SOPRA-ISO V ALU AND SOPRA-ISO V PLUS

WALLS

INSULATION
WATERPROOFING

POLYISOCYANURATE INSULATION BOARDS

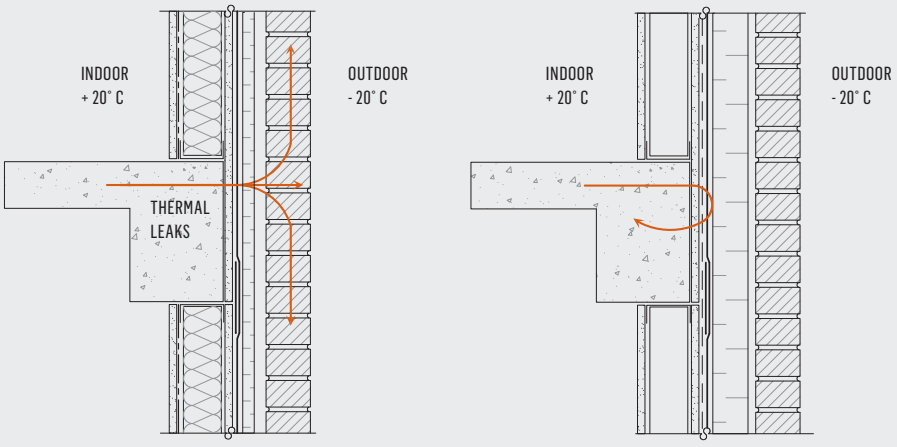
SOPREMA®

SOPRA-ISO V ALU AND SOPRA-ISO V PLUS

POLYISOCYANURATE INSULATION BOARDS

Insulation products limit heat exchange between the inside and outside of a building in order to make the latter more efficient. To be the most efficient, the wall must be designed to have a high thermal resistance (R-value). It has been clearly demonstrated that continuous insulation is the most effective building insulation method to achieve energy savings, because it eliminates thermal bridges through steel, wood or concrete structures.

Polyisocyanurate is the material of choice to increase the R-value of walls without adding too much thickness. SOPRA-ISO V boards, given their excellent R-value and low water absorption, offer incomparable versatility for wall insulation. Among all types of insulation, their R-value is the highest per inch; this results in thinner yet more efficient walls, and less thermal bridge effect.



CONTINUOUS SEALING: A DEFINITE ADVANTAGE

- Increase in the performance of wall assemblies and overall buildings through the elimination of thermal bridges.
- Money and energy savings which greatly increase the building's energy efficiency.
- Reduction of air infiltrations and leaks by minimizing air movement when the joints are properly sealed.
- Smaller risk of condensation and moisture infiltration.

QUALITY

BENEFITS OF POLYISOCYANURATE

POLYISOCYANURATE INSULATION BOARDS ARE KNOWN FOR THEIR VERSATILITY, BUT THEY ALSO OFFER MANY BENEFITS THAT MAKE THEM AN ADVANTAGEOUS SOLUTION WHEN IT COMES TO DESIGNING EFFICIENT ASSEMBLIES.

Thermal efficiency

With the highest R-value per inch in the industry, based on LTTR (long term thermal resistance), it is the most effective thermal insulation product on the market.

Durability

Thanks to its rigidity, the product will not collapse, then would deteriorate or lose its thermal performance during the building's service life. It has excellent dimensional stability.

Convenient size

It is lightweight, easy to transport and handle, and has a constant thickness.

Fire resistance

Polyisocyanurate meets the criteria of ASTM E84 (Class B <75) and shows superior performance in fire tests.

Mould barrier

The core and surfaces will not contribute to mould growth.

Compatibility

It is compatible with most solvents used in construction adhesives.

Environmentally friendly

It is a product without CFCs and HCFCs.

Double function

When properly installed, it can act as two products in one: insulation and air/vapour barrier.

LEED credits

Polyisocyanurate panels can help in obtaining numerous LEED credits.

SOPRA-ISO V PLUS

SOPRA-ISO V PLUS is a closed-cell polyisocyanurate foam insulation board laminated with a non-reflective glass-mat facer on both sides.

Panels are 1.2 m (4 ft) by 2.44 m (8 ft) in size*, and available in many thicknesses ranging from 13 to 102 mm (0.5 to 4.0 inches).

