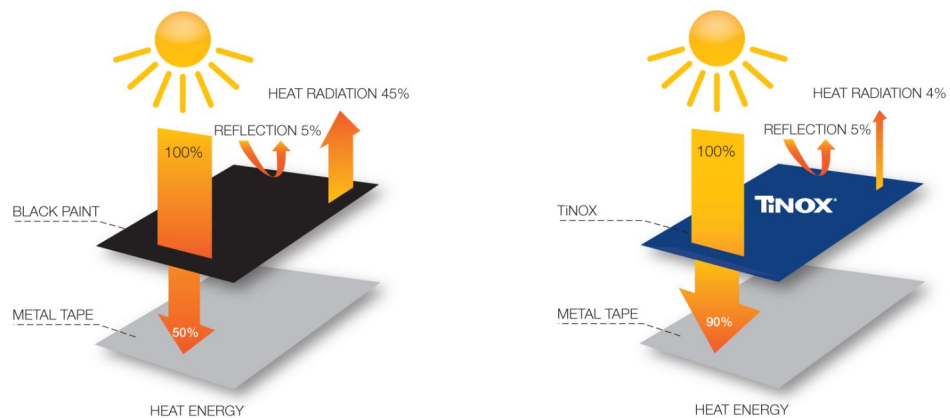


TiNOX[®] energy

Absorber Coatings

The efficiency of any solar absorber depends on its ability to transfer sunlight into heat. High absorption of solar radiation is a basic condition and can be achieved quite easily. The challenge is to capture the solar-energy inside the material. The special TiNOX energy-coating does not just have a very high absorption but a very low thermal emittance.



The highly selective blue absorber is the first choice for collector manufacturers who wish to guarantee their customers the highest output even when less sunlight is available.

Physical characteristics	TiNOX energy Cu	TiNOX energy Al	TiNOX nano
Absorption	$\alpha \sim 95\% \pm 2\%$	$\alpha \sim 95\% \pm 2\%$	$\alpha \sim 90\% \pm 2\%$
Emission	$\epsilon \sim 4\% \pm 2\%$	$\epsilon \sim 3\% \pm 2\%$	$\epsilon \sim 5\% \pm 2\%$
Width	max 1.250 mm	max 1.250 mm	max 1.250 mm
Thickness	0.12 - 0.50 mm	0.20 - 0.75 mm	0.20 - 0.75 mm

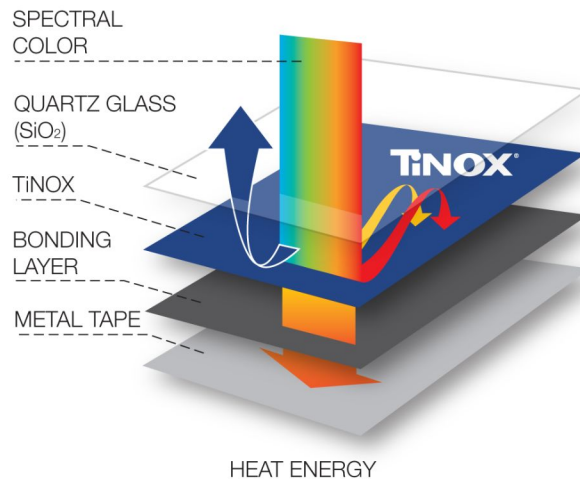
All TiNOX energy absorbers coatings are available on copper and aluminium.



www.almecosolar.com



TiNOX energy layers get their colour from the multiple reflections of incident light in the top quartz **Why is TiNOX blue?** layer. The light is reflected in the transparent top quartz layer until most of it has been absorbed by the absorber layer. Only a small part of the spectrum – the blue part – manages to leave the quartz layer, producing TiNOX blue's unique colour. The colour is a pure spectrum of light characteristic of the high-quality antireflection layer.



For more than fifty years the Almeco Group has devoted itself to making aluminium products with **The Company** reflective and decorative surface finishes. This specialization has led to the Group becoming one of the world's largest producers of components for the lighting and solar energy industries. All Tinox energy products are manufactured in Germany at Almeco GmbH, which incorporates the Solar Business Division of Almeco Group. With modern, high technology vacuum coating and manufacturing lines, Almeco GmbH specializes in high-tech reflector and absorber coatings that convert sunlight into heat energy in an efficient, reliable and environmentally friendly manner.



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