

# PROFILON® P4A

**One of the most highly resistant security films in the world – proved with a test certificate**

**PROFILON® P4A is an extremely high-resistance security film that provides optimum protection against break-in, vandalism and incendiary attacks. A test certificate is available that confirms the film's extremely high protection capability, in line with resistance class P4A, against thrown objects; it also displays a highly reliable anti-splintering effect. In addition, it possesses explosion-resistant properties and is suitable as a retrofit solution for glazing.**

The multi-layer security film can be retrofitted to all flat glass surfaces and is the first security film to attain resistance class P4A with 4mm float glass. Naturally, PROFILON® P4A is installed solely on the inside, which renders the security measure invisible to any potential attackers.

The effectiveness of the film has been confirmed by a practical test conducted by TÜV Rheinland in accordance with DIN EN 356 A. In the test, a steel ball was dropped a total of three times from a height of nine metres onto a glass panel coated with PROFILON® P4A. The pane was held in place despite the enormous energy resulting from the impact, and the robust, multi-layer film successfully held the splinters in the frame.

An integrated UV filter provides additional protection of the interior against UV radiation. The film is scratch-insensitive and maintenance-free. The specially hardened surface can be cleaned using conventional cleaning materials.



PROFILON® P4A is manufactured by the only producer of security films in Germany and is therefore guaranteed to be "Made in Germany".

#### Characteristics at a glance:

- Extremely high-resistance security film
- Resistance class P4A, installed solely to the inside of the window
- First security film in the world to attain this resistance class with 4mm float glass
- Verified by a practical test conducted by TÜV Rheinland in accordance with DIN EN 356 A
- Passed the 9-metre drop impact test
- Retrofit solution for all types of glazing
- Developed and produced by HAVERKAMP – guaranteed "made in Germany"
- Scratch-insensitive, maintenance free, invisible to potential attackers

#### PROFILON® P4A is:

- Extremely resistant to thrown objects
- Blast-resistant
- Extremely resistant to smash & grab
- Inhibits airborne splinters
- Inhibits the spread of fire (is not consumed by smoke)
- UV-absorbent



## Resistance class ratings / standards

PROFILON® P4A is a multi-layer laminate construction. It is documented for the following resistance classes, according to test of the German TÜV Rheinland:

- P4A according to DIN EN 356 A

The security film is also flame retardant.

## Areas of application

- Public administration buildings
- Office facilities
- Shop Windows
- Entrance areas
- Production halls
- Industrial premises
- Server rooms / IT centres
- Conference rooms
- Galleries/musea

## Scratch insensitivity

The excellent scratch insensitivity of the surface hardcoat grants for an utter longevity. The hardened surface can be cleaned with conventional glass cleaning agents.

## UV protection

PROFILON® P4A is equipped with a special UV inhibitor which protect the film itself but also the merchandise, exhibits and furniture inside the building from discoloration.



## Installation

PROFILON® P4A is installed on the inner surface of the window pane. In addition, an appropriate frame anchoring of the film edges complements the high physical resistance. Depending on the framing type, the edges are either installed underneath the frame extrusions or attached with a special sealant. The panes do not have to be removed from the frames. The work and life routines of the building occupants are hardly disturbed. HAVERKAMP installs its security films exclusively by trained and approved installation teams.

## Technical data

<b>Resistance class</b>	P4A according to DIN EN 356
<b>Color/Appearance</b>	transparent
<b>Visible light transmission</b>	76 %
<b>UV absorption</b>	> 99 % (300 – 380 nm)
<b>Adhesive</b>	on acrylate basis
<b>Construction</b>	multi-layer laminate
<b>Hardcoat</b>	hardened DURITAL sr surface;
<b>Fire rating</b>	B1 according to DIN 4102 part 1