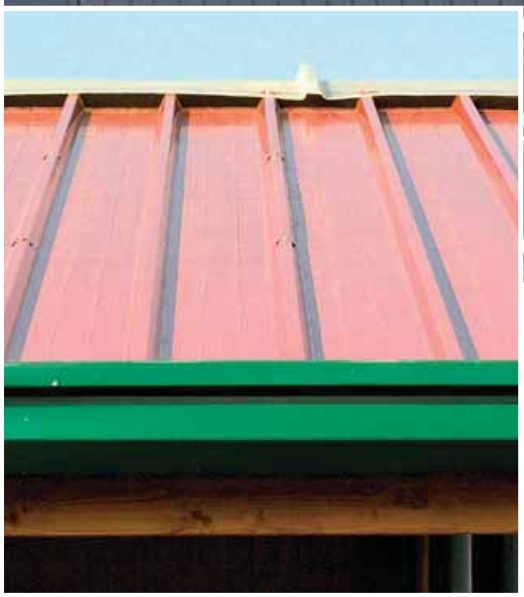
Isofire Roof

Manufactured in: Italy

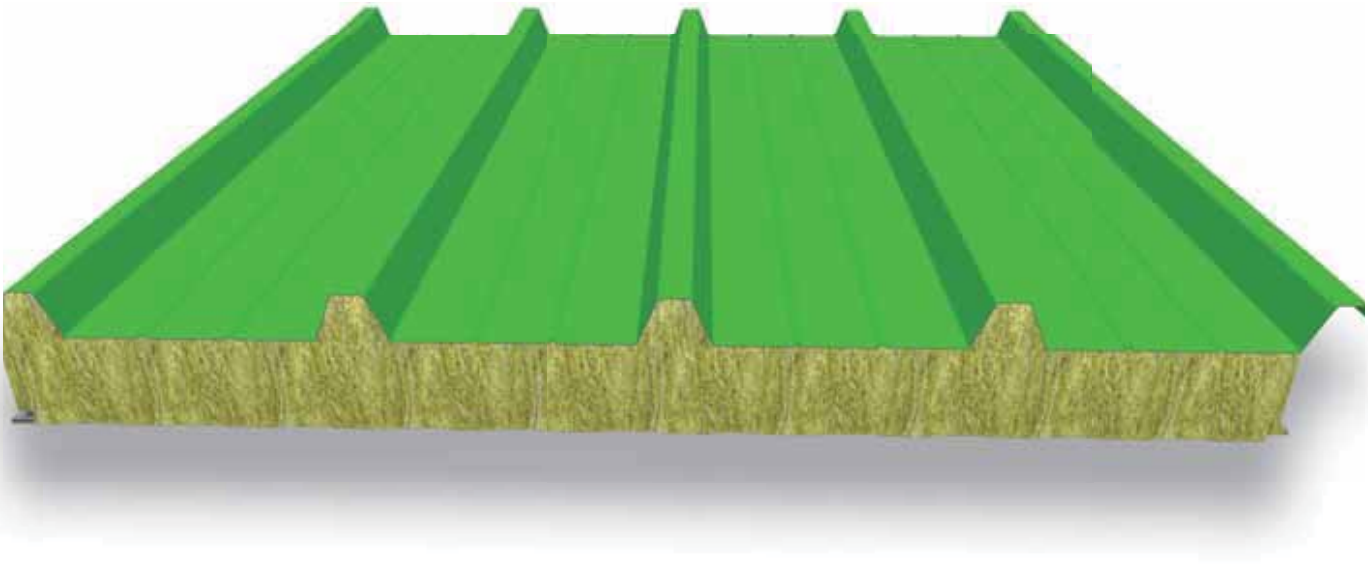
Roof of a management centre in Milano



Detail of the roof

→ Legend pag. 18

Panel designed for pitched roofs. Thanks to its core of mineral fibre, it ensures both the incombustibility of the product and an excellent thermal insulation.
The panel is designed to meet the growing performance requirements of fire resistance, while maintaining a high mechanical resistance.