R-Value and Thermal resistance		
PANEL THICKNESS	RSI	R-VALUE
13.0 mm (0.5 in)	0.53	3.0
19.0 mm (0.75 in)	0.79	4.5
25.4 mm (1.0 in)	1.06	6.0
38.1 mm (1.5 in)	1.58	9.0
50.8 mm (2.0 in)	2.13	12.1
63.5 mm (2.5 in)	2.69	15.3
76.2 mm (3.0 in)	3.26	18.5
89.0 mm (3.0 in)	3.82	21.7
102.0 mm (4.0 in)	4.40	25.0

(Nominal value)

SOPRA-ISO V ALU

SOPRA-ISO V ALU is a closed-cell polyisocyanurate foam insulation board laminated with a radiant barrier quality reflective foil facer on the back side and a non-reflective aluminum facer on the top surface.

Panels are 1.2 m (4 ft) by 2.44 m (8 ft) in size*, and available in many thicknesses ranging from 13 to 102 mm (0.5 to 4.0 inches).

R-Value and Thermal resistance		
PANEL THICKNESS	RSI	R-VALUE
13.0 mm (0.5 in)	0.58	3.3
19.0 mm (0.75 in)	0.86	4.9
25.4 mm (1.0 in)	1.14	6.5
38.1 mm (1.5 in)	1.73	9.8
50.8 mm (2.0 in)	2.31	13.1
63.5 mm (2.5 in)	2.89	16.4
76.2 mm (3.0 in)	3.49	19.8
89.0 mm (3.0 in)	4.10	23.3
102.0 mm (4.0 in)	4.72	26.8

(Nominal value)

SOPRA-ISO V PLUS AND SOPRA-ISO V ALU INSULATION BOARDS ARE DESIGNED FOR ALL TYPES OF BUILDINGS, WHETHER COMMERCIAL, INSTITUTIONAL OR RESIDENTIAL.

* Other thicknesses and dimensions available upon request.

DIFFERENT SURFACES, DIFFERENT BENEFITS

WHETHER THE SURFACE IS ALUMINUM OR FIBREGLASS, BOTH OPTIONS ARE HIGHLY EFFICIENT IN PROTECTING THE WALLS OF THE BUILDING DURING CONSTRUCTION. HOWEVER, THERE ARE SOME PARTICULARITIES:

FIBREGLASS (SOPRA-ISO V PLUS):

- Superior permeability for products with a fibreglass surface.

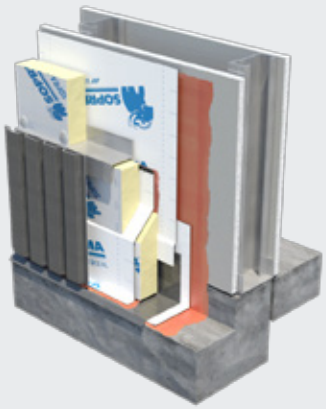
ALUMINUM (SOPRA-ISO V ALU):

- R-value per inch is higher than any other surfaces. It is thinner and consequently more polyisocyanurate is used for equal thickness.
- It can acts as a reflective insulation.

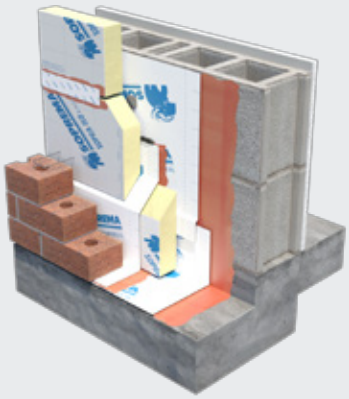
SOPREMA ASSEMBLIES

PERFECT WALL

The insulation of a perfect wall must be continuous. The entire building structure is located on the warm side of the wall, which greatly reduces thermal bridges. This type of wall is the most effective and energy efficient, and it brings maximum comfort to the building's occupants.



