



JOTUN

Providing comfort in the heat

The Cool Shades Collection



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For a brighter future

Powder Coatings

Architectural

Jotun GreenSteps 

New levels of energy efficiency

As temperatures rise in the summer, we need to use more energy to keep buildings cool and comfortable. The Cool Shades Collection of powder coatings from Jotun offers an innovative and sustainable way to reduce temperatures and energy consumption.

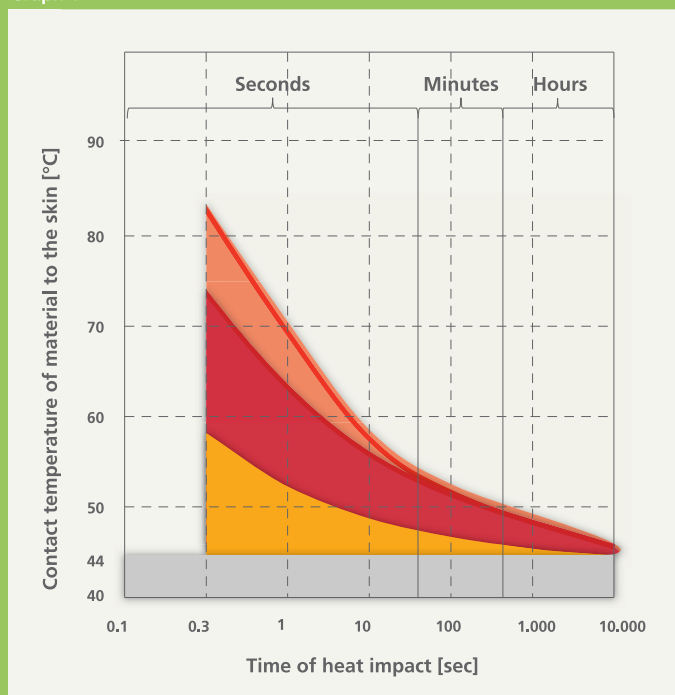
When applied to building components, this environmentally friendly powder coating reflects the heat from the sun. By reducing the temperature of both the external and internal surfaces, it also lowers the internal air temperature. And when it is cooler inside, you save more energy (see Graph 2).

The surfaces of buildings and structures can reach high temperatures during hot summer periods. Prolonged human contact can cause various degrees of burns (see Graph 1). By using The Cool Shades Collection, you can control the temperature and improve human comfort and safety.

Risk scenarios of interior surface temperatures

(source: SKIEA 1979 and ai3 2013)

Graph 1



- 1 Normally no changes in the skin tissue
- 2 1st degree burns (redness, swelling with pain)
- 3 Transition Zone
- 4 2nd degree burns (blistering, skin incomplete destruction) and 3rd degree burns (full skin destruction)



A green choice

It is not just the inside of buildings that can be affected by high temperatures. As the sun heats urban structures, they radiate heat back into the atmosphere. This heat-island effect then increases the air temperature of the surrounding areas.

Using heat reflective materials such as coatings from The Cool Shades Collection helps to keep the urban air temperature lower thus reducing the need for cooling the buildings and improving the comfort of inhabitants in the city.

Total Solar Reflectance (TSR) measures the solar energy reflected by surfaces. The higher the TSR, the cooler the surface. While conventional dark colour systems have a low TSR (see Graph 3), all colours in The Cool Shades Collection have a TSR above 25%. This prevents heat from penetrating the building, increasing energy savings and improving comfort levels.

Studies demonstrate that using heat reflective materials only on exterior window frames in hot climates like the Middle East and South East Asia* can significantly reduce a building's energy consumption.**

In addition to enhanced durability and weathering performance, The Cool Shades Collection offers an attractive finish. It is supported by Qualicoat Class 1 and Class 2 certification and is in line with AAMA 2603 and 2604 requirements.

* In Bangkok, for example, using Twilight from The Cool Shades Collection (TSR 31%) instead of a standard dark grey colour (TSR 10%) on low insulated window frames can reduce annual energy consumption of the building by 2.1%.

** "Impact of the TSR Value on the Users Comfort and the Energy Performance of Buildings" ai3, Oct 2013 Germany

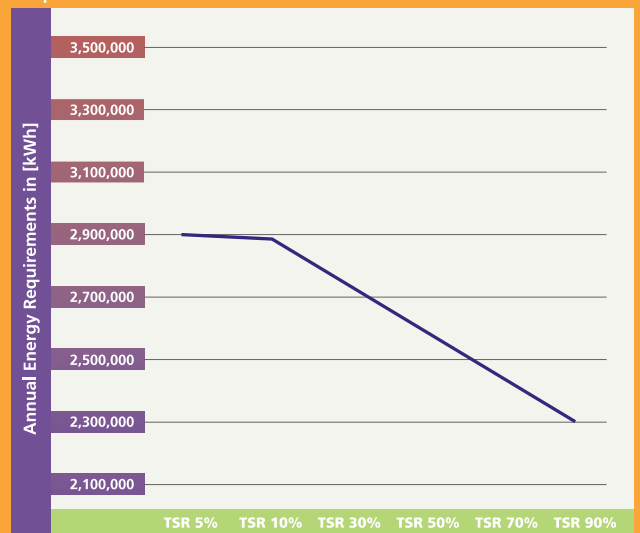




Energy requirements for different TSR values of exterior window frames

Location: Bangkok*

Graph 2



* "Impact of the TSR Value on the Users Comfort and the Energy Performance of Buildings" ai3, Oct 2013 Germany

