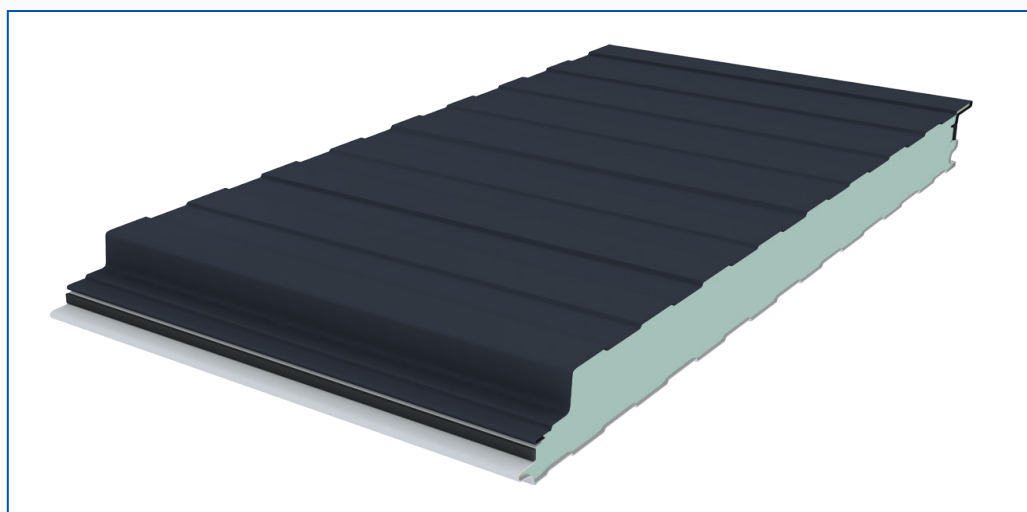
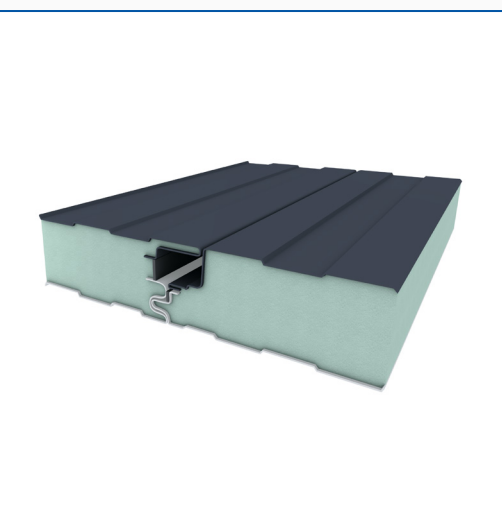


HI-PIRM STS / HI-PIR STS

INSULATING PANEL, HIGH-PERFORMANCE 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 slightly profiled finish with 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.

Technical Sheet HI-STS Facade panel | Date: 03/04/19 | Issue: 5.0

DESCRIPTION AND APPLICATIONS

Sandwich panel with **metal faces** and **rigid, insulating** core.

Panel with low-height profiled surfaces and **hidden tongue and groove joints**.

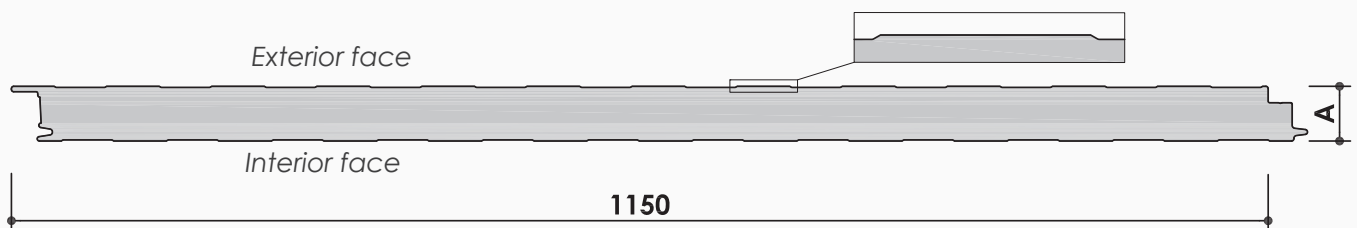
PIR or **PIRM** (polyisocyanurate) foam may be used as the insulating core.

Available in **various thicknesses, coatings** and **colours**.

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



DIMENSIONS, WEIGHT AND THERMAL PROPERTIES



Useful width	1.150 mm						
Manufacturing length	2,0 a 13,5 m 13.5 to 18 m (special transport)						
Thermal conductivity	0,0195 W/mK						
Declared thermal conductivity¹	0.0217 W/mK (considering an aged core)						
Insulating core density	40 ± 5 kg/m ³						
Thickness (A)	35	40	50	60	80	100	(mm)
Weight	9,93	10,13	10,53	10,93	11,73	12,53	(kg/m ²)
Thermal transmittance¹ (PIR/PIRM)	0,63	0,54	0,43	0,35	0,27	0,21	(W/m ² K)
Thermal resistance² (PIR/PIRM)	1,57	1,80	2,26	2,72	3,64	4,56	(m ² K/W)

NOTES: (1) 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.

(2) For 0.5/0.5 mm sheets (int/ext).

COMPONENTS

Insulating core

Rigid polyisocyanurate foam (PIR / PIRM) continuous injection.

Exterior faces

Cold-profiled sheet from a reel of type S220GD structural steel of certified quality.

Both faces are low-height profiled.

Standard sheet thickness: 0.5 mm for outer and inner faces (other thicknesses on demand).

