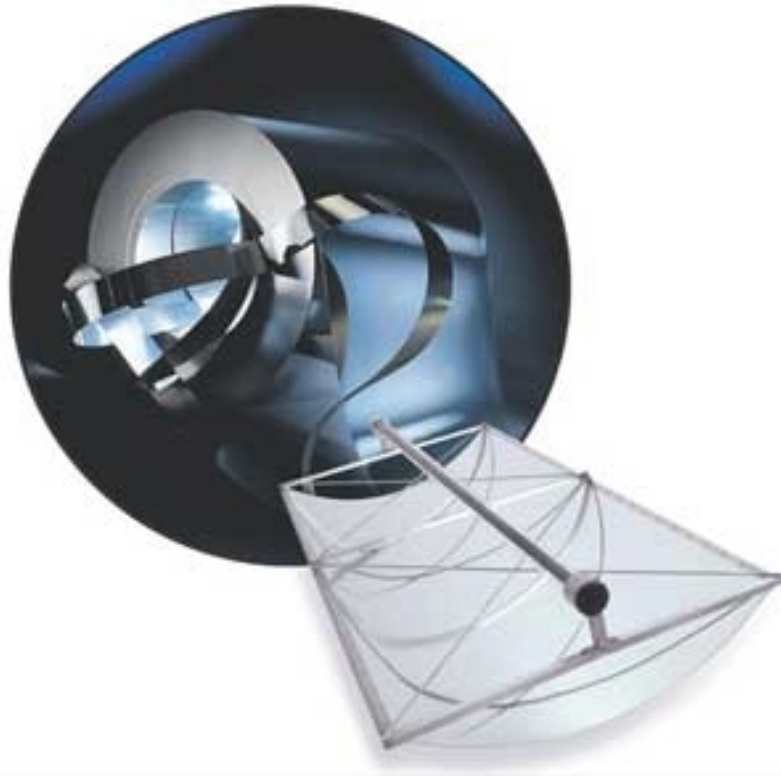


MIRO – SUN



Weatherproof Aluminium Reflector Material

Applications:

- Parabolic solar collectors (solar thermal power)
- CPC-mirrors under tube-collectors
- Daylight utilization systems/Venetian blinds

Construction:

Based on our MIRO product range with 95% total light reflectance, a new reflector type for outdoor applications has been developed (MIRO-SUN).

By employing a continuous "air-to-air" PVD-Process (Physical Vapor Deposition), a highly reflecting layer sequence is deposited onto anodized aluminium substrate (MIRO). At a second stage, a specially developed transparent lacquer is then applied by a coil coating process on MIRO to ensure environmental protection.

Various finishes are available for the backside:

- transparent lacquer
- grey lacquer or any other RAL-color
- Acrylic adhesive
- anodized

Sizes:

Production width : up to 1250 mm

Material thickness:

0.3 - 0.8 mm

Available in:

