

TiNOX[®] nano



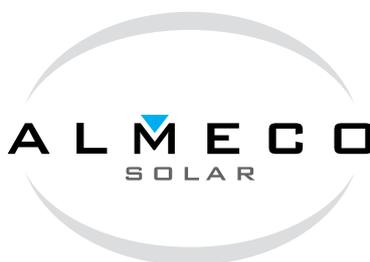
An optimum balance between efficiency, costs and environmentally friendly manufacture: the TiNOX nano. This absorber is suitable for regions with high levels of sunshine and provides an extremely cost-effective, environmentally friendly alternative to the black chrome or lacquer absorbers that are often used in those regions.

In contrast to black chrome or lacquer absorber layers, which have a high level of emissivity in heat radiation, TiNOX nano still delivers the best possible output even at high temperatures in the collector, thanks to a low emissivity level of only 5%. The absorption level is especially designed for high levels of solar radiation, keeping the stagnation temperature low and thus reducing the thermal stress on the collector. Thanks to a top-quality protective layer, TiNOX nano absorbers are extremely robust and resistant to environmental damage.

Almeco produces TiNOX nano – like all its other absorbers – exclusively in cutting-edge PVD coating facilities in Bernburg, Germany. Unlike in the manufacture of black chrome or lacquer coatings, no toxic waste is produced in the process. The coating procedure is also completely emissions-free. With TiNOX nano, collector manufacturers are capable of providing their customers in very sunny countries in Southern Europe, Latin America, Asia or Africa with a reliable and high-performance product, which is designed especially for the unique conditions in these regions.

Degree of solar absorption $\alpha \sim 90 \%$

Degree of thermal emissivity $\varepsilon \sim 5 \%$

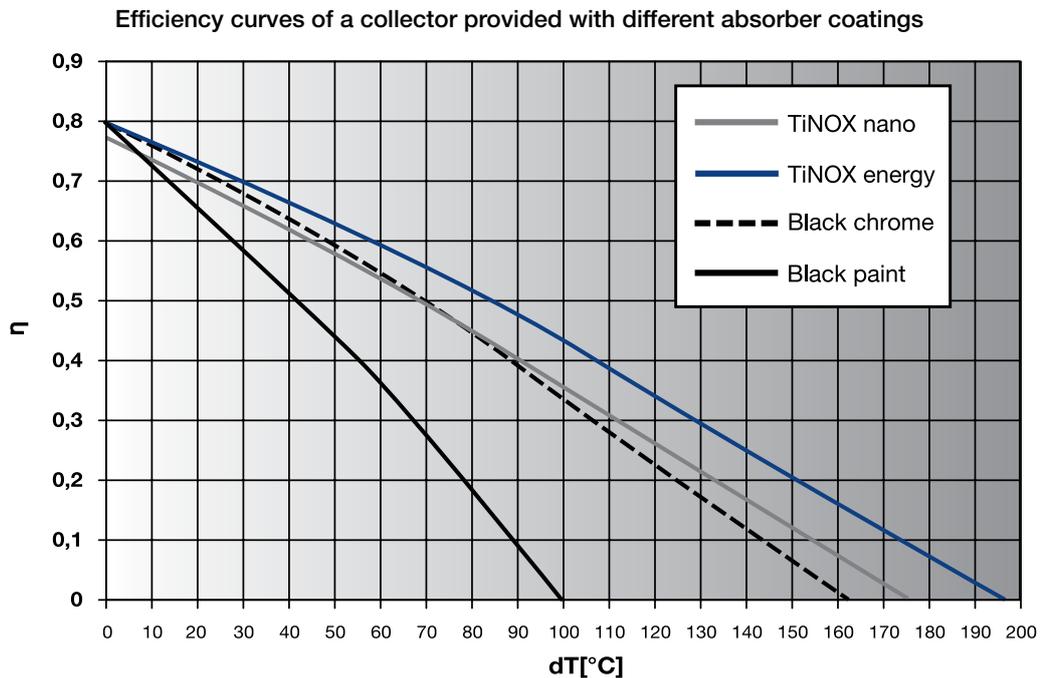




TiNOX nano is deposited on copper and aluminum substrates up to 1,250 mm width. With our in-house cutting facilities, the width and length of the substrates can be customized.

TiNOX nano absorber substrates can be further processed using all common industry methods: ultrasonic welding, plasma welding, laser welding, soft soldering, forming, glueing.

Deep drawing and embossing are also possible. We recommend to contact us beforehand for such processing.



Almeco GmbH

Triebstrasse 3 - 80993 Munich - Germany
Ph.: +49 89 147296-0 - Fax: +49 89 147296-72
info@almecosolar.com - www.almecosolar.com