

## HEAT-INSULATING SANDWICH ELEMENTS

Low weight, high strength and unlimited design flexibility for surfaces and façades, this is the recipe for success of the innovative sandwich systems of Weiss.

### We would like to advise you!

Your specialist dealer

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## Technical information on U value

### Explanations

**U-value** Overall coefficient of heat transfer U      W / (m<sup>2</sup>·K)

*This value defines the thermal insulation behaviour of a structural element*

**WLG** Thermal conductivity group       $\lambda$  W / (m·K)

How to determine the U-value by calculation is regulated in DIN 4108 part 4

PUR/AL	Polyurethane rigid foam with Vapour-diffusion tight aluminium film	WLG 025
PUR	Polyurethane rigid foam of cut from block foam	WLG 025
XPS	Polystyrene rigid foam extruded	WLG 030   035
EPS	Polystyrene rigid foam expanded	WLG 035   040
MIN	Mineral fibre insulating material	WLG 035   040
TK	Thermoplastic plastic material	WLG 040   045

Core material (Thickness in mm)	WLG ( $\lambda \leq 025$ )	WLG ( $\lambda \leq 030$ )	WLG ( $\lambda \leq 035$ )	WLG ( $\lambda \leq 040$ )
	U-value	U-value	U-value	U-value
16	1.23	1.39	1.49	1.75
20	1.03	1.16	1.26	1.49
21	0.99	1.12	1.21	1.44
22	0.95	1.08	1.17	1.39
24	0.88	1.00	1.09	1.30
25	0.85	0.97	1.05	1.26
27	0.80	0.91	0.99	1.18
29	0.75	0.86	0.93	1.12
30	0.73	0.83	0.90	1.09
32	0.69	0.79	0.86	1.03
33	0.67	0.77	0.83	1.00
37	0.60	0.69	0.76	0.91
40	0.56	0.65	0.70	0.85

For comparison:

Outer wall of masonry bricks, thickness 365 mm, U-value: 0.80 W/m<sup>2</sup>K

## Examples for application



Façades



Window sills



Doorpanels



Refrigerated lorry

## COSMO® ENERGY

Heat-insulating composite panels  
Active protection of environment



weiss

## Product description

### COSMO® ENERGY

#### Energy-saving elements

At a time when energy resources are limited, increasing importance is attached to the topics of energy efficiency and thermal insulation in the building and industry sector. With our product line COSMO® ENERGY we are offering to you a variety of high-grade element variants with outstanding thermal insulation properties and in this way, we actively support you in saving energy.