Observations were made in the Bangkok's climate on a residential building model containing 80 apartments on 20 floors with orientation towards the South.

Software Solutions

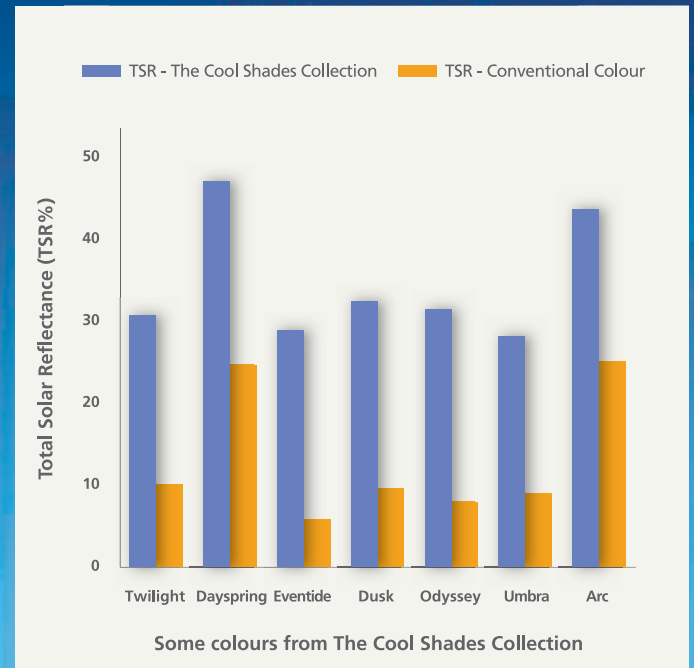
- flxio professional version 7 from Infomind.ch for the *Interior Comfort* investigations
- ArchiWizard version 2.7.1 from RayCREATIS for the *Energy Requirements of Buildings*



A vision of colour

The Cool Shades Collection is available in a wide range of colours to match the architect's vision and provide the desired impact. This innovative powder coating can be applied to window frames, curtain walls, shutters, louvers, wall panels, roofs, hand rails and other building components.

Graph 3



A Jotun GreenSteps Product

This product isn't just a step towards outstanding protection for your property; it is also a step towards a better environment. It is one of many Jotun products that qualifies to be a part of the Jotun GreenSteps programme – a programme that makes a significant difference to the world we all share, with steps like waste and hazardous material reduction, product innovations that reduce energy usage, new processes that lower our carbon footprint and creating more products with lower Volatile Organic Compound (VOC) emissions. By using this Jotun GreenSteps product, you are part of a journey to a greener, more colourful world.

Environmental benefits of Powder Coatings

Environmentally friendly, powder coatings do not contain solvents, so no VOCs are released into the air. Unused or oversprayed powder can be recycled with minimal wastage, and disposal is easy and safe. In addition, all Jotun Powder Coatings' products are lead-free.

Arc



Couronne



Dayspring



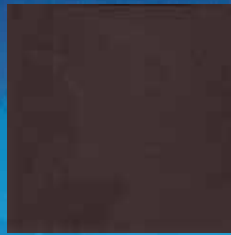
Dusk



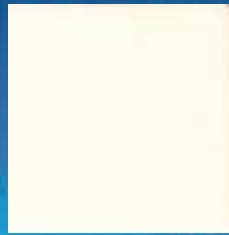
Equinox



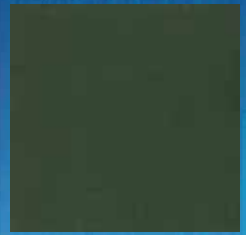
Eventide



Meridian



Odyssey



Sepia



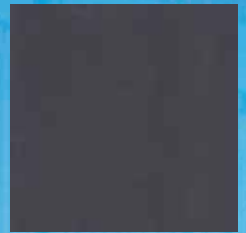
Starfall



SunPath



Twilight



Examples of finishes:

Umbra Texture



Umbra Matt



Umbra High gloss



Stay in touch

Please contact us for more information on The Cool Shades Collection. We offer company training on our product portfolio and powder coating technology through a number of powder schools that we run for our customers. Feel free to contact your local sales representative for more information.



Scan QR code to find out more or visit [jotun.com](https://www.jotun.com)



Jotun Protects Property