

## Protection Levels & Security Classifications

### Personal protection/Safety film

EN 12600 - Pendulum impact test, double tyre weights (50 kg)

The standard replaces SS 224426 and SS 224455

Class	Drop height	Hammerglass product
Class 3	190 mm	SafeCoat Safe 400
Class 2	450 mm	SafeCoat Safe 400
Class 1	1200 mm	SafeCoat Safe 700

### Protection against vandalism/Smash-and-grab

EN 356 - Dropped metal sphere (4 kg)

3 drops, no penetration of the glass

Class	Drop height	Laminated glass Thickness - Weight	Hammerglass product Thickness - Weight
P1A	1500 mm	-	SafeCoat 800 Mil
P2A	3000 mm	-	SafeCoat 1200 Mil
P3A	6000 mm	-	HmG 4 mm - 4.8 kg/m <sup>2</sup>
P4A	9000 mm	10 mm - 22 kg/m <sup>2</sup>	HmG 4 mm - 4.8 kg/m <sup>2</sup>
P5A	9000 mm, 3x3 in triangle	10 mm - 22 kg/m <sup>2</sup>	HmG 6 mm - 7.2 kg/m <sup>2</sup>

### Burglar proof doors

ENV 1627 - Glass standards

Door class

Door class	Security class
MK2	P4A
MK3	P5A
MK4	P6A
MK5	P7B
MK6	P8B

### Protection against break-ins

EN 356 - Axe blows (2 kg)

A 40x40 cm hole is made

Class	Number of blows	Swedish standard SF-200	Laminated glass Thickness - Weight	Hammerglass product Thickness - Weight
P6B	30-50	Class 1 & 2	12/15 mm - 30/38 kg/m <sup>2</sup>	HmG 6 mm - 7.2 kg/m <sup>2</sup>
P7B	51-70	Class 3	19 mm - 42 kg/m <sup>2</sup>	HmG 6 mm - 7.2 kg/m <sup>2</sup>
P8B	71<	Class 3	21/24 mm - 43/54 kg/m <sup>2</sup>	HmG 8/10 mm - 9.6/12.0 kg/m <sup>2</sup>
P8B	71<	Class 3	-	HmG Insulate 6 mm (HG06-12-4.41)

### Security glazing/Bullet resistance

EN 1063

Class	Weapon	Caliber	Range (m)	Bullet velocity (m/s)	Shots	Hammerglass product
BR1	Handgun/Rifle	.22 LR	10	360 m/s	3	-
BR2	Handgun	9 mm x19 Parabellum	5	400 m/s	3	-
BR3	Handgun	.357 Magnum	5	430 m/s	3	-
BR4NS	Handgun	.44 Magnum	5	440 m/s	3	HmG BR4NS 23 mm
BR5	Rifle	5.56x45 mm	10	950 m/s	3	-
BR6NS	Rifle	7.62x51 mm	10	830 m/s	3	HmG BR6NS 39 mm
BR7	Rifle	7.62x51 mm	10	820 m/s	3	-

### Security glazing/Explosion resistance

EN 13123/13124-2

Class	Charge (kg)	Distance (m)	Pressure P <sub>so</sub> (bar)	Impulse I <sub>so</sub> (bar/ms)	Hammerglass product
EXR1	3	5	0.75	1.05	HmG 12 mm
EXR2	3	3	2.3	1.65	HmG 12 mm
EXR3	12	5,5	1.7	2.25	-
EXR4	12	4	3.6	3.00	-
EXR5	20	4	6.3	4.20	-