slit coil or sheets, with protective film

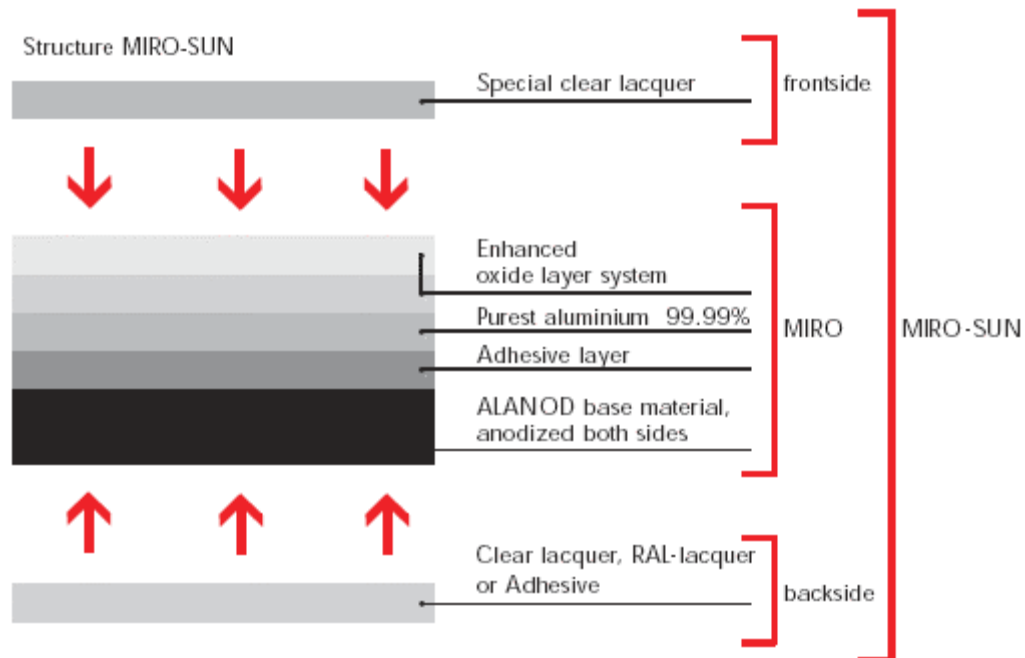
Optical values (DIN 5036-1 und -3):

Total light reflectance (Rho) = 93%

Solar reflectance (AM 1.5) = 89%

(spectral reflectance measurement see diagram).

Structure MIRO – SUN



Material Tests

Composite adhesion : Without temperature stressing

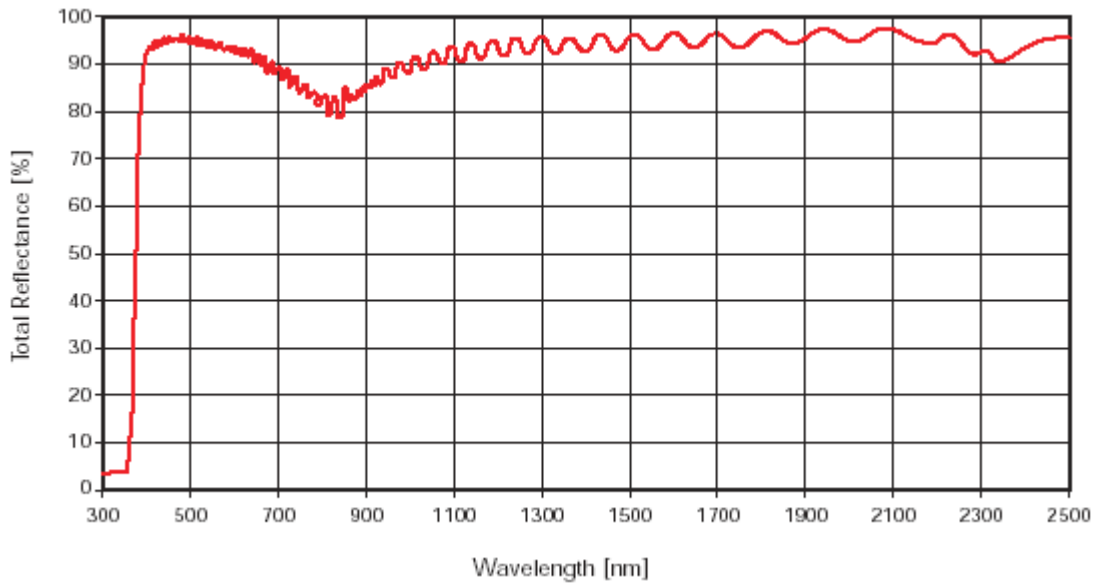
Cross cut test 1 mm acc. to DIN EN ISO 2409 with Scotch-Tape 670 CFM	✓
Result: GT 0	
Bending around 2 mm - mandrel and with Scotch-Tape 670 CFM(material thickness 0.5 mm, standard strength H18, alloy Al 99.85)	✓
Result: no separation of composite	

