

Solar Keymark Network

Experience exchange circle of test labs and certifiers
working according to the Solar Keymark scheme rules



Equivalent absorber coatings

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Different coatings are considered as equivalent provided that

1. They are applied on the same substrate (e.g. copper, aluminium)
and
2. The specific test procedure described below has been passed successfully
and
3. The equality is accepted by the Solar Keymark Network

Procedure

If a coating is to be considered equivalent to other coatings then the following tests shall be passed and requirements shall be fulfilled:

1. Two identical collectors (apart from the absorber coating) are compared to verify the equality of the two coatings. The absorbers of the two collectors must be made of the same material and must have the same thickness. One of the collectors is coated with one of the reference coatings. The other collector is coated with the new coating.
2. The durability and reliability tests according to EN 12975-2 (being relevant with regard to the absorber, thus 5.3 High Temperature Resistance, 5.4 Exposure and 5.6 Internal Shock) for the collector with the new coating performed by an EN12975 accredited test lab are successfully passed.
3. The power curves determined by an accredited test lab for the two collectors with different coatings shall not differ by more than 2% - **points** at a temperature difference of 0 K and not more than 2% - **points** at a temperature difference of 50 K

The absorptance and emittance of the different coatings under question shall have - according to the specifications of the manufacturer - equivalent optical properties ($\alpha_1 = \alpha_2 \pm 1\%$ point at most, $\epsilon_1 = \epsilon_2 \pm 1\%$ point at most) and the same range of the production variability, e.g. $0.95 \pm 2\%$ **points**.

4. For selective absorber coatings on metal, a IEA SHC Task X test shall be performed successfully
5. The interchange ability is accepted by the Solar Keymark Network

The equivalency of the absorber coating can be challenged anytime. In this case the absorber has to be sampled by an accredited third party or by the test lab. The costs for the whole procedure are fully carried by the challenger. Upon presentation of tests that suggest none-equivalency of a absorber coating, the SKN is obliged to request the re-evaluation of a absorber coating the latest until the forthcoming SKN meeting. The absorber has to be sampled by a third party.

List of equivalent absorber coatings are given on the next pages.

Coatings on aluminium

Aluminium - Equivalent Group 1	Reference to decision
Alanod MIROTHERM	D5.M6
Bluetec eta plus_al	D5.M6
TiNOX energy Al	D6.M8
Solarceo on Al	D1.Correspondance

Coatings on copper

Copper - Equivalent Group 1	Reference to decision
Blutec etaplus CU	D1.M5
Sunselect	D1.M5
Tinox classic	D1.M5
Tinox energy CU	D9.M7