

api



**flexigel lh
cool-deck™**
the new decorative
composite deck

api
protective coatings
and resin flooring

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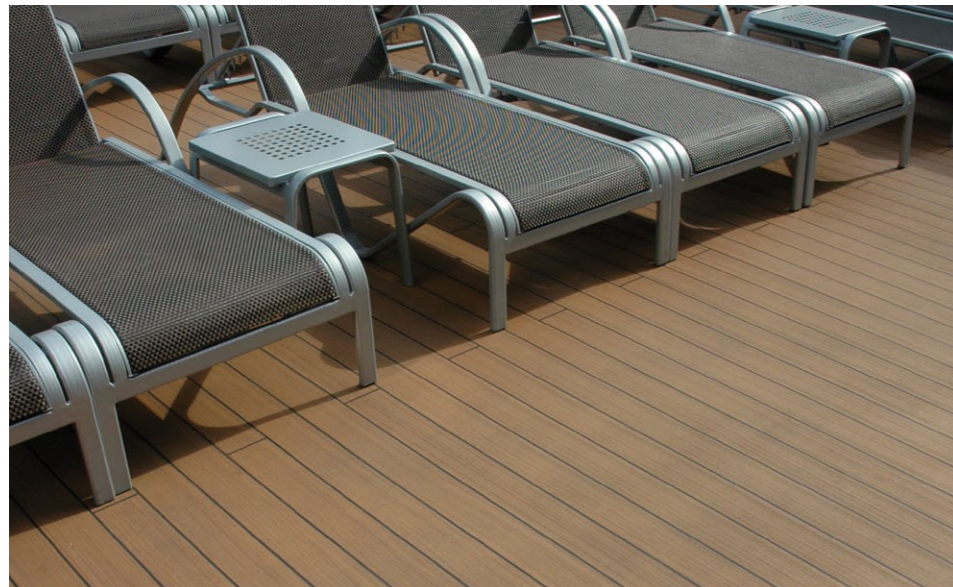
flexigel lh cool-deck™

After being the most successful deck coating in recent years and the first to be introduced, the **Flexigel decoro - teak effect** flooring system has been modified aesthetically and technically in the latest version called **Syntheteak**.

The main features of **Syntheteak** are its excellent non-slip performance, resulting from the surface structure and the intrinsic characteristics of the material, and an outstanding aesthetic appearance, making it comparable with real teak but without the typical defects of wood.

In order to improve the characteristics of our decks, based on the Api approach of performing ongoing research to achieve ever better levels of performance, Api now offers the new concept product **Flexigel lh - Cool-deck™**, which applies technology that increases the IR reflectance of the deck to reduce surface heating even in the strongest direct sunlight and for darker colours. The result is a deck that is more comfortable underfoot and to the touch, while retaining the safety and appearance of Api decks.

Flexigel lh - Cool-deck™ has been studied at the SKZ institute in Wurzburg, Germany, to determine the surface temperature in various environmental and irradiation conditions.



Determination of surface temperature, SKZ Institute, Würzburg, Germany



During laboratory weathering, the surface temperature of the samples is regularly measured using an IR pyrometer. The measured data are assigned to their respective specimens using RFID tags.

The samples are fixed in the middle of a three-tier inclined specimen rack. The entire rack rotates at a speed of 1 rpm around a xenon lamp for more uniform irradiance, temperature and humidity at the sample's surface.

The IR pyrometer determines the surface temperature once every rotation. The surface temperature depends on the chamber temperature, the radiation intensity of the xenon lamp, the flow rate of the cooling air arriving through ventilation slots, the humidity and the type of plastic used for the sample.

The device was set up according to DIN EN 513 to comply with a moderate climate zone (procedure 1) and an extreme climate zone (procedure 2). The procedures differ in terms of the black standard temperature used for temperature control and the duration of dry and wet phases within the weathering cycle.