#### Examples for surfaces



## Product examples



#### COSMO® THERM

PVC/1.5-PUR/AL

Thermal conductivity group: 025

Total thickness: 36.0 mm

Lambda value: 0.025 W/mK



#### COSMO® THERM

PVC/1.5-XPS

Thermal conductivity group: 035

Total thickness: 36.0 mm

Lambda value: 0.033 W/mK



#### COSMO® THERM

ALU/1.0-XPS

Thermal conductivity group: 030

Total thickness: 24.0 mm

Lambda value: 0.029 W/mK



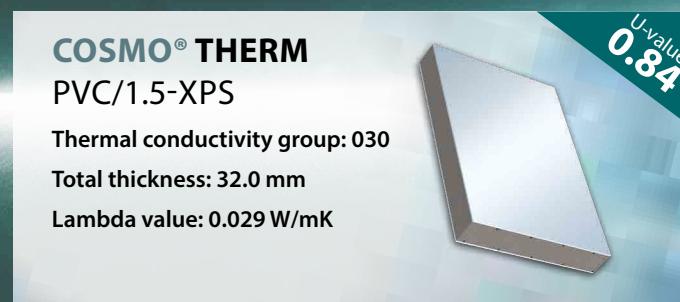
#### COSMO® THERM

PLYWOOD/4.0-PUR/AL

Thermal conductivity group: 025

Total thickness: 40.0 mm

Lambda value: 0.025 W/mK



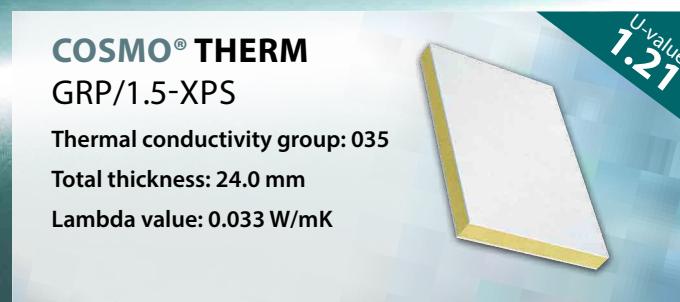
#### COSMO® THERM

PVC/1.5-XPS

Thermal conductivity group: 030

Total thickness: 32.0 mm

Lambda value: 0.029 W/mK



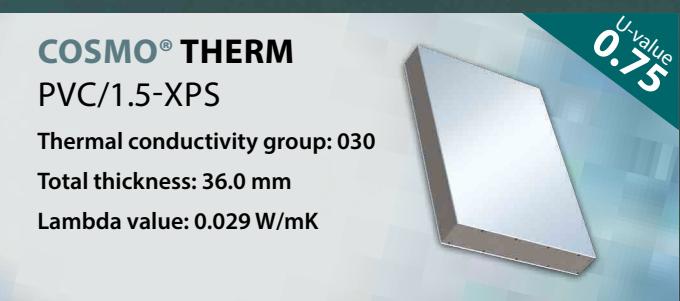
#### COSMO® THERM

GRP/1.5-XPS

Thermal conductivity group: 035

Total thickness: 24.0 mm

Lambda value: 0.033 W/mK



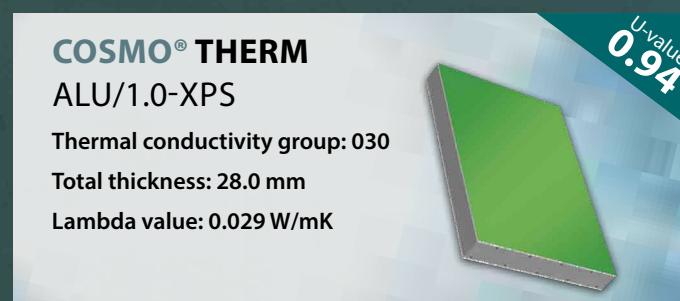
#### COSMO® THERM

PVC/1.5-XPS

Thermal conductivity group: 030

Total thickness: 36.0 mm

Lambda value: 0.029 W/mK



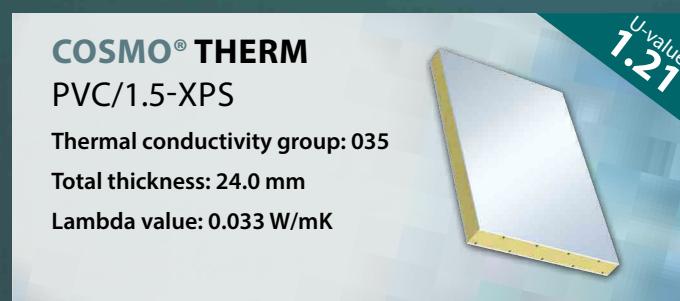
#### COSMO® THERM

ALU/1.0-XPS

Thermal conductivity group: 030

Total thickness: 28.0 mm

Lambda value: 0.029 W/mK



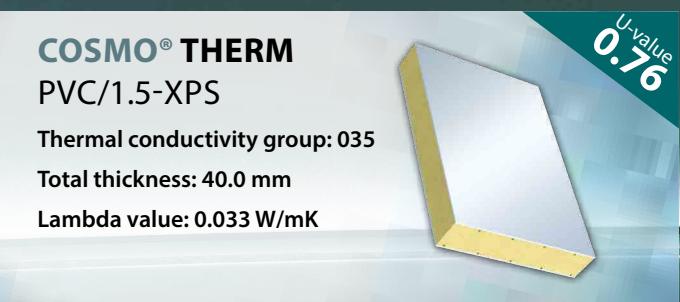
#### COSMO® THERM

PVC/1.5-XPS

Thermal conductivity group: 035

Total thickness: 24.0 mm

Lambda value: 0.033 W/mK



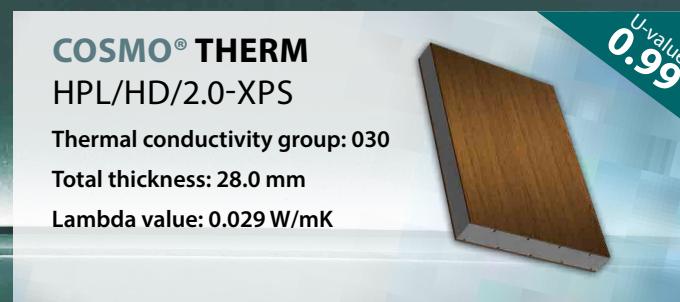
#### COSMO® THERM

PVC/1.5-XPS

Thermal conductivity group: 035

Total thickness: 40.0 mm

Lambda value: 0.033 W/mK



#### COSMO® THERM

HPL/HD/2.0-XPS

Thermal conductivity group: 030

Total thickness: 28.0 mm

Lambda value: 0.029 W/mK



#### COSMO® THERM

PLYWOOD/4.0-XPS

Thermal conductivity group: 035

Total thickness: 24.0 mm

Lambda value: 0.033 W/mK