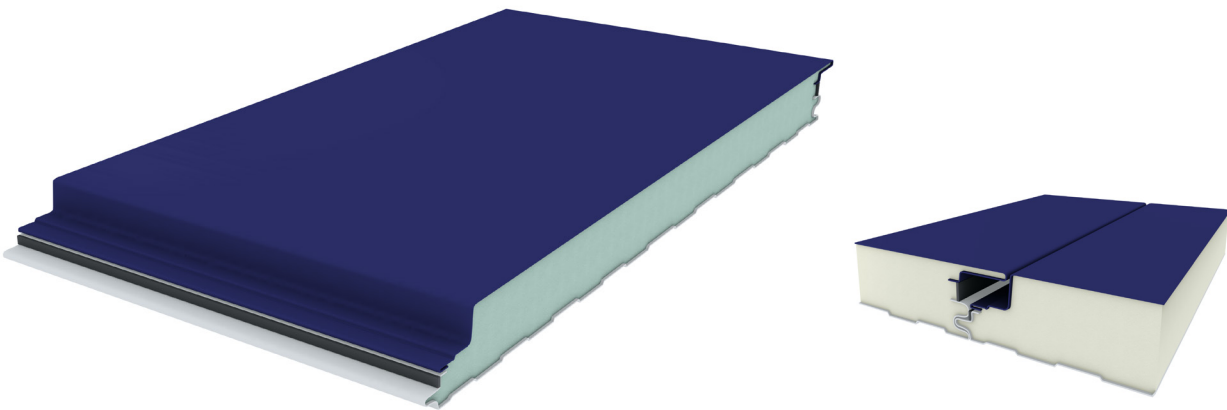




TZ-VL

HIGH-PERFORMANCE FLAT INSULATING PANEL FOR FACADES



- Rigid insulating core with excellent thermal properties (thermal conductivity is only 0.0195 W/mK).
- Lightweight enclosure with vertical or horizontal installation options. Also suitable for ceilings and interior partition walls.
- Structural steel sheets with flat exterior finish and various long-lasting coating options.
- Does not absorb water and maintains its performance throughout its lifetime and is not affected by biological agents.
- Guaranteed and certified quality and safety.



TZ-VL Flat panel for facades

DESCRIPTION AND APPLICATIONS

Sandwich panel with metal faces and rigid, insulating core.

Provides an excellent architectonic finish due to its flat outer face and hidden fastenings.

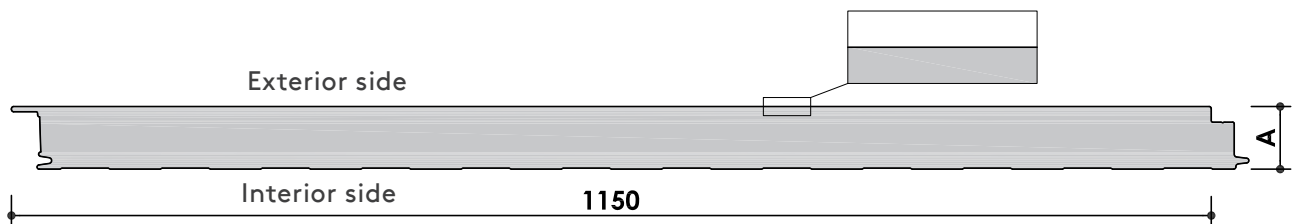
PUR (polyurethane) or PIR (polyisocyanurate) foam may be used as the insulating core.

Available in various thicknesses, coatings and colours.

Insulating façades for industrial, residential, commercial and sports facilities building, together with ceilings and internal partition walls.



PRODUCT DATA



Useful width	1,150 mm						
Manufacturing length	Standard 2.0 a 13.5 m						
	Special 13.5 a 16 m (special transport)						
Thermal conductivity (PIR)	0.0195 W/mK						
Conductividad térmica declarada (PIR)	0.0217 W/mK (considering an aged core)						
Insulating core density	40 ± 5 kg/m ³						
Thickness of insulating core (A)	35	40	50	60	80	100	(mm)
Selfweight	11.6	11.8	12.2	12.6	13.4	14.2	(kg/m ²)
	13.4	13.6	14.1	14.5	15.5	16.4	(kg/ml)
Thermal transmittance (PIR)	0.66	0.58	0.47	0.40	0.29	0.23	(W/m ² K)

NOTE:

Thermal transmittance determined according to UNE-EN 14509 standard, taking into consideration the effect of ageing of the insulating core and certified by the AENOR "N" stamp.

