



cool ❄️
colors
by Hornschuch

Stay cool, even when it's hot

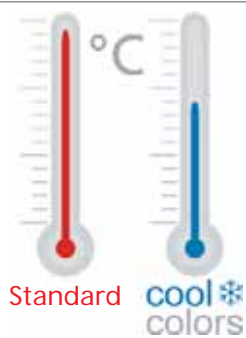
skai® – The skin of your product

cool colors

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Intelligent surfaces with integrated sun protection



In top form - in any climate

The midday heat in Spain or a record-breaking summer in northern Europe: windows and doors, furniture or car panelling featuring the new, patented skai 'cool colors' always stay attractive, pleasantly cool – and retain their colour. Even wide temperature variations are no longer a problem with 'cool colors'. But beauty and functionality are by no means mutually exclusive: many of the existing skai coatings are already available in the new 'cool colors' range – and the range is continually being extended.

'cool colors': new and exclusive from skai

Hornschuch is continually coming up with new innovations to improve the manufacturing and usage properties of skai films and synthetics. These innovations are what gives the company the edge over its competitors. Surface coatings containing the patented 'cool colors' pigments are only available from skai.



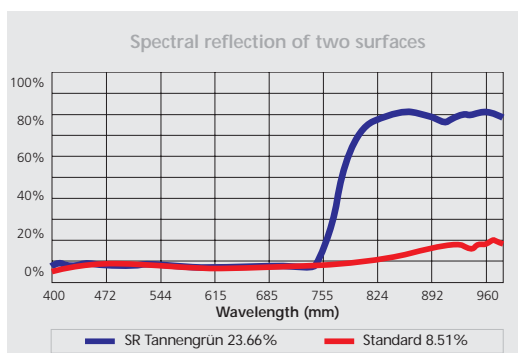


New pigments protect against heat

In the past, heat and wide fluctuations in temperature, as experienced in southern Europe but also as far north as Scandinavia, were a problem for coated surfaces – especially darker colours. This is because the surfaces can become extremely hot. Also, the inside of a window frame or other carrier materials often remains relatively cool. These temperature differences often lead to tension and, in extreme cases, to warp.

The 'cool colors' films and synthetic pigments represent a completely new departure here. They reflect up to 80% of the NIR proportion of sunlight, thus reducing heating of the surfaces by 20% or more. The result: significantly improved application properties and greater durability of the materials.

Improved reflection – less heat penetration



'cool colors' "tannengrün" (blue curve) reflects 4 times better than an equivalent standard film (red curve).

The secret of the 'cool colors' technology lies in the radical improvement of radiation reflection in the near infrared range (approx. 780 to 1500 nanometers). Spectrometer measurements show that 'cool color' films are powerful reflectors of the energy-charged IR spectrum of sunlight. They perform considerably better than standard films. Up to 80% of the NIR radiation is reflected, while the appearance remains unchanged – even with darker colours

Significantly lower heat absorption

Tests carried out using a radiation thermometer show how much surfaces can heat up. A direct comparison shows that the surface temperature of 'cool colors' films is demonstrably lower than that of a standard window frame film after exposure to direct radiation.



At first glance no difference: The daylight image shows a conventional film on the left, and a 'cool colors' window frame film on the right ("Staufereiche").



The special camera demonstrates the optimised reflective properties of the 'cool colors' film (lighter in the picture) in comparison to the standard film.



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