Resistance against Corrosion:

<p>Humidity test DIN 50 017 / 1000 h Result: no blistering</p> <p>no measurable change (± 0.5%) of total light reflectance Rho (DIN 5036 - 3)</p>	✓
<p>Salt spray test DIN 50 021 - SS / 1000 h Result: Corrosion at scratch-point < 0.5 mm no edge-attack no measurable change (± 0.5%) of total light reflectance Rho (DIN 5036 - 3)</p>	✓
<p>Acetic acid - Salt spray test DIN 50 021 - ASS / 1000 h Result: Corrosion at scratch-point 0.5 - 2 mm, Edge-attack 1.5 - 4.5 mm, no measurable change (± 0.5%) of total light reflectance Rho (DIN 5036 - 3)</p>	✓
<p>Accelerated ageing test QUV - B 313 / 500 h Result: D E* <= 3 (within the instrument tolerance) no loss of brightness chalking < 10%.</p>	✓
<p>UV-C-resistance due to radiation by sterilization lamp (manufacturer: OSRAM, Typ: HNS10 W / U OFR, 4 W UV radiant power)</p> <p>Distance to tested object: 50 mm, duration: 96 h</p> <p>Result: Reduction of total light reflectance (Rho) by less than 1%, see diagram (for comparison only: reflector film: decrease by 3% in 48 h)</p>	✓

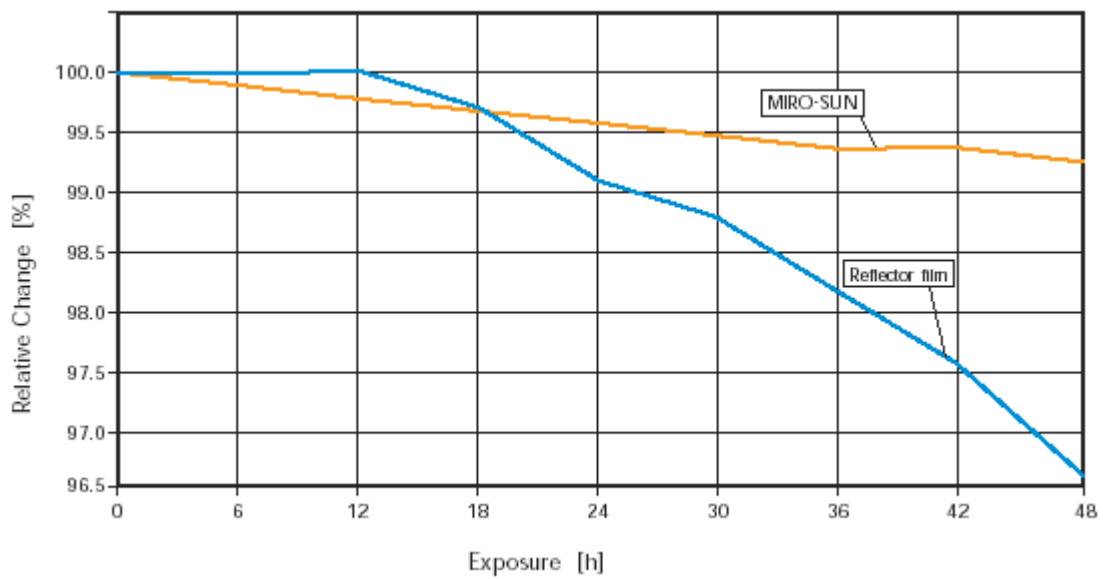
Please keep surface free from standing water!

Spectral Reflectance MIRO – SUN



Total-light-reflectance V (l) - weighted = 93.8%
Solar total reflectance AM 1.5 weighted = 89.5%

Change of Total Light Reflectance under UV-Exposure



MIRO-SUN

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