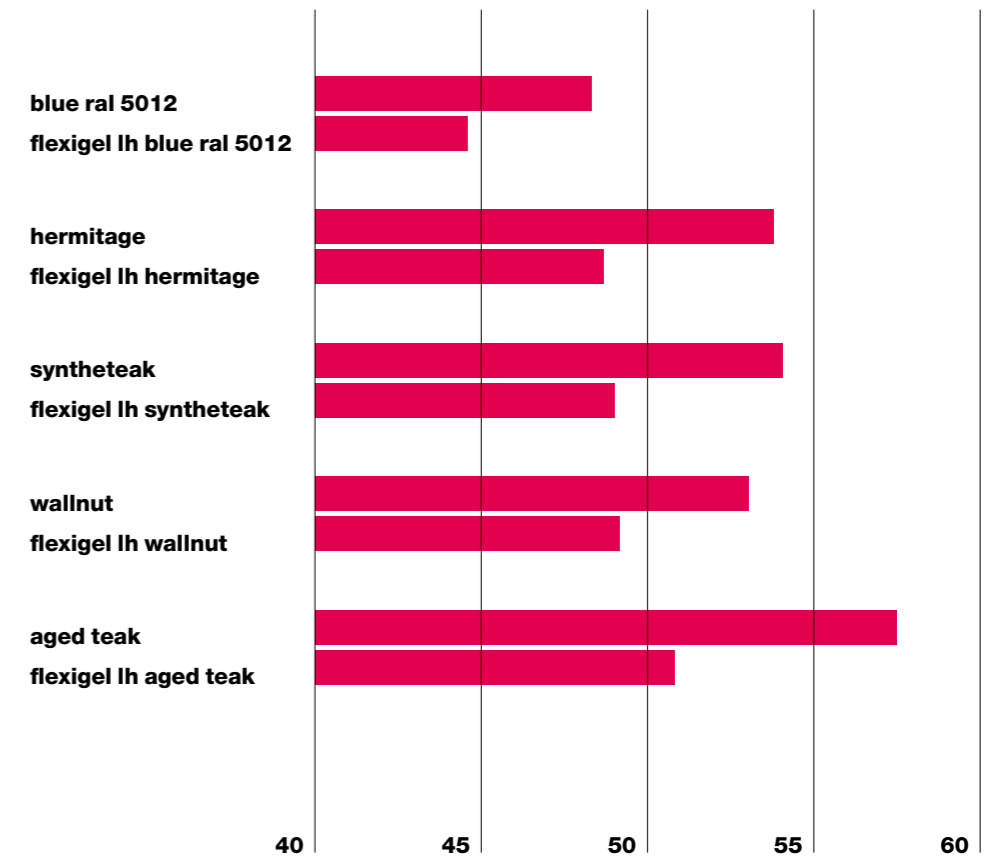
Procedure 1
Black Standard Temperature BST: 60 °C
Weathering cycle dry: 102 min.
Weathering cycle wet: 18 min

Procedure 2
Black Standard Temperature BST: 65 °C
Weathering cycle dry: 114 min.
Weathering cycle wet: 6 min

The chamber temperature was regulated according to the target black standard temperature. Each weathering procedure was performed for a period of 24 h.

With an average temperature of 6 to 8 degrees lower than previous deck coatings, this new material delivers greatly improved IR radiation reflection properties to the extent that, especially in natural wood color shades, such as teak and all its color variations, they are comparable to real wood.

Extreme temperature (°C)

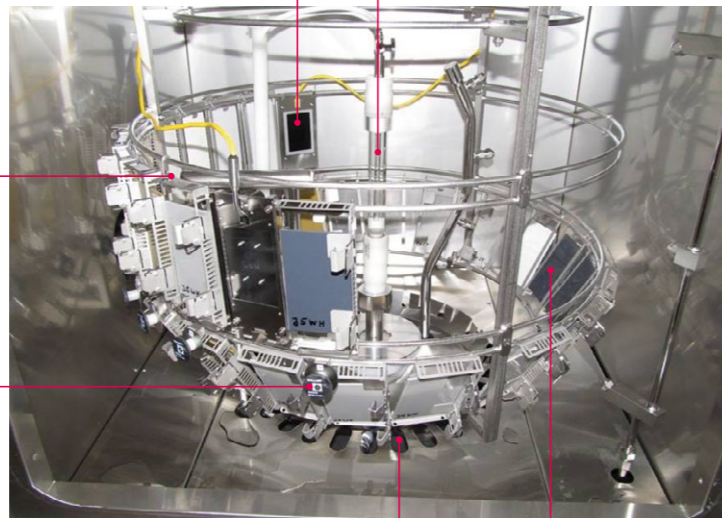


Black Standard Thermometer

Xenon lamp

IR-Pyrometer

RFID



Samples

Ventilation slots