Flat panel for facades **TZ-VL**

COMPONENTS

Insulating core

Rigid polyurethane (PUR) or polyisocyanurate foam (PIR) continuous injection.

Exterior faces

Cold-profiled sheet from a reel of type S220GD structural steel of certified quality. Flat exterior face, slightly profiled interior face.

Standard sheet thicknesses: 0.7 mm for a flat exterior face, 0.5 or 0.6 mm for the interior face (other thicknesses on demand).

Hot-galvanised sheet according to EN 10346.

Coatings

The TZ-VL panel can be produced in various coatings to guarantee high durability depending on the environment and proposed conditions of use:

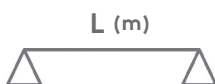
- Lacquered polyester (25 microns)
- Granite HDX (55 microns)
- PVDF / Polyvinylidene fluoride (35 mm)
- PET (50 microns) (only for the inner side of the panel)

TABLES OF MAXIMUM ALLOWABLE SPAN

The tables below indicate the maximum allowable distance between supports (m) depending on panel thickness (mm) and the uniformly distributed characteristic load (daN/m²) in the SLS.

The mechanical performance of the panel has been determined by structural testing. Contact the Technical Department for load tables in the ULS.

SINGLE SPAN



Thickness (mm)	Pressure load (daN/m ²)						
	50	75	100	125	150	175	200
35	3.45	3.00	2.75	2.53	2.40	2.25	2.15
40	3.60	3.15	2.85	2.65	2.50	2.40	2.25
50	3.90	3.40	3.10	2.85	2.70	2.55	2.45
60	4.10	3.60	3.25	3.05	2.85	2.70	2.60
80	4.55	4.00	3.60	3.55	3.15	3.00	2.85
100	6.00	5.40	4.70	4.20	3.85	3.55	2.85

NOTE: Maximum deflection $\leq L/200$.

1 daN/m² \approx 1 kg/m²

TWO SPANS



Thickness (mm)	Pressure load (daN/m ²)						
	50	75	100	125	150	175	200
35	4.00	3.50	3.15	2.95	2.75	2.65	2.50
40	4.20	3.65	3.30	3.10	2.90	2.75	2.65
50	4.50	3.95	3.60	3.30	3.10	2.95	2.85
60	4.80	4.20	3.80	3.50	3.30	3.15	3.00
80	5.25	4.60	4.20	3.90	3.65	3.45	3.30
100	6.50	6.00	5.55	4.90	4.50	4.15	3.85

NOTE: Maximum deflection $\leq L/200$.

1 daN/m² \approx 1 kg/m²

TZ-VL Flat panels for facades

REACTION TO FIRE

TZ-VL PIR panel:

Euroclass B,s1,d0

TZ-VL PUR Panel:

Euroclass B,s2,d0

The reaction to fire has been determined by laboratory tests (standard EN 13501).

The TZ-VL panel with PIR insulation core has obtained the best possible classification for an organic material (hardly combustible product with very little contribution of smoke and no production of flammable droplets).

QUALITY AND MANUFACTURING

Guaranteed and certified quality

The TZ-VL panel is manufactured with the highest quality raw materials using automated and constantly monitored C.I.M manufacturing lines and is subject to strict quality control to ensure compliance with Kingspan's high quality standards. The panel is subjected to flexural, compression and tensile tests, thermal conductivity, core density, accelerated aging and dimensional controls, among others.

The Kingspan Integral Quality Management System, according to ISO 9001, is audited and certified by AENOR and IQNet.

Steel sheet certificates

Steel used in accordance with EN 10346 (galvanized) and EN 10169 (organic coatings).

TZ-VL Panel certificates

CE marking according to EN 14509.

Product certified with the "N" quality assurance stamp of AENOR.



OTHER FEATURES

Resistance to biological agents

The Kingspan panels, thanks to the closed structure of the insulation core, are immune to the attack of fungi, molds and other deteriorating biological agents.

Water absorption

The insulation core of the panel does not absorb water, thus maintaining its thermal performance over its entire life. Therefore, it can be installed in adverse weather conditions.

Water tightness

The carefully designed tongue-and-groove design of the hidden joints of the panel ensures absolute watertightness against rainwater.

Sustainability

Both the steel and its metallic and organic coatings are free from SVHC ("Substances of very high concern"), in accordance with the requirements of the European REACH regulation.

The insulation core of the panel is injected by means of a non-HCFC gas release process.

Kingspan's Environmental Management System (ISO14001) and the Occupational Safety and Health System (OHSAS 18001) are certified by AENOR and IQNet.

Kingspan reserves the right to modify the contents of this document without any prior warning