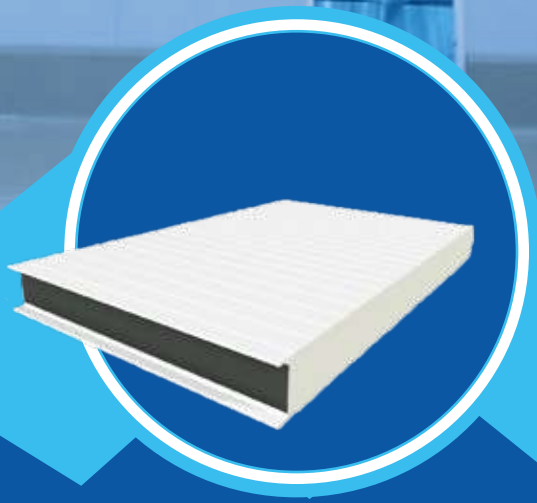
HUURRE PANAMÁ

HP-PUR F

COLD STORAGE PANEL



HUURRE PANAMÁ

COLD STORAGE PANEL

COLD STORAGEMAXIMUM
THERMAL EFFICIENCY AND SAFETY
BEFORE FIRE CERTIFIED

Exceptional thermal insulation, reaching a thermal transmittance U of only 0.11 W/m accredited and certified.

High performance mechanical resistance; suitable for outdoor use, in seismic areas, with risk hurricane or severe hail impact.

Does not absorb water, maintaining its performance throughout its useful life, and is not affected by biological agents.

Excellent tightness of its joint, accredited by essays.

HP-PUR F

Data Sheet
COLD STORAGE PANEL

DESCRIPTION AND APPLICATIONS

Cold Storage sandwich panel with metal faces and rigid insulating core, designed for applications that require a high degree of insulation:

Agri-food industry, cold rooms, laboratories and etc.

Excellent fire behavior, certificate class B s2d0 for APPLUS laboratories.

PUR foam can be used as insulating core available in various thicknesses of steel, with coatings suitable for contact with foods.

High mechanical performance through laboratory tests.

DIMENSIONS, WEIGHT AND THERMAL PERFORMANCES

Useful width		1000 m					
Manufacturing length	Standard	2 a 16 m					
Joint type		CS					
Thermal conductivity		0,018W/mK					
Declared thermal conductivity1		0,0195W/mK (considerando núcleo envejecido)					
Density of the insulating core		40 ±5 kg/m³					
TotalThickness(A)	40	50	75	100	150	200	(mm)
Weight	12,5	13,0	14,0	15,0	17,0	19,0	(kg/m²)
(PUR)	0,52	0,39	0,26	0,20	0,13	0,08	(W/m²K)
	11,21	14,01	21,36	28,48	42,72	56,96	(BTU hora pulg²)

NOTES: (1) Thermal transmittance determined according to the UNE-EN 14509 standard, considering the effect of aging of the insulating core For 0.5/0.5mm sheets (int/ext).

HUURRE PANAMÁ
Vía Transistmica,Milla 8, Parque IndustrialMilla 8, Galera N°1
Tel. +(507) 203 03 10 | +(507) 394 20 49
M: huurre@huurrepanama.com | W: http://www.huurrepanama.com

HUURRE PANAMÁ

CS Joint has been designed with a type of double tongue-and-groove joint, the refrigerator panel it is designed to offer excellent sealing and tightness with the best assembly.

Material Specifications

RIGID POLYURETHANE FOAM (PUR)(Core):
PHYSICAL PROPERTIES
Average density: 38Kgs/ M3 with a structure of at least 90% closed cells, with conform to standards ASTM-D 1622 and ASTM-D - 2856
Self-extinguishing: This is how this cellular plastic is considered because it does not require additives fire retardants to meet US building specifications from America.

Thermal conductivity:

K= 0.14 BTU Inch. / (Hr.) (Foot2) (°F) at a temperature of 75° F (24°C) according to the Standard ASTM-C-518

Chemical resistance:

Excellent resistance to water, seawater, acid vapors, most solvents, hydrocarbons and mineral oils.

