to 120 minutes. Benefits include:

- Large Scale transparency in buildings
- Can be combined with other solar on external and internal glass
- Tested pane sizes over 7 sqm
- Application in all fire resistance classes E, EW and EI
- CE marked products of highest quality

INTERFLAM Integrity

INTERFLAM Radiation

INTERFIRE Insulation



Fire-rated Glass in Dubai
Metro Station



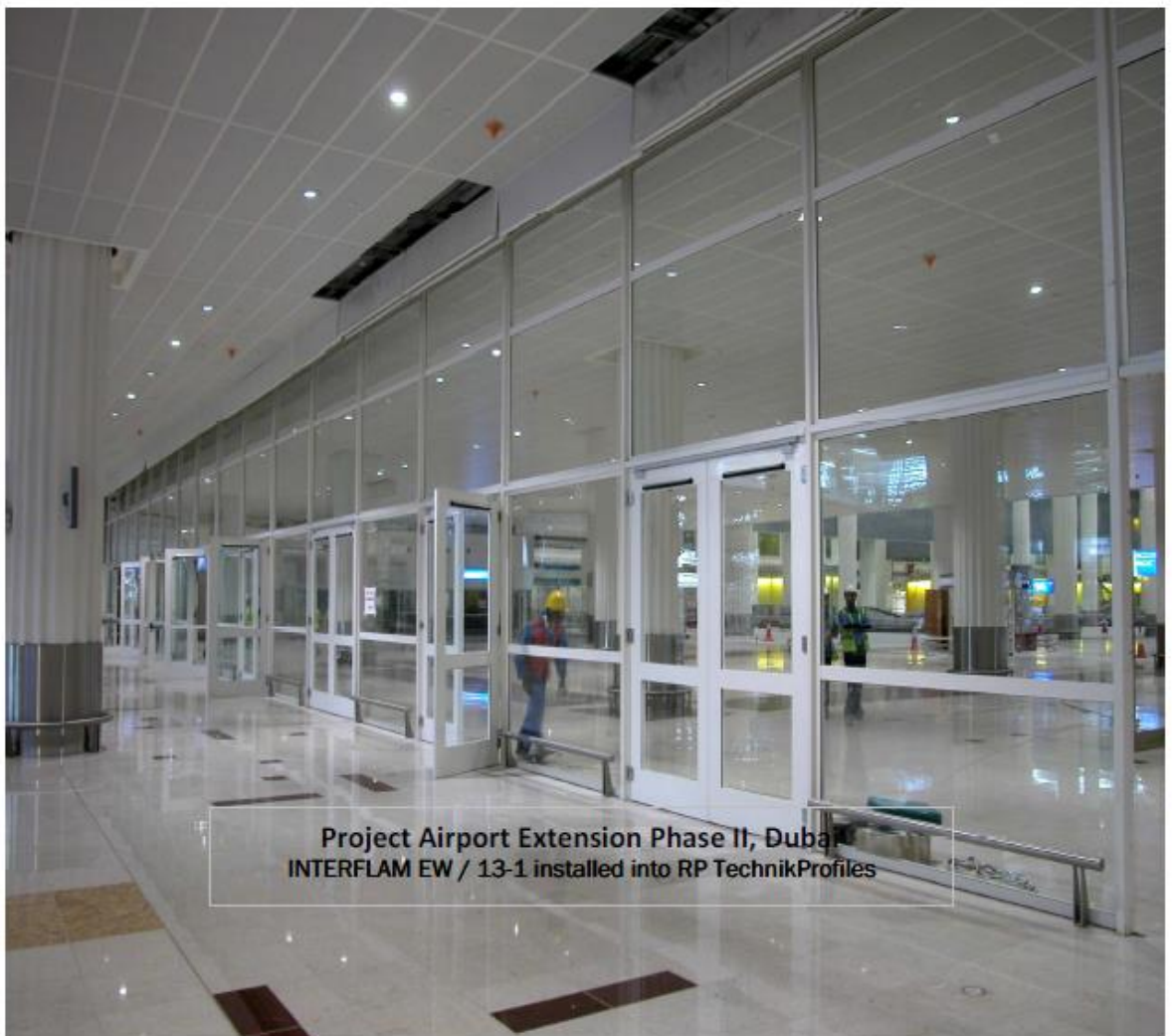
INTERFLAM E/EW

The product group **INTERFLAM** covers applications of the class E 30 either as single glass in thickness from 5 mm onwards, or as laminated glass and double glazing. **INTERFLAM E** is mainly for applications in steel frame systems.