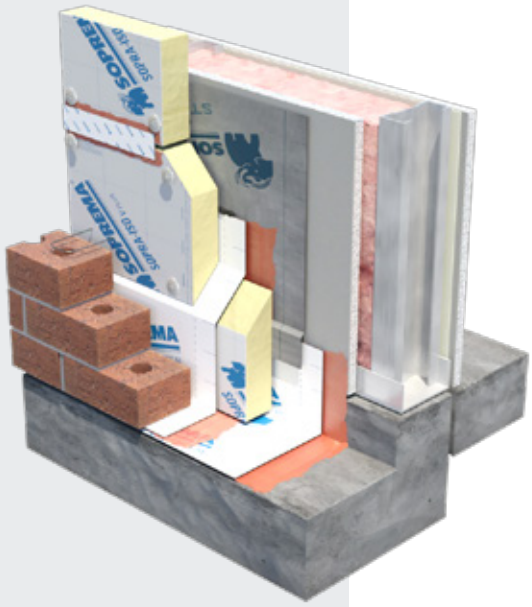
Metal cladding can be installed with SOPRA-ISO V boards using Z bars or anchoring systems with thermal breakage.

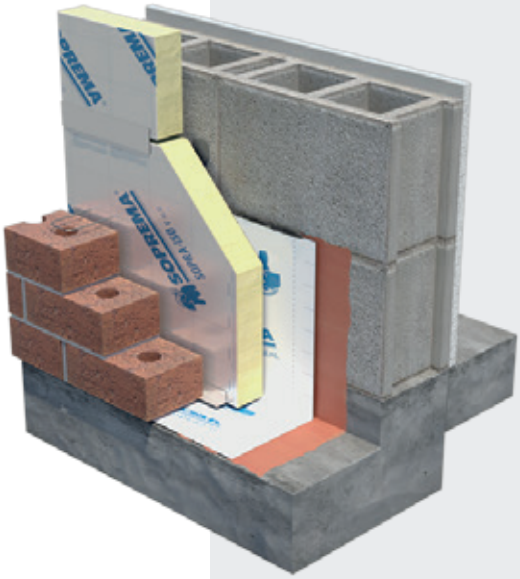


Masonry cladding can be used with SOPRA-ISO V boards. The insulation board is mechanically attached or installed with adhesive and supported by brick ties.

HYBRID WALL

In hybrid walls, the insulating materials are added in the void between the studs, thereby moving the dew point inwards. The addition of SOPRA-ISO V continuous rigid insulation eliminates thermal bridges through the structure, giving walls a higher R-value.

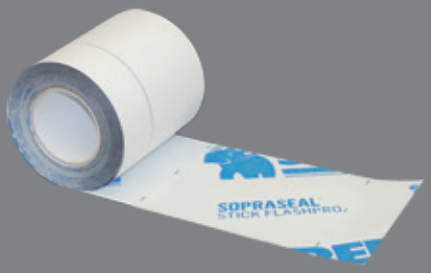




WEATHER BARRIER SYSTEM

In this type of wall, the air barrier function is provided by the SOPRA-ISO V ALU continuous insulation panel, thereby reducing heat loss and air infiltration through the building envelope. This type of assembly is easy to install and reduces installation steps, as no other air barrier is needed. Joints and anchors must be sealed with joint strip or overlap memebrane to prevent air and water infiltration.

COMPLEMENTARY PRODUCTS

FASTENER		**INSULATION BOARDS FASTENERS**
WATERPROOFING TAPE		**AYR-FOIL ALUMINUM TAPE** AYR-FOIL aluminum tape is a self-adhesive aluminized film with a silicone release film. Only used with SOPRA-ISO V ALU for temperatures over 10 °C.
		**SOPRASEAL STICK FLASHPRO** Self-adhesive air/vapour barrier membrane composed of a polymer-based adhesive and a tri-laminated polyethylene film facer.
		SOPRASEAL STICK 600 TC Self-adhesive air/vapour barrier membrane composed of a tri-layer laminated polypropylene facer.
ADHESIVE		**SOPRASEAL LM 200T** Single componenent liquid air/vapour barrier made from water and synthetic rubbers used as an insulation adhesive..

INNOVATION SINCE 1908

SOPREMA has developed around the idea that the quality, durability and reliability of materials must match builders' ambitions and expectations. For more than 100 years, SOPREMA has been using its expertise to develop a variety of high-end products that meet or exceed all the requirements of the construction field.

ROOFS WALLS FOUNDATIONS PARKING DECKS BRIDGES ADDITIONAL EXPERTISE

WATERPROOFING

INSULATION

VEGETATIVE SOLUTIONS

SOUNDