ISOFROZEN / ISOFRIGO
TECHNICAL DATASHEET

General Description

Self-supporting metal panel insulated with expanded polyurethane, offering great versatility and easy installation. The high thermal insulation performance and the quality of the joint system make it especially suitable for environments where temperature control is required.

Product Range and Manufacturing

Available useful widths: 1000–1155 mm (Italy) or approximately 1070–1225 mm (Spain, Romania). Standard useful width: 1150 mm.
ISOFRIGO / ISOFRIGO G.I. are produced exclusively in Italy (the injected joint version – G.I.), while ISOFROZEN and ISOFROZEN HT are produced in Italy, Spain, and Romania.

Panel thicknesses available:

- ISOFRIGO: 80, 100, 120, 150, 180, 200 mm
- ISOFROZEN: 100, 120, 150, 180, 200 mm
- ISOFROZEN HT: 120, 150, 200 mm

Panel Weight – Steel Sheets

Steel Thickness	80	100	120	150	180	200	Unit
0.5 / 0.5	11.4	12.2	13	14.2	15.4	16.2	kg/m²
0.6 / 0.6	13.1	13.9	14.7	15.9	17.1	17.9	kg/m²

Thermal Conductivity (λ)

Panel Thickness (mm)	80	100	120	150	180	200	Unit
K (λ)	0.26	0.21	0.18	0.14	0.12	0.11	W/m²·K
U (λ)	0.27	0.22	0.18	0.15	0.12	0.11	W/m²·K

Uniform Loads and Maximum Span (according to EN 14509 Annex E)

Static design calculated in compliance with EN 14509, Annex E. Deflection limit: L/200. Values in the tables do not account for thermal load effects.

Steel sheet thickness 0.5 / 0.5 mm – 120 mm support spacing.
Typical maximum spans (cm) under uniform loads (kg/m²):
50–200 kg/m² with spans ranging approximately from 270 to 960 cm, depending on panel thickness (80–200 mm).

Steel sheet thickness 0.6 / 0.6 mm – 120 mm support spacing.
Typical maximum spans (cm) under uniform loads (kg/m²):
50–200 kg/m² with spans ranging approximately from 250 to 980 cm, depending on panel thickness (80–200 mm).

Thermal Insulation

Determined according to EN 14509 A.10 and EN ISO 6946. Thermal transmittance values (U) range from 0.27 to 0.11 W/m²·K, ensuring excellent insulation performance.

Dimensional Tolerances (EN 14509)

- Length ≤ 3 m: ±5 mm
- Length > 3 m: ±10 mm
- Useful Width: ±2 mm
- Thickness ≤ 100 mm: ±2 mm
- Thickness > 100 mm: ±2%
- Perpendicularity deviation: 6 mm
- Internal face misalignment: ±3 mm
- Sheet coupling offset: 0 to +3 mm

Joint Systems and Airtightness Solutions

1. Dry Joint (Standard): Panel equipped with a standard PVC gasket for quick installation.
2. Joint with Expanding Tape: Dual thermo-expanding tapes improve airtightness between interior and exterior surfaces.
3. Joint with Thixotropic Sealant: Provides excellent air-tightness; the sealant's thixotropic behavior ensures high sealing performance.
4. Injected Joint (ISOFRIGO G.I.): The injected PVC joint and polyurethane foam guarantee the highest level of airtightness, eliminating thermal bridges.

Thermal dispersion at the joint: Uf = 0.119 W/m²·K
Available useful width: approximately 1070–1225 mm.
All panels comply with EN 14509 requirements for self-supporting double skin metal-faced insulating panels. Manufactured in Italy, Spain, Germany, and Romania.

Source: Isopan Technical Documentation – ISOFROZEN / ISOFRIGO Datasheet.