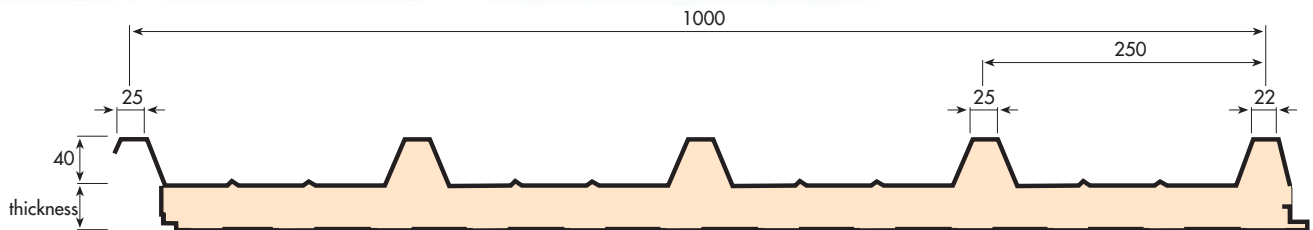




ISOCOP-5 1000

A panel designed for pitched roofing. It can also be used as a covering material. The possibility of using a single kind of panel for both roofing and walling simplifies design and material supply. It is characterized by its strength and extreme versatility. Its high mechanical features allow it to be used in applications on large areas of unsupported spans, therefore providing a saving in the cost of supporting structures.



NOTES FOR CONSULTATION OF THE DATA CARD (reference should be made to norm AIPPEG¹ for anything not mentioned herein)

METAL SUPPORTS

- Laminates of galvanized steel Sendzimir (UNI-EN 10147)
- Laminates of galvanized steel, prevarnished with a Coil Coating procedure
- Laminates of aluminium alloy, with a natural finish, embossed and prevarnished (UNI 9003)
- Prevarnishing carried out by means of a continual-cycle process, with a thickness of the visible side of 5 microns of primer and 20 microns of paint, as follows: PS-PX-PVDF (special products with a high level of anticorrosion are available upon request).
- Laminates of copper (DIN 1787/17670/1791).

INSULATING MASS

Rigid plastic with a high level of insulating power, made from polyurethane resins (PUR) and poliisocianurates (PIR) both self-extinguishable *, with the following standards of quality:

- thermal conductivity at 10°C: $\lambda_m = 0.020$ W/mK
- total density: $40 \text{ kg/m}^3 \pm 10\%$
- value of adhesion to supports: 0.10 N/mm^2
- value of compression at 10% of deformation: 0.11 N/mm^2 .

THERMAL INSULATION

The coefficients of thermal transmission "K" mentioned in the data card should be considered useful for projects, at 10°C; calculations have taken into consideration the two external and internal laminate resistances and the

thermal conductivity at 10°C (obtained by applying the oversize $m = 10\%$ to λ_m): $\lambda = 0.022$ W/mK.

WEIGHT CAPACITY

- Deformation: an indicator, similar to or below 1/200 L is established
- Flexion: it is believed that the pressure of flexion is entirely absorbed by the supporting steel
- Kerf: it is believed that the pressure of the cut is partly absorbed by the supporting steel and in part by the resin.

Information indicated in tables 1 and 2 is to be considered indicative. The project manager should check this data according to the specific applications.

FIXING INSTRUCTIONS

The project manager should evaluate the conditions of use according to the local climatic situation. Particular attention should be paid to the fixing of panels with aluminium or copper supports.

For further information, please consult "RECOMMENDATIONS FOR THE FIXING OF STEEL PANELS AND OF INSULATED METAL PANELS" issued by AIPPEG.

* Upon request, Isopan can supply polyurethane resins suitable to pass the most severe fire reaction tests, to obtain panels of class 0-1 according to D.M. 26/06/1984, class M1 according to the French norm P 92-501, B1 or B2 according to the German norm DIN 4102.

1- **AIPPEG** (Associazione Italiana Produttori Pannelli ed Elementi Grecati): Italian Association of Panels and Ribbed Items Manufacturers.

