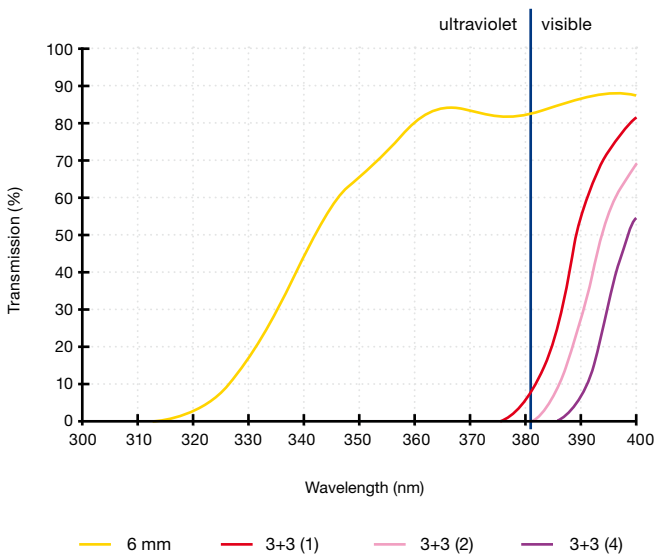


Stralami

Laminated glass

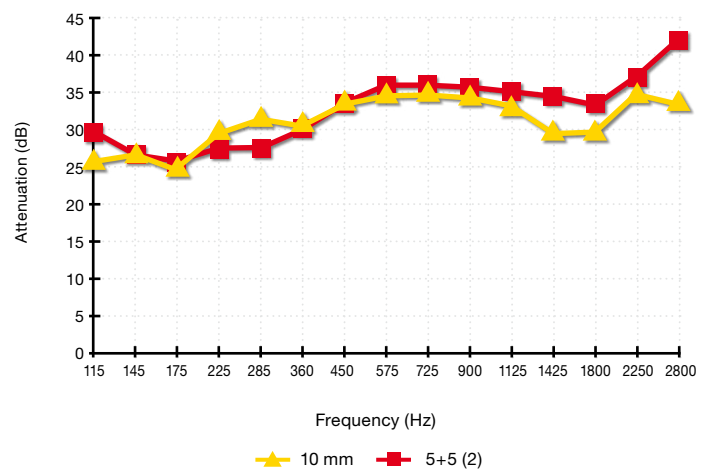
- Protection against UV radiation

The PVB used for joining the sheets that make up the Stralami laminated glass contain special additives that absorb ultraviolet radiation. Thanks to this property, laminated glass blocks more than 99% of ultraviolet radiation.



- Improved acoustic attenuation

Stralami laminated glass is a good alternative for effective protection against noise. The elasticity of the PVB absorbs noise, therefore improving the attenuation as opposed to monolithic glass.



- Solar protection and aesthetic aspect

Stralami laminated glass can also provide solar control functions through the use of coloured laminas and their combination with layers of solar control and high performance characteristics.

Type of Glass	R _w	R _{A, tr}	R _A
Monolithic 8 mm	32	29	30
Stralami 4+4.2	34	31	34
Stralami 6+6.2	36	33	36
Stralami 10+10.2	39	36	39

Stralami

Laminated glass

Protection against the risk of physical accidents

The high elasticity of PVB makes it highly resistant to impacts. As the Stralami laminated glass is resistant to penetration it is ideal for use in the safety and protection of people and goods. If breakage occurs the glass fragments remain adhered to the butyral and the structure remains intact, reason for which it is safe for people close by and it makes it difficult for anyone or anything to get through.

Laminated glass is also the ideal option for use in decks, banisters, glass floor tiles and all applications where the integrity of the glass is vital.

Protection against theft and vandalism

The EN 356 norm defines eight levels of classification from trials that show the aptitude of glass to resist the impact of thrown objects or robbery attempts (refer to tables).

The level of protection chosen within the Stralami range depends on the degree of risk and also the nature and value of the goods to protect.

The different levels of protection allow the production of shop windows and doors, entrance doors and office windows. Moreover Stralami glass guarantees the protection of its occupants from injuries in case of an accident.

Varying the nature, number and thickness of its components we can obtain groups with different characteristics, altering resistance for example, can provide characteristics ranging from physical safety to being bullet proof.

Stralami laminated glass meets with all the requirements of the norm UNE-EN 12600 relative to pendular soft impact, reaching the maximum level of protection, classification 1B1. Consult our technical department for advice on the necessary composition.

NORM UNE-EN 356				
Security level	Name	Nominal thickness	Trial (impact of a 4,11 kg iron ball)	
			Nº of impacts	Falls from height
P1A	Stralami 7P1	7 mm	3	1,5 m
P2A	Stralami 9P2	9 mm	3	3,0 m
P3A	Stralami 8P3	8 mm	3	6,0 m
P4A	Stralami 10P4	10 mm	3	9,0 m
P5A	Stralami 10P5	10 mm	9	9,0 m

NORM UNE-EN 356			
Security level	Name	Nominal thickness	Trial (combined attack with a drop hammer and an ax)
P6B	Stralami 19P6	19 mm	No opening, 30 y 50 impacts
P6B	Stralami 23P6	23 mm	No opening, 30 y 50 impacts
P8B	Stralami 21P8	21 mm	No opening, more than 70 impacts

Stralami

Laminated glass

Protection against fire arm

When people need to protect themselves from armed attacks (banks, police stations, military installations, etc.) Stralami Bulletproof is used. These compositions have, in accredited laboratories, passed the resistance tests of different fire arms according to the UNE-EN 1063 “Glass in building. Security glazing. Testing and classification of resistance against bullet attack”

NORM UNE-EN 1063					
Security level	Name	Nominal thickness	Trial		
			Type of weapon	Caliber	N° of impacts
BR2S	Stralami 27BR2	27 mm	short	9 mm Luger	3
BR4S	Stralami 39BR4	39 mm	short	0.44 Rem.	3
BR4NS	Stralami 24BR4	24 mm	short	0.44 Rem.	4