There are two available options for applications in the class EW:

1. One side coated **INTERFLAM EW**- 6 mm for applications up to 60 minutes with the extra benefit of reduction in radiation and cost
2. **INTERFLAM EW** \geq 10 mm using the highly transparent INTERVER interlayer between panes of toughened or laminated glass to provide up to 120 minutes fire resistance plus protection from radiated heat.

Building Components Listing



Project Airport Extension Phase II, Dubai
INTERFLAM EW / 13-1 installed into RP TechnikProfiles



INTERFIRE EI

The product group **INTERFIRE** is used as fire protection glazing in buildings where a total heat shielding function is required. Again using the transparent **INTERVER** interlayer between toughened, float and laminated glass **INTERFIRE EI** provides up to 120 minutes fire protection plus protection against heat transfer.

All **INTERFIRE EI** glasses can be combined with other functional glass for either internal applications or in facades to meet additional requirements of safety, sound control, thermal control, solar control or decoration.



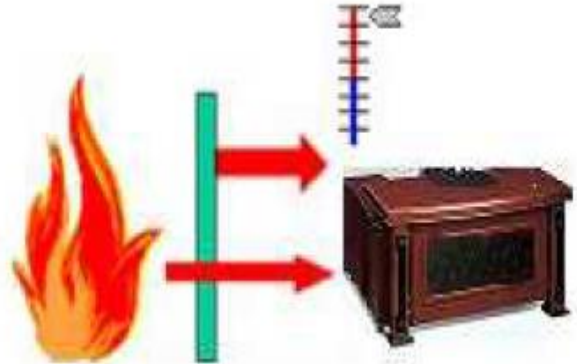
Project Metro Dubai,
INTERFLAM EW / 13-1 installed into RP TechnikProfiles



The classification according EN 13501-2

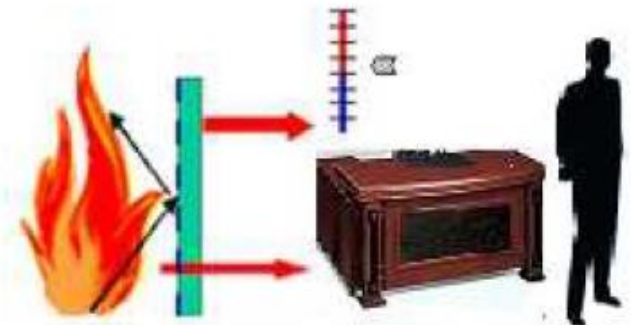
Class E: No flames or hot gases to appear on the unexposed side

INTERFLAM® - INTEGRITY



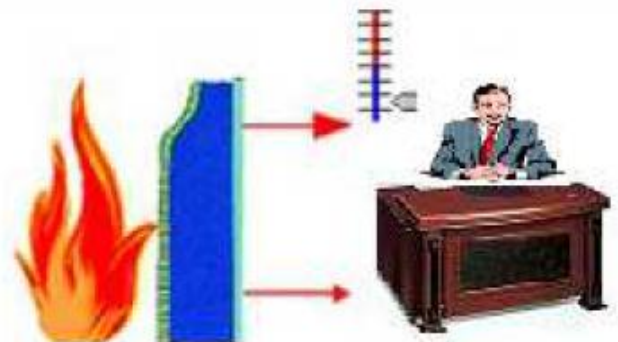
Class EW: as class E above plus the radiated heat level in front of the glazing may not exceed 15 kW/m²

INTERFLAM® - RADIATION



Class EI: Heat shield function. Temperatures on the unexposed side of the specimen may not exceed an average of 140°C

INTERFIRE® - INSULATION





Hose Stream Testing I

NORM: ASTM E119-08a/ Standard Test Methods for Fire Tests of Building Construction and Materials