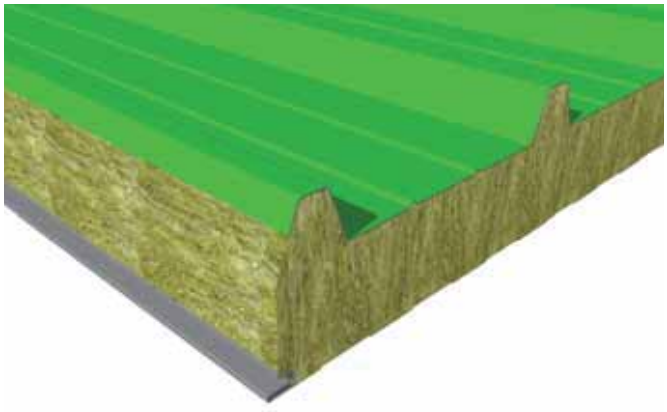


APPLICATION

The Isofire Roof panel is used for roofs that require high fire resistance and sound insulation performances.

CHARACTERISTICS

Isofire Roof is a self-supporting double skin panel, insulated with mineral wool fibre made with an exclusive insulation layer composed of mineral wool strips, placed in a longitudinal way, with the fibres being set at 90 degrees to the plane of the two faces, and the ribs of the external sheets are filled in with shaped mineral wool strips. In case of fire, it also contains the heat propagation thanks to the thickness of the mineral wool; the 5 ribs maximize the static resistance and the various thicknesses ensure a flexible use. The fixing system is a penetrating type with the possibility to use exposed caps, the number and the place of the fixing elements should guarantee the stresses resistance. On this panel, the LB1 system, which is specially designed for fixing photovoltaic mono and polycrystalline modules, can be used.

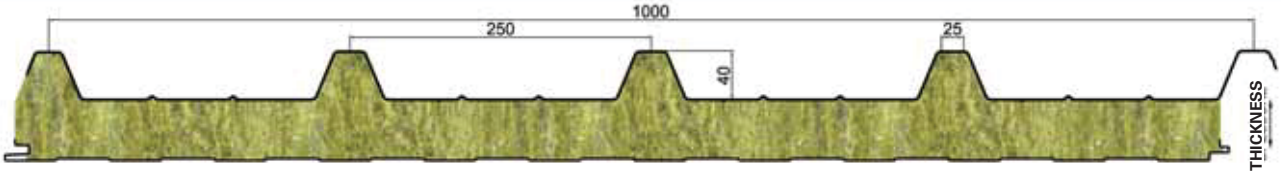


ADVANTAGES

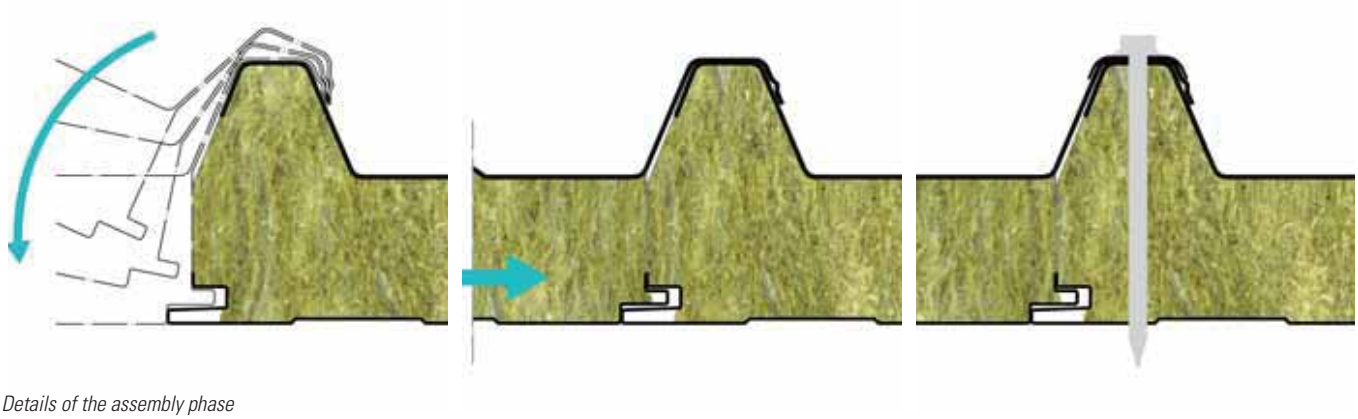
- **High thermal insulation**
- **High fire resistance**
- **High sound insulation**

