Alesta® Cool

Black as cool as white.

Solar warming of buildings is a matter of reflection.

Approximately 50 % of solar energy reaching the Earth's surface consists of infrared light which makes a significant contribution to warming.

When buildings and objects undergo warming from solar energy, it is all about radiation and reflection. The invisible infrared radiation contributes significantly to the warming of the object.

If this radiation falls on a light surface, a large proportion is reflected and there is a low level of warming of the property. The darker the colour of the surface, the lower the reflection, the higher the absorption and the higher the warming of the property.

In the case of buildings, this means that the darker the colour of the facade of the building, the more energy is needed to cool it. The temperature of the object is not just significant for interiors but also for processed materials and joints exposed to high mechanical stresses through temperature-induced expansion.

Advantages:

- Improvement of infrared reflection of over 20 %
- Reduction in surface temperature by up to 20 %
- Reduction of mechanical stress of metals in outdoor areas
- Reduction in energy costs for cooling the building
- Coating of poorly reflecting materials is possible
- Easy handling
- Particularly environmentally friendly
- A large selection of RAL colours available in varying degrees of gloss

Alesta®
Powder Coatings

With Alesta® Cool, black reflects just as well as white.

With the innovative powder paint system Alesta® Cool, you can now control the heat reflection properties of a surface perfectly.

Alesta® Cool is a polyester-based powder coating that significantly improves the reflection of dark colours thanks to special pigments. At the same time, the effectiveness of Alesta® Cool increases as the colour selected is an increasingly dark shade.

Alesta® Cool can be handled just like normal powder coatings and has various Qualicoat and GSB approvals.

To achieve a measurable improvement in reflection, a thin continuous coating is all that is required. Even poorly reflecting materials can be coated with little effort and their reflection properties are improved.

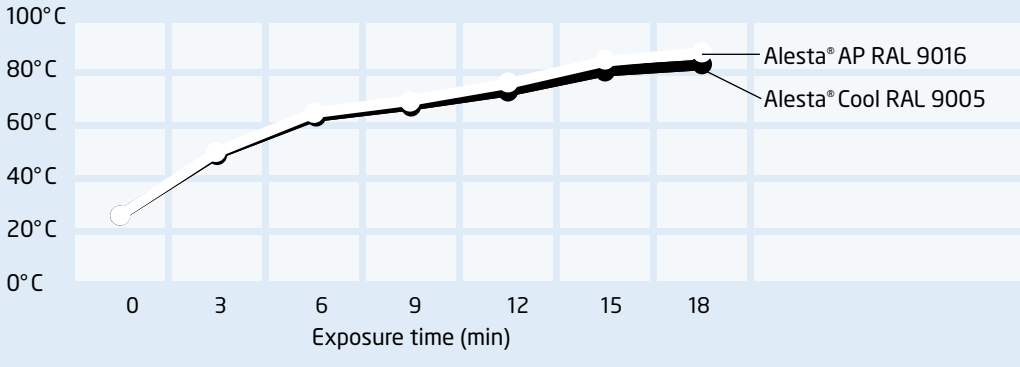
Depending on the colour, the improvement in reflection can be up to 20 %. The surface temperature can be reduced by up to 20 %.

Black can now be as cool as white – with Alesta® Cool.

Test results for Alesta® Cool

Simulation test (LAB) Alesta® Cool black (RAL 9005) in comparison to Alesta® AP Standard white (RAL 9016)

Exposure time (min)	Alesta® Cool RAL 9005 (°C)	Alesta® AP Standard RAL 9016 (°C)
0	25,1	25,0
3	47,8	48,1
6	61,9	63,2
9	70,5	72,7
12	76,3	79,0
15	80,6	83,9
18	84,0	87,5



Colours and surfaces		Alesta® Cool	Alesta® AP Standard
		TSR-Value	
gloss	RAL 3005	32 %	21 %
	RAL 5004	29 %	7 %
	RAL 7016	35 %	10 %
	RAL 9007	44 %	30 %
semi-gloss	RAL 6005	26 %	-
	RAL 8017	27 %	-
	RAL 7021	29 %	-
matt	RAL 5013	32 %	11 %
	RAL 9005	30 %	5 %
fine textured	RAL 5011	29 %	-
	RAL 6009	25 %	9 %
	RAL 7026	35 %	-

Alesta® Cool is available in a wide range of common RAL colours.
Various levels of gloss and different textures are also available.

TSR = Total sun reflection defines the percentage at which sunlight is reflected (100 % = total reflection, 0 % = total absorption).

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