SOLAR MIRROR - SolReflex®

ENERGY PROJECT OF THE FUTURE

SolReflex®

SolReflex® with it's special aluminium high gloss surface combines the characteristics of a solar surface with a total reflection of more than 88% and a low diffusion rate with the advantages of an extremely light and fl at composite panel with high bending stiffness.

This special high gloss aluminium surface is designed to bundle and/or to reflect light and as such provides the basis for highly innovative energy projects of the future. A special nano-transparent coating protects the SolReflex® effectively against weather, corrosion and mechanical influences. It is also scratch and heat resistant, can easily be bent and cleaned.

Besides the benefit of easy processing using the routing and folding technique, the SolReflex® impresses with its minimal investment in sub-construction and fastening devices and its problem-free handling on site. ž outstanding characteristics also result from its longevity, weather resistance and easy cleaning performance.

In addition to that the SolReflex® completes the ecolocial aspect with regard to total recycling of scrap into the material cycle and convinces with its benefi t to the environment and recyclability.

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Delivery Programme		
		Tolerance for dimensions
Thickness	4 mm Other formats like 3 and 6 mm are available on request.	+/- 0,2 mm
Width	1.165 mm	-0/+4 mm
Length	to 8.000 mm	-0/+10 mm

Brightness and reflection properties	
Surface Properties	
Cross-cut Test	GT 0
Front Side	Anodized with epoxi clear coat
Reverse Side	Mill finish
Pencil Hardness	> H
Optical Properties (Front Side)	
Total Solar Reflectivity (ASTM 891-87)	88% +/- 2%
Specular Solar Reflectivity (DN 5036-3, ASTM E-1651)I	83% +/- 2%
Corrosion, weather and chemical resistance	
UV-resistance (3000 h, ASTM G-154-06)	No colour change
Neutral Salt Spray (3000 h, EN ISO9227 NSS)	No blistering, no attack at edge
Acidified Salt Spray (1000 h, EN ISO 9227 AASS)	< 3%
Filiform Corrosion (3000 h, DIN EN ISO3665)	No measurable change
Outdoor Exposure (>8 Years)	No measurable change
pH test (30 min., pH 1.0 – pH 12.5)	No measurable change

Mechanical properties of SolReflex® composite panel		
Thickness		3 to 6 mm
Skin Sheet Thickness	[mm]	0,30 to 0,50
Weight	[kg/m²]	3,80 to 7,3
Alloy		Al 99,8
Tensile Strength	[MPa]	> 140
Proof Stress (0.2%)	[MPa]	> 120
Elongation (A5)	[%]	> 1
Technical Properties		
Section Modulus W	[cm³/m]	0,81 to 2,75
Rigidity E•I	[kNcm²/m]	865 to 5.900
Core		
Polyethylen, Typ LDPE	[g/cm³]	0,92
Thermal Properties		
Thermal Resistance R	[m² K/W]	0,0047 to 0,0172
Thermal Conductivity U	[W/m²K]	5,72 to 5,34
Temperature Resistance	[°C]	-50 to +80

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