INSTRUCTIONS OF USE

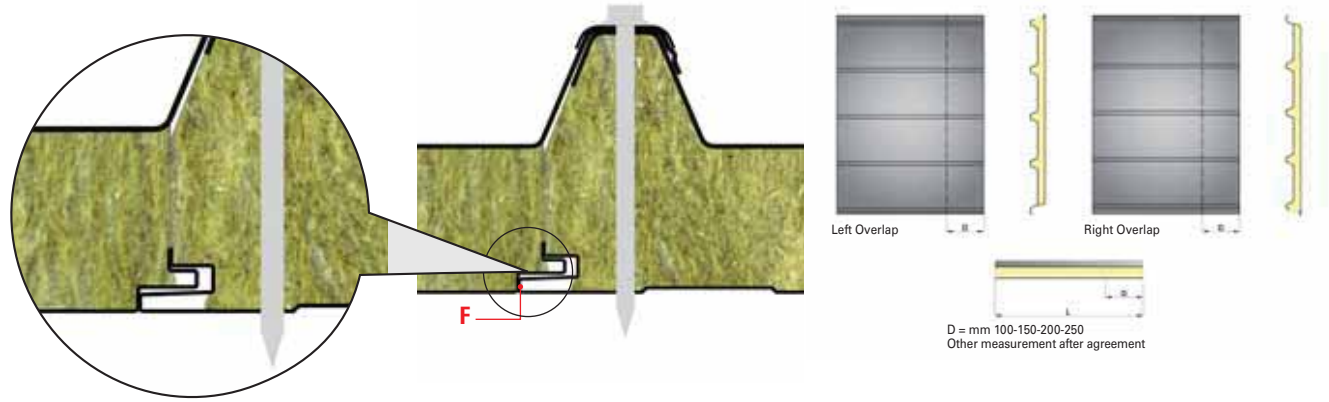
For the use of the panels and the related limits, please consult the technical data sheet available on www.isopan.it under the section "technical data sheet" and the "recommendations for the assembly of ribbed sheets and metal faced insulating panels" defined by AIPPEG Association of Italian Producers of Panels and Ribbed Ements.



