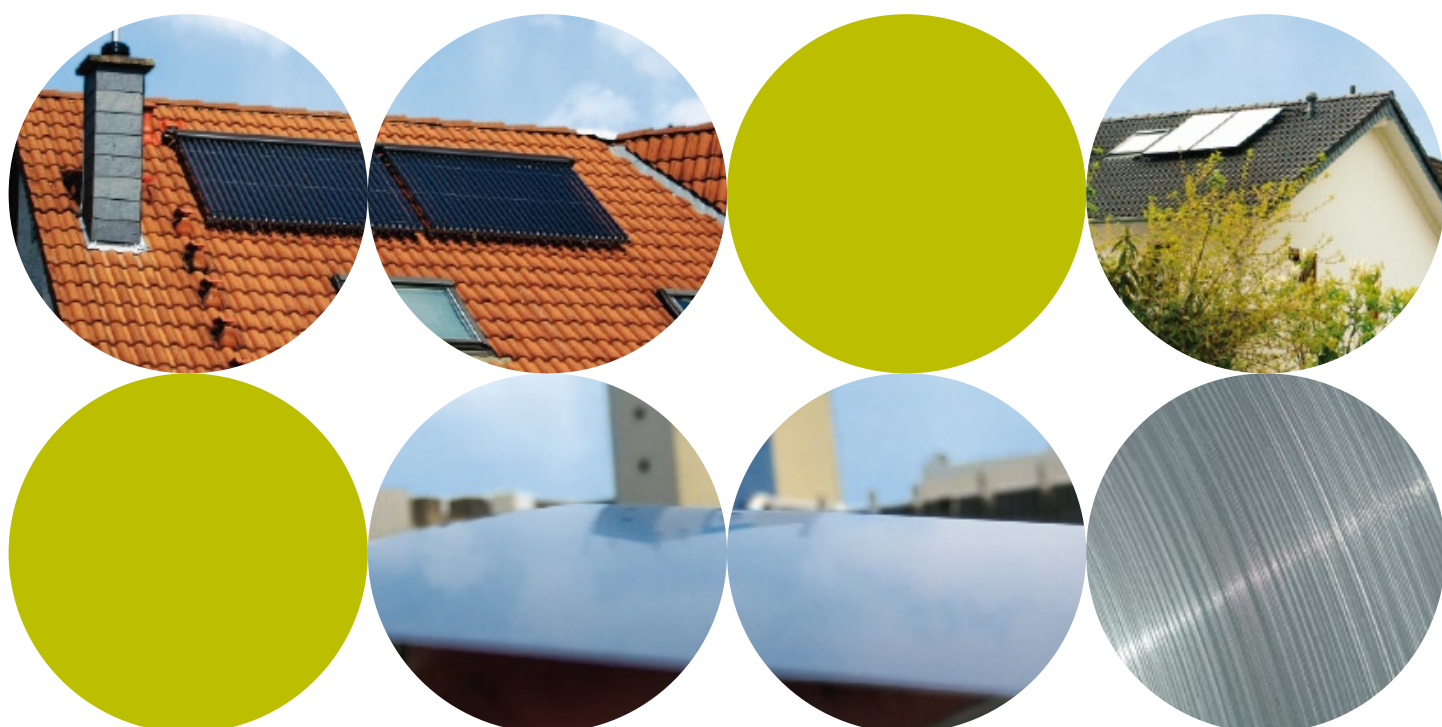


HySelect for Solar Thermal Energy

HySelect - the new selectively coated aluminium absorber strip made by Hydro - allows solar power to be absorbed exactly where it is required. This innovative system for solar thermal energy collectors is based on a pre-treated, coated material combination developed in house and produced using the efficient and cost-effective coil coating process.



HySelect is a newly developed, selective absorber coating which offers a cost-effective alternative to established PVD-CVD absorber coatings.

The absorber coating consists of a 3-layer inorganic system:

- Thin-layer anode coating
- Inorganic bonding agent and passivation coating
- The actual absorber coating comprises a special low-emission, spinel-type binder

This coating combination achieved a world-wide first by creating a selective absorber

coating with high absorbance values of up to 90% and emission values of 12% using a coil-coating process. Furthermore, this coating does not need any chromium addition or solvent; an added plus in processing and also for the environment.

The reverse side of the absorber is provided with a special corrosion protection coating. The strip can be connected to aluminium as well as to copper tubes using all conventional joining processes:

- Ultrasonic welding
- Laser welding
- Soldering
- Brazing

The HySelect coating also remains resistant at elevated temperatures of up to 600°C.

HySelect is suitable for use in many applications. For example:

- Industrial water heating
- Solar back-up heating
- Solar-powered air conditioning

Hydro supplies customers with:

- Absorber strip and sheet for flat-plate collectors
- Slit absorber strip material for strip absorbers and tube collectors

HySelect for Solar Thermal Energy – Product Range

Selectively Coated Absorber Strip and Sheet

Thickness	0.4 mm to 0.8 mm		
Width	Coiled strip - 40 mm to 2,000 mm Sheet - 500 mm to 1,420 mm		
Length	Sheet - 500 mm to 2,700 mm		
Alloy	EN AW 1050, EN AW 5005, others on request		
Temper	H0		
Surface topography	Mill finish, others on request		
Surface treatment	Hot AC Inorganic primer		
Coil coating	Selective inorganic absorber coating		
Special customer requirements	Paper interleaves or protective film on agreement		
Properties of the coating	Solar absorption:	90 +/- 3%	
	Thermal emission:	12 +/- 3%	
	Temperature resistance:	Up to 600°C	
		Without temperature	72 h 300°C
	Cross-cutting test: (According to DIN EN ISO 2409 with tesa 4104)	GT0	GT0
	Mandrel bending 6 mm (Test with tesa 4104)	OK	OK
Corrosion test			
Condensation water test (1008 h in accordance with DIN EN 50017 KK)	No corrosion, undercutting or blistering		
Salt spray test (1008 h in accordance with DIN EN ISO 9227)	No corrosion, undercutting or blistering		
Long-term stability test, microclimate in flat-plate collectors (Ageing test in accordance with test procedure ISO/CD 12952.2, Task 10)	Relevant tests are ongoing		

Contact details:

Hydro Aluminium Deutschland GmbH
Contact person: Willi Schenkel,
Head of Rolled Vision
Aluminiumstr. 1, 41515 Grevenbroich
Germany
Tel: +49 2181 66-1136
Fax: +49 2181 66-1023
E-mail: willi.schenkel@hydro.com
www.hydro.com