Applicable standards

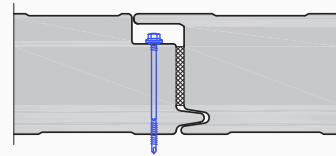
Hot-galvanised sheet according to EN 10346 and organic coatings according to EN 10169.

Coatings

The HI-STs panel can be produced in various coatings to guarantee high durability depending on the environment and proposed conditions of use (see table of available coatings).

Hidden joint

Tongue and groove joint that hides the panel fastening to the load-bearing structure and protects the screw head and increases useful lifetime.



AVAILABLE COATINGS

	OUTDOOR ENVIRONMENT						INDOOR ENVIRONMENT			RESISTANCE	
	RURAL WITHOUT POLLUTION	URBAN / INDUSTRIAL		MARINE			NON-AGRESSIVE ENVIRONMENTS		AGGRESSIVE AND/OR VERY HUMID ENVIRONMENTS	CORROSION	UV
		Moderate	Severe	Between 3 and 20 km	< 3km (*)	Mixed	Low humidity	Medium humidity			
E5001	✗	✗	✗	✗	✗	✗	✓	✗	✗	NA	NA
Polyester 25µ	✓	✓	!	!	✗	✗	✓	✓	✗	Good	Good
HDX 55µ	✓	✓	✓	✓	✓	!	✓	✓	!	Excellent	Very good
HDS 35µ	✓	✓	!	✓	!	!	✓	✓	!	Very good	Very good
PVDF 35µ	✓	✓	!	✓	!	!	✓	✓	!	Very good	Excellent
PET 50µ	✗	✗	✗	✗	✗	✗	✓	✓	✓	Excellent	NA

✓ Suitable coating

✗ Unsuitable coating

! Check with HUURRE IBÉRICA for the most suitable coating NA Not applicable

(*) Please contact us for distances < 300 m.

For agricultural solutions, please consult our HI-AGRO Panel Technical sheet.

USAGE TABLES (daN/m²)

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

TWO SUPPORTS	Thickness (mm)	Pressure loads (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	3.35	3.15	3.00	2.85
	100	4.88	4.25	3.88	3.60	3.38	3.20	3.10

THREE SUPPORTS	Thickness (mm)	Pressure loads (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	5.68	4.95	4.50	4.15	3.93	3.73	3.58

1 daN/m² ≈ 1 kg/m²

NOTES: Load charts based on L/200 deflection limit.

For values according to EN 14509 contact our technical department.

REACTION TO FIRE

Reaction to fire according to European legislation

EUROCLASS B,s1,d0

B: Hardly inflammable¹

s1: Very limited smoke production

d0: No inflammable dripping

(1) best classification possible for an organic type of material.

Reaction to fire is determined according to UNE-EN 13501 (report AFITI-LICOF 2843T15-3 R1 and N stamp).

Reaction to fire according to <FM GLOBAL> standards (only for HI-PIRM STS panel).



<FM APPROVED> CLASS 1
(according to the 4880 standard).

Test programme 4880 certifies² the buyer the integrity of HI-PIRS STS panels against the most demanding fire protection requirements in interior applications.

(2) Subject to installation conditions.


MANUFACTURING QUALITY AND STANDARDS

Guaranteed and certified quality

The HI-STS panel is manufactured using top-quality raw materials, together with automatic CIM production lines, which are continually monitored and subject to strict quality assurance controls to guarantee compliance with all HUURRE's high quality standards. The panel undergoes tests for bending, compression and traction, thermal conductivity, core density, accelerated ageing, and dimensional checks, among others.

The HUURRE Comprehensive Quality Management System, which is in accordance with ISO 9001, is audited and certified by AENOR and IQNet (ER-0947/1998 certification).

HI-PIR STS and HI-PIRM STS panel certifications

 CE marking according to UNE-EN 14509 standard



Product certified with the "N" quality assurance stamp of AENOR. (Certified to 020/003381 for PIR and 020/003382 for PIRM).



Avis Technique d'Application CSTB - HI-ST 2.1/18-1795_V1.

HI-PIRM STS certifications



The certification <FM Approved> 4880 for interior applications guarantees that the HI-PIRM STS panels are safe against fire and do not contribute to fire propagation. Subject to installation conditions.

OTHER FEATURES

Resistance to biological agents

Because of the closed insulating core structure, the HUURRE panels are immune to attacks by fungi, moulds and other harmful biological agents.

Water absorption

The insulating core in the panel does not absorb water and thus maintains its performance throughout its lifetime. For this reason, they can be installed in adverse weather conditions.

Water-tightness

The careful tongue and groove design of the hidden panel joints ensures complete water-tightness against rainwater and is certified by testing (report Applus 15_10894-2504 and N stamp). Regarding the impermeability requirement for the CTE enclosures, sections 5.2.6, 5.2.7 and 5.2.8 of EN 14509 determine that the sandwich panels with metal faces will be considered sealed against water, air and water vapour, with these parameters only being relevant at the joints and fastenings depending on the installation.

Sustainability

Both the steel and their metallic and organic coatings are free of SVHC (Substances of Very High Concern), in conformity with the requirements of the European REACH regulation.

The insulating core of the panel is injected using a process that does not release HCFC type gases.

The HUURRE Environmental Management System (ISO 14001) and the Health and Safety in the Workplace System (OHSAS) are certified by AENOR and IQNet (certifications GA-2003/0091 and ES-SST-0035/2010 respectively).

Warranty

The HUURRE HI-STS panel has a 25-year warranty for its operational performance and up to 35 years for its coatings. Conditions apply.