Water Hose: \varnothing 64 mm

Nozzle: \varnothing 28.5 mm

Distance: 6 m

Duration: 2.5 min./ 9 m²

Water Pressure: 207 kPa= 2 bar



Hose Stream Testing II

Duration: 2.5 min./2bar

Then: 2.5 min./ 7 bar

Original US Fire Brigade Hose



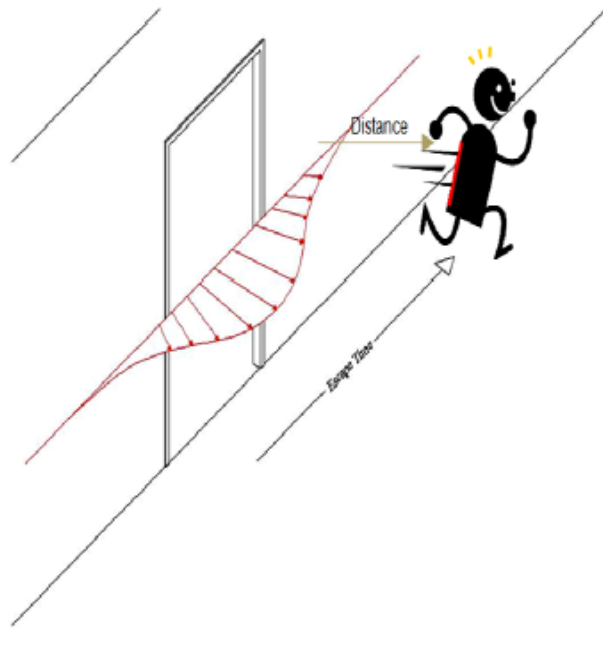





Radiation

What do we mean by reduction in radiated heat?





The Fire Standard requirement is $\leq 15 \text{ kW/m}^2$
GUENIS- Interlayer offers: ca. 10 kW/m^2 after 120 minutes.

Here is a comparison chart showing the difference between Class E monolithic, Class EW coated and EW Interlayer products, when radiated heat is measured on the unexposed side of the glass at a distance of just 1 meter from the glass






	30 minutes	60 minutes	90 minutes	120 minutes
Class E  INTERFLAM® E	26.5 kW/m ²	56.2 kW/m ²		
Class EW, coated  INTERFLAM® EW	7.6 kW/m ²	13.8 kW/m ²		
Class EW, with interlayer  INTERFLAM® EW120	2.2 kW/m ²	5.1 kW/m ²	8.1 kW/m ²	10.2 kW/m ²







INTERFLAM E/EW	Type	Description: INTERFLAM fire resistant and safety glass Tested following EN 12600 class 1B1/1C1	Frame
	E 30 5-12 mm	Compound: Single or laminated glass Screen printed, acid etched Max.sizes: 1200 x 2200 mm - 1600 x 2850 mm	Steel Alu
	Smoke screen 8 mm	Compound: Single glass 8 mm Frameless, to be hanged from ceiling Max.sizes: 2500 x 1200 mm	Point fixing
	E 60 EW 30/60 ≥ 6 mm	Compound: Single or laminated glass One side coated - asymmetrical use only Max.sizes: 1200 x 2200 mm - 1385 x 2835 mm	Steel Alu Timber
	E 30 - EW 60 DGU	Compound: INTERFLAM 6 mm/ spacer / combi glass Symmetrical or asymmetrical use Max.sizes: 1285 x 2285 mm - 1844 x 2409 mm	Steel Alu Timber



INTERFLAM EW/13	Type	Description: INTERFLAM fire resistant and safety glass Tested following EN 12600 class 1B1/1C1	Frame
	EW 30 - EW 120 EI 15 13 mm	Compound: Single glass 2 x toughened / Interlayer Screen printed, acid etched, coloured Max.sizes: 2585 x 2835 mm - 2300 x 3800 mm	Steel Alu Timber
	EW 30 - EW 120 EI 15 Combi	Compound: Single glass 1 x toughened plus combi Upon choice: monolithic or laminated Max.sizes: 1485 x 2585 mm	Steel Alu Timber
	EW 30 - EW 120 EI 15 DGU	Compound: INTERFLAM 13mm / spacer / combi glass Symmetrical or asymmetrical use Max.sizes: 1500 x 2900 mm - 2285 x 1585 mm	Steel Alu Timber



INTERFIRE EI	Type	Description: INTERFLAM fire resistant and safety glass Tested following EN 12600 class 1B1/1C1	Frame
	EI 30 16 mm	Compound: Single glass 2 x toughened / Interlayer Screen printed, acid etched, coloured Max.sizes: 1495 X 2495 mm - 2585 x 1485 mm	Steel Alu Timber
	EI 60 24 mm	Compound: Single glass 3 x toughened / 2 Interlayers Screen printed, acid etched, coloured Max.sizes: 1285 x 2486 mm - 1385 x 2835 mm	Steel Alu Timber
	EI 90 32 mm	Compound: Single glass 3 x toughened / 2 Interlayers Screen printed, acid etched, coloured Max.sizes: 1500 x 2834 mm - 2834 x 1500 mm	Steel Alu Timber
	EI 120 47 mm	Compound: Single glass 4 x toughened / 3 Interlayers Screen printed, acid etched, coloured Max.sizes: 1224 x 2835 mm - 1300 x 2825 mm	Steel Calcia-Silica



THANK YOU



Working together on your next project

to be

LEED compliant and Eco friendly