



UNIGLAS®  
IT'S CLEAR

UNIGLAS®  
IT'S CLEAR

### Arguments for UNIGLAS® | SAFE Safetyglass

- Ideal for use in frameless applications (ESG)
- No serious cuts in the event of the glass breaking (ESG)
- As an integral part of VSG, TVG is a safety glass that ideally combines construction, active and passive safety features. (TVG)
- Low risk of injury. The break in the glass remains closed. (VSG)



Our proximity: your advantage

UNIGLAS GmbH & Co. KG  
Robert-Bosch-Straße 10  
D-56410 Montabaur  
Telefon: +49 (0) 2602/94929-0  
Fax: +49 (0) 2602/94929-299  
E-Mail: info@uniglas.de



© UNIGLAS® 12/2012

UNIGLAS® | **SAFE**  
S a f e t y g l a s s



[www.uniglas.net](http://www.uniglas.net)



# UNIGLAS® | **SAFE**

S a f e t y g l a s s

Glazed areas are often the weak point of a building shell with regard to attacks of any kind. High-class insulation glass with active and/or passive safety provide protection against burglary, bullets and explosion, not only for the building but also for the people inside.

Passive safety means on the one hand that a sufficient shatter protection and protection against injuries is ensured if the pane breaks. For example, the use of glazing in schools and nursery schools or in doors.

Active safety however means that the glazing withstands defined attacks for penetration. The requirements with regard to active safety are governed by standards or by requirements of the Association of Insurers (VdS) and they are divided into different classes.

The classification includes break-resistant, penetration-resistant, bullet-resistant and limiting explosion effects. UNIGLAS® | **SAFE safety glass** can be combined in a whole variety of ways with more functions, for example with

heat insulation glass, sound reduction glass or solar protection glass. The customised safety concept is tailored to needs and the property according to the safety class and requirements.

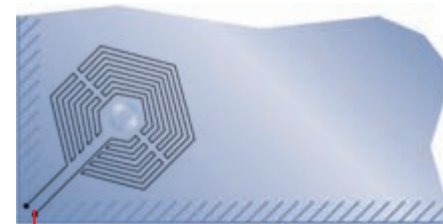
The UNIGLAS® | **SAFE safety glass** is divided into laminated sheet glass (LSG) with sheets as intermediate layers and resin laminated glass.

An LSG is a glass built up in layers, in which at least two panes of glass are firmly joined to each other with one or several intermediate layers made of highly tear-resistant sheeting.

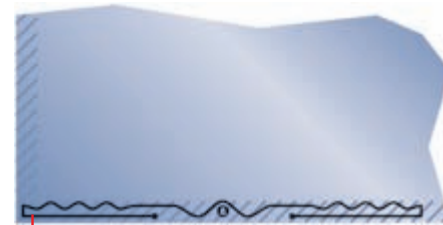
In resin laminated glass, two or more panes of glass are joined together at the edge with a transparent strip and an elastic intermediate layer of resin. In the event of mechanical overloading by impact or shock, the glass breaks, but the shards stick to the tough and elastic sheeting and/or the resin.

ESG can be made into alarm glass with an alarm function and be an important integral part of a building's safety concept. The alarm loop or electrically conductive layer act as the alarm sensor.

## Different alarm loops



1 Conventional alarm web in the visible area



2 Conventional alarm web in the non-visible area



3 Insulating glass: coating acts as an invisible alarm loop and is monitored by an evaluation unit