



Defense Group  
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# PROFILON® AX A1

Impact resistant  
security film



**PROFILON® AX A1 is a 3-ply security film with impact resistant properties protecting glass in cases of smash-and-grab, vandalism and attacks with incendiary devices. Additionally, the laminate offers explosion resistant properties and is hardly flammable in conformity with DIN 4102-1 class B1.**

Panes, as e.g. windows or shop windows, belong to the most sensitive parts of a building. Burglaries, attacks with projectiles or incendiary devices and vandalism are often carried out at these most damageable parts of a building. PROFILON® AX A1 was developed to increase the resistance value the offender encounters in cases of mechanical attacks on glass panes.

**Due to a revised formula, the new PROFILON® AX A1 will convince you with a significantly higher transparency and even better adhesive strength.**

The multiply composition of PROFILON® AX A1 absorbs the impact energy (e. g. caused by a stone throw, a throw of incendiary devices or other attacks). At the same time, the optimized material composition provides a very high and firm bond of splinters. This higher resistance of the glass usually leads to a stop of the criminal activities in most of the cases.

## PROFILON® AX A1 provides

- Impact resistance properties
- Explosion resistance properties
- Deterrent to smash-and-grab
- Splinter retention
- Reduction of the spreading of fire (no fuming)
- UV absorption

PROFILON® AX A1 can be retrofitted on any glass with a plain surface, regardless of whether it is float glass, toughened glass, laminated security glass or heat strengthened glass.

Additionally, an integrated UV filter protects the interior against UV radiation. Thus, a yellowing and fading respectively of upholstered furniture or clothing is retarded.

## PROFILON® AX A1

### Which resistance classes does PROFILON® AX A1 achieve?

PROFILON® AX A1 is a 3-ply security film with a thickness of approx. 0,4mm. Glass coated with PROFILON® AX A1 achieves the following resistance classes:

- A1 according to DIN 52 290
- P2A according to EN 356
- UL 972

In addition to this, PROFILON® AX A1 has explosion resistant properties, e. g. it binds the dangerous glass splinters in the event of a detonation.

### Which variants of PROFILON® AX A1 are available?

- Transparent (significantly improved)
- White-matt (privacy protection)
- Solar (sun protection)

### How scratch-resistant is PROFILON® AX A1?

After an abrasion test, which scratches the film wantonly, the increase of diffused light is measured. The German Federal Office for motor vehicles (Kraftfahrtbundesamt), known for its high values allows an increase of diffused light of 4,5%. With an increase of only 2,5% PROFILON® AX A1 is well below this value. The scratch-resistance generated by the special surface coating provides for a long durability of PROFILON® AX A1.

According to experiences, PROFILON® AX A1 works without visual and technical impairments for many years after expiration of the 5-year warranty period. The specially-hardened, long-lasting surface of the film can easily be cleaned with ordinary detergents.

### Can PROFILON® AX A1 be combined with glass break sensors and intrusion detection systems?

- A passive glass break sensor especially developed to work with PROFILON® AX A1 is available (alarm classification A and B; VdS certified according to G 193522).
- In order to meet the requirements of alarm classification C, we have developed PROFILON® Alarm A1; this product is VdS certified, as well (please see separate product data sheet).

### Does PROFILON® AX A1 change its appearance in the course of time?

PROFILON® AX A1 is equipped with a UV filter preventing a yellowing of film even after many years.

### How is the glass coated with PROFILON® AX A1?

The high-performance film is installed on the inside of the panes. A professional frame anchoring provides a high resistance. Depending on the window construction the frame anchoring is either provided by installing PROFILON® AX A1 below the pane holding profile or by a special silicone sealing. The glass panes do not have to be taken out of the frame. Our skilled and trained Defence Group Technologies installers coat the glass panes with PROFILON® AX A1 while they are staying within the frame.

### Technical data

Resistance class	A1 according to DIN 52 290 (impact resistance) P2A according to EN 356 UL 972 (Underwriters Laboratories USA/Canada)
Thickness	approx. 0,4mm
Color/tinting	transparent, white-matt, silver-grey
Light transmission	94 % (visible light)
UV absorption	> 99 % (300 – 380nm)
Adhesive	on acrylate basis
Composition	multi-ply laminate, developed in Sandglider-process
Surface coating	hardened DURITAL surface sr; increase of scattered light 2,5 % according to Taber abrasion test
Fire features	according to DIN 4102, part 1



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Mit Erscheinen einer Neuauflage dieses Merkblattes mit neuem Stand verlieren die bisherigen Angaben ihre Gültigkeit.  
Münster, September 2012.