Panel transversal section

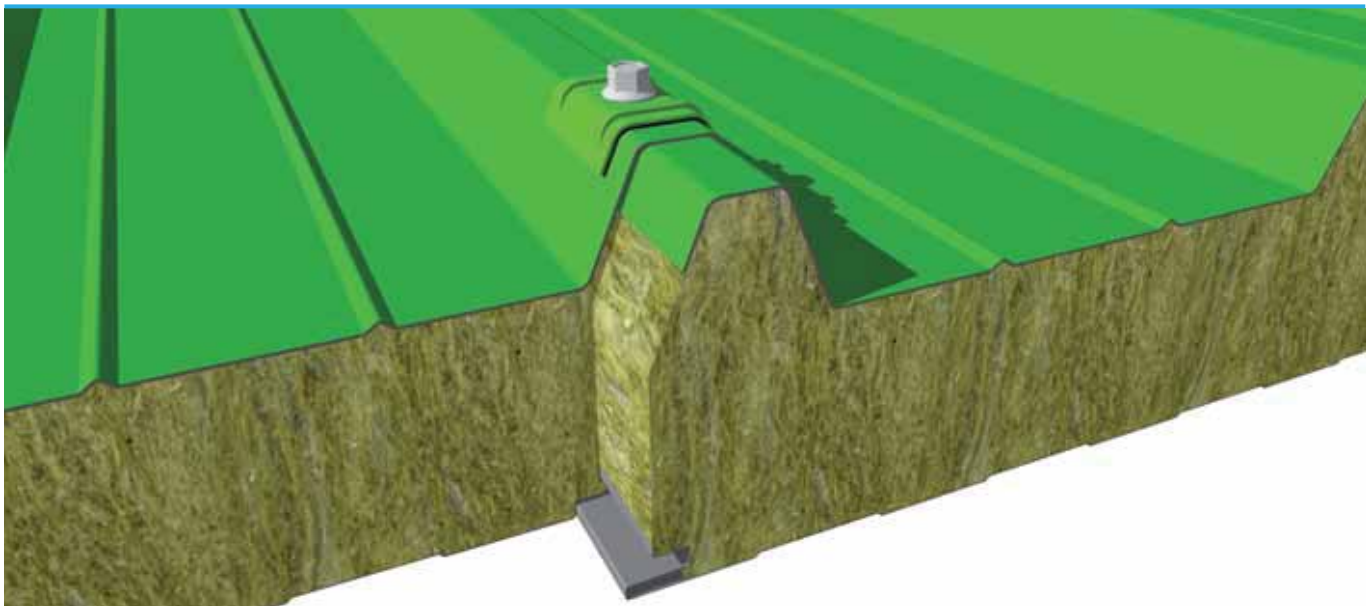


Details of the assembly phase



Details of the fixing system and the coupling tolerance

Details of the overlapping system



Isofire Roof

OVERLOAD SPANS

UNIFORMLY DISTRIBUTED LOAD	Steel sheet 0.5 mm – support 120 mm						Steel sheet 0.6 mm – support 120 mm					
	PANEL NOMINAL THICKNESS mm						PANEL NOMINAL THICKNESS mm					
	50	60	80	100	120	150	50	60	80	100	120	150
kg/m²	MAX SPANS cm						MAX SPANS cm					
80	325	355	415	470	515	550	345	370	425	490	535	595
100	300	325	370	425	480	525	310	335	390	445	495	570
120	270	300	345	390	435	505	290	310	355	405	450	515
140	255	270	315	360	405	470	270	290	325	370	415	490
160	245	265	300	335	380	435	255	270	310	355	390	450
180	225	245	280	315	355	405	245	255	290	325	360	425
200	210	225	270	300	335	390	225	245	280	310	345	400
220	195	215	255	285	315	370	210	235	265	300	335	380
250	175	195	230	270	295	345	190	210	245	280	310	355

Calculation for static sizing according to the Annex E of the UNI EN 14509 standard.
Deflection limit 1/200 ℓ

On client's request, Isopan can provide the following certificates related to the reaction to fire:

REACTION TO FIRE

iSOFIRE ROOF panels' reaction to fire has been tested according to EN 13501-1 and are classified as: A2-S1-D0.

FIRE RESISTANCE

ISOFIRE ROOF panels obtained the following results:
REI 30 for 50 mm thick panels (according to the EN 13501-2 standard)
REI 60 for 80 mm thick panels (according to the EN 13501-2 standard)
REI 120 for 100 mm thick panels (according to the EN 13501-2 standard)

PANELS WEIGHT

SHEET mm		PANEL NOMINAL THICKNESS mm					
		50	60	80	100	120	150
0,5	kg/m²	14,3	15,3	17,3	19,3	21,3	24,3
0,6	kg/m²	16,2	17,2	19,2	21,2	23,2	26,2

DIMENSION TOLERANCE (in accordance with EN 14509)

DEVIATION mm		
Length	L ≤ 3 m L > 3 m	± 5 mm ± 10 mm
Working length	± 2 mm	
Thickness	D ≤ 100 mm D > 100 mm	± 2 mm ± 2 %
Deviation from perpendicularity	6 mm	
Misalignment of the internal metal faces	± 3 mm	
Bottom sheet coupling	F = 0 + 3 mm	

L means the working length, D means the panels thickness and F means the sheets coupling.

THERMAL INSULATION

In accordance with the new standard EN 14509 Annex 10

U	PANEL NOMINAL THICKNESS mm					
	50	60	80	100	120	150
W/m² K	0,78	0,66	0,50	0,41	0,34	0,28
kcal/m² h °C	0,67	0,57	0,43	0,35	0,29	0,24

According to the calculation method EN ISO 69646

K	PANEL NOMINAL THICKNESS mm					
	50	60	80	100	120	150
W/m² K	0,72	0,61	0,44	0,36	0,30	0,25
kcal/m² h °C	0,64	0,52	0,38	0,32	0,26	0,22

AVAILABLE COLOURS (the colour should be chosen according to the final-use, the installation area and the standard thicknesses in stock)

bianco grigio

bianco G9010

grigio antracite G7016

blu genziana G5010

blu grigiastro G5008

silver G9006

verde muschio G6005

testa di moro

rosso ossido G3009

rosso antico