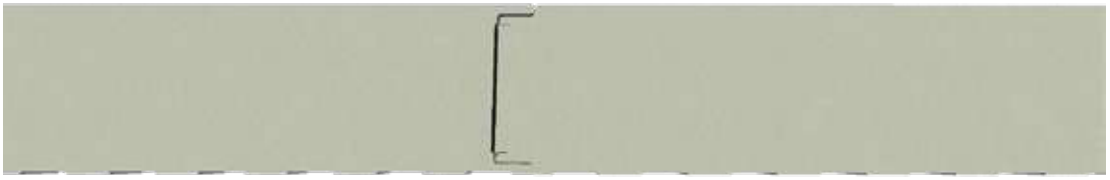
Operating temperature:

Minimum: -40°C (Depending on the thickness of the panel and the coating on the plate)

Maximum: +120°C

Mechanical properties

Compression stress: 1.42 Kg. / Cm2 (20 Lbs./Inch3) ASTM-D-1621



MECHANICAL RESISTANCE PERFORMANCES

The HP-F panel is ideal for use as exterior cladding for facades, thanks to its high stiffness, impact resistance and durability.

Certified resistance to earthquakes

The HP-F panel is safe to use in high seismicity areas.

USAGE TABLES (daN/m^2)

The following tables show the maximum allowable distributed uniform load (daN/m2) depending on the thickness of the panel (mm) and the distance between supports (m)

Tables calculated according to the European Norm in 14509 for ELS.

TWO SUPPORTS	THICKNESS	50	75	100	125	150	175	200
Burden (Kg/ m2)	50	3.42	3.00	2.71	2.54	2.33	2.25	2.17
	75	4.27	3.75	3.38	3.14	2.95	2.86	2.67
	100	6.00	5.40	4.70	4.20	3.85	3.55	3.30
	150	8.00	7.00	5.80	5.30	4.85	4.55	4.20
	200	8.00	8.00	6.70	5.80	5.30	4.80	4.60

THREE SUPPORTS	THICKNESS	40	75	100	125	150	175	200
(Burden Kg/ m2)	50	4.00	3.50	3.17	2.92	2.75	2.63	2.50
	75	4.90	4.31	3.98	3.66	3.42	3.23	3.09
	100	6.50	6.00	5.50	4.90	4.50	4.15	3.85
	150	9.00	7.00	6.00	5.30	4.85	4.55	4.20
	200	9.00	8.00	6.70	5.80	5.30	4.90	4.60

HUURRE PANAMÁ
Vía Transistmica,Milla 8, Parque IndustrialMilla 8, Galera N°1
Tel. +(507) 203 03 10 | +(507) 394 20 49
M: huurre@huurrepanama.com | W: http://www.huurrepanama.com

HUURRE PANAMÁ

OTHER PROPERTIES

Resistance to biological agents

HUURRE HP-F panels, thanks to the structure closed of the insulating core, they are immune to attacks by fungi, molds and other deteriorating biological agents.
Therefore, they are ideal for applications that require a high degree of hygiene and sanitation (agri-food sector, laboratories, etc).

Water absorption

The insulating core of the panel does not absorb water, thus maintaining its benefits thermal throughout its useful life. Thus, In addition, it can be installed in conditions adverse weather.

Sustainability

Both steel and its metallic coatings and organic are free of SVHC ("Substances extremely worrying"), in accordance with the requirements of the European regulation REACH.
The insulating core of the panel is injected by a process that does not release HCFC-type gases.

Prepainted –PP

GENERAL DESCRIPTION

HUURRE PANAMÁ®manufacturer products using prepainted steel, specifically designed by Huurre Panamá S.A. to provide a high durability, premier cladding and roofing material for general use.

TYPICAL USES

Roofing and accessories,wall cladding, rain water goods. For material selection advice, please contact Huurre Panamá technical department

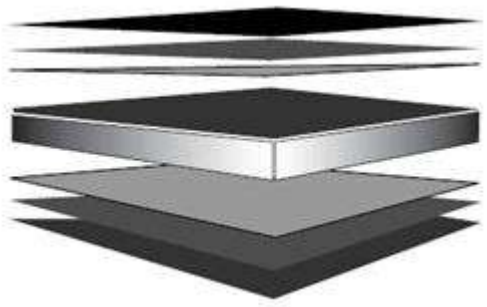
U.S.A STANDARS

Substrate –ASTM A 792 –G50

Paint Coating –ASTM D 4214

PREFERRED SUBSTRATES

Steel Sheet, 55% Aluminum–ZincAlloy–Coated by the HotDip Process



ALWAYS equipped with a protective film that preserve histop quality properties.