FIXING INSTRUCTIONS

FOR USE IN ROOFING

- Type of fixing: PVC screw-washer - cap - gasket
- Screw type and shank: - self-tapping diam. 6.0 mm for surface support ≥ 3 mm
- self-threading diam. 6.3 mm for surface support < 3 mm with false washer incorporated
length: nominal thickness of panel + 60÷70 mm
- Quantity: One for each ridge for extreme supports or overlaps
One every two ridges for intermediate supports

FOR USE IN WALLING

- PVC screw-washer (*)
- self-tapping diam. 6.0 mm for surface support ≥ 3 mm
- self-threading diam. 6.3 mm for surface support < 3 mm with false washer incorporated
length: nominal thickness of panel + 20÷30 mm
- One for each ridge for extreme supports or overlaps
One every two ridges for intermediate supports

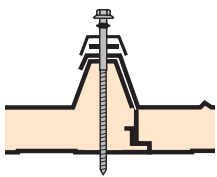
(*) In the case of strong depression a 50 mm diam. washer should be interposed. For panels with aluminium or copper supports request special instructions.

OVERLOADS - SPANS

SHEET STEEL THICKNESS 0.5 mm													
EVENLY DISTRIBUTED LOAD		▲————▲						▲————▲————▲					
		PANEL THICKNESS mm						PANEL THICKNESS mm					
		30	40	50	60	80	100	30	40	50	60	80	100
kg/m ²	daN/m ²	MAX. SPAN cm						MAX. SPAN cm					
80	78	345	390	435	485	560	640	400	455	500	560	645	735
120	117	290	335	370	415	480	550	345	390	430	485	555	635
150	147	265	305	340	375	440	505	315	355	400	440	515	585
200	196	235	270	300	340	395	450	285	325	360	400	460	525
250	245	210	245	275	305	360	415	255	295	325	360	425	485

ALUMINIUM STEEL THICKNESS 0.6 mm													
EVENLY DISTRIBUTED LOAD		▲————▲					▲————▲————▲						
		PANEL THICKNESS mm					PANEL THICKNESS mm						
		30	40	50	60	80	30	40	50	60	80		
kg/m ²		MAX. SPAN cm					MAX. SPAN cm						
80		250	285	320	355	415	290	330	370	405	475		
120		215	245	275	305	360	250	285	320	350	415		
150		200	225	255	280	330	230	265	295	325	380		
200		175	205	230	250	295	190	220	250	280	330		

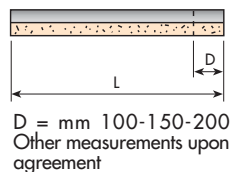
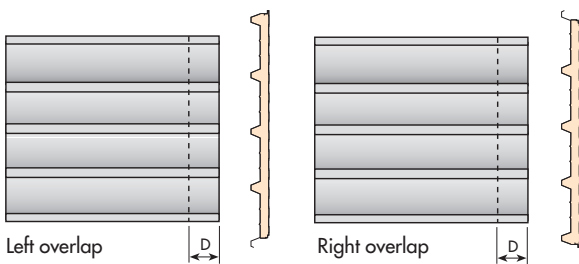
INSTALLATION EXAMPLE



WEIGHTS OF PANELS

STEEL THICKNESS	WEIGHT	NOMINAL THICKNESS OF PANEL mm						
		30	40	50	60	80	100	120
0.4	kg/m ²	8.5	8.9	9.3	9.7	10.5	11.3	12.1
0.4-0.5	kg/m ²	9.5	9.9	10.3	10.7	11.5	12.2	12.9
0.5	kg/m ²	10.3	10.7	11.1	11.5	12.3	13.1	13.9

DISPOSITION OF THE OVERLAP



THERMAL INSULATION

K	NOMINAL THICKNESS OF PANEL mm						
	30	40	50	60	80	100	120
W/m ² K	0.55	0.44	0.36	0.31	0.25	0.20	0.17
kcal/m ² h °C	0.48	0.38	0.32	0.27	0.22	0.17	0.15

DIMENSIONAL TOLERANCES

DEVIATIONS mm	
Length	± 5
Effective width	± 5
Thickness	± 2
Orthometry and rectangularity	± 3

DRAFT OF SPECIFICATIONS

Nominal thickness: mm _____ out of ridge
 Effective width: mm 1000
 External support: ridged (ridge height mm 40, span mm 250) in galvanized steel/aluminum/copper thickness mm _____ prevarnished on the visible side series _____ with 5 microns of primer and 20 microns of paint _____ colour _____
 Internal support: micro-ridged in galvanized steel/aluminium thickness mm _____ prevarnished on the visible side series _____ with 5 microns of primer and 20 microns of paint _____ colour _____
 Insulation: made of rigid plastic with a high level of insulating power made from polyurethane resins, total density kg/m³ 40 ±10%
 Coeff. of thermal transmission: K = _____ W/m² K = _____ kcal/m² h °C
 Fixing: type of fixing _____ ; screw type and shank _____ ; qty _____