

**arcon topview.**  
Exceeding the standard.





## arcon topview

Until now, annoying anisotropy was an unsolvable problem with tempered glass. With new process engineering, arcon has now succeeded in substantially reducing anisotropy, so that the human eye doesn't perceive it as annoying. arcon topview – a development that far exceeds the standard.

### New technology prevents visible anisotropy

Until now, visually annoying double refraction phenomena – so-called anisotropy – occurred with tempered glass depending on the angle of observation and the lighting situation. Normally, such anisotropy is perceived as gray rings, stripes or as leopard patterns. The effect becomes more apparent with increasing thickness of the glass. It can also increasingly occur in the case of tempered glass with modern solar control coatings, since colored effects arise from the gray patterns. Even generally valid standards and guidelines accept this physical effect with heat-treated glass, since it results from the internal stress distribution (EN 12150-1:2000).

### Exceeding the standard – arcon topview ESG and TVG

At arcon, new process engineering was developed that can substantially reduce anisotropy with tempered glass. Our products arcon topview ESG [tempered safety glass] and arcon topview TVG [heat-strengthened glass] are produced with this special process, which is patented by arcon. Thanks to this technical innovation, the visual disturbance due to anisotropy is so slight that the human eye doesn't perceive it as annoying.

### New measuring technology for determining the isotropy value

At the same time, a measuring technology was developed by arcon which can quantitatively determine the so-called isotropy value. This now puts arcon in a position to produce a better tempered glass, to document it quantitatively and make it verifiable.

Normally, tempered glass that is available on the market shows isotropy values in a range from about 55% to 80%. arcon topview ESG and arcon topview TVG show an isotropy value greater than 95%.

### arcon topview combined with arcon sunbelt: a clear advantage for you!

Of course, our sunbelt solar control coatings were also optimized for arcon topview. The coatings have been optimally adapted to the improved ESG and TVG in regards to polarization.

What you can expect:

- ▶ no annoying interference due to anisotropy on the coated glass in a façade\*
- ▶ best visual quality
- ▶ best energy values, coordinated with the location of the façade

arcon topview ESG and TVG

+ quantitative measuring technology

+ sunbelt coating

= free of annoying anisotropy\*

### How do you recognize anisotropy?

Through tempering, different stresses are placed in the cross section of the glass. These stress fields cause a double refraction in the glass that can be visible in polarized light. If heat-treated soda-lime tempered safety glass is viewed in polarized light, the stress fields are visible as colored zones. They are also called "polarization fields."

Polarized light is present in normal daylight. The amount of polarization depends on the weather and the position of the sun. The double refraction can become visible under a grazing or flat angle of vision, with the use of polarized eyeglasses or also in certain installation situations.

### with anisotropy



### without anisotropy



\* Even our arcon topview technology cannot exclude anisotropy, but it is reduced to such an extent that it is not visible to the naked eye as a disturbing element.

arcon  
Industriestraße 10  
D-91555 Feuchtwangen  
Telephone +49 9852 6700-0  
Telefax +49 9852 6700-49  
E-mail: [info@arcon-glas.de](mailto:info@arcon-glas.de)  
[www.arcon-glas.de](http://www.arcon-glas.de)