- Finish Coat (Finish Coat +Primer =nominal 25µm)
- Universal CorrosionInhibitive Primer
- Conversion Coating
- Zinc/Aluminiumalloy coated steel Substrate
- Conversion Coating
- Universal CorrosionInhibitive Primer
- Backing Coat (Backing Coat +Primer =nominal 10µmtotal)

AVAILABLE STEEL SHEET THICKNESS

Gauge –28	Gauge –26	Gauge –24

ATTRIBUTES TESTED DURING MANUFACTURE

Property	Test & Evaluation Method(s)	Results
Adhesion		
Reverse Impact	ASTM D 2794	≥10joules
T–bend	ASTM D 4145	Maximum 6T
Hardness		
Pencil	ASTM D 3363	HB or harder
Specular gloss		
60° meter	ASTM D523	Nominal ±10 units

HUURRE PANAMÁ

Vía Transistmica,Milla 8, Parque IndustrialMilla 8, Galera N°1
Tel. +(507) 203 03 10 | +(507) 394 20 49
M: huurre@huurrepanama.com | W: http://www.huurrepanama.com

PRODUCT ATTRIBUTES

Property	Test & Evaluation Method(s)	Results
Flexibility		
T–bend	ASTM D4145	Maximum 10T(no cracking).
Resistance to abrasion		
Scratch	ASTM G171–03	Typically 2000g
Adhesion		
Natural well washed exposure (10 yrs)	ASTM D 3330; D 3359 – 97	No flaking or peeling.
Resistance to humidity		
Cleveland (500 hours)	ASTM D4545	Blister density: ≤3.Blister size: ≤S2.No loss of adhesion or corrosion.
Resistance to corrosion		
Salt spray (1000 hours)	ASTM B117	Blister density: ≤2.Blister size: ≤S3. Undercut from score: ≤2mm.No loss of adhesion or corrosion.
Kesternich (SO2) (50 cycles)	DIN 50018	Edge creep: <4mm.
Resistance to colour change		
Natural well washed exposure (10 yrs)	ASTM D2244 (Colour)	ΔE cielab 2000:Light colour: ≤4units; Intermediate colour: ≤6units; Dark colour: ≤10units.
QUV (2000 hours)	ASTM G154 & ASTM D2244 (Colour)	ΔE cielab 2000:Intermediate colour : ≤5 units
Resistance to chalking		
Natural well washed exposure (10 yrs)	ASTM D4214	Chalk rating: ≤4.
QUV (2000 hours)	ASTM G154	Chalk rating: ≤4
Resistance to Solvents		
Exposure	ASTM D1308 (3.1.1) & ASTM D2244 (Colour); ASTM D714 (Blisters)	No discolouration or blistering.
Resistance to acids		
Exposure	ASTM D1308 (3.1.1) & ASTM D2244 (Colour); ASTM D714 (Blisters)	No discolouration or blistering.
Resistance to alkalis		
Exposure	ASTM D1308 (3.1.1) & ASTM D2244 (Colour); ASTM D714 (Blisters)	No discolouration or blistering.
Resistance to fire		
Exposure	ASTM E108	Ignitability index: 0 rating in scale of 0–20 Spread of Flame index: 0 rating in scale of 0–10 Heat evolved index: 0 rating in scale of 0–10 Smoke evolved index: 0–1rating in scale of 0–10
Resistance to heat		
Exposure 100°C continuous (500 hrs)	ASTM D2244 (Colour)	Colour change ΔE cielab 2000: ≤3units

HUURRE PANAMÁ
Vía Transistmica, Milla 8, Parque Industrial Milla 8, Galera N°1
Tel. +(507) 203 03 10 | +(507) 394 20 49
M: huurre@huurrepanama.com | W: http://www.huurrepanama.com

HUURRE PANAMÁ

HUURRE PANAMÁ

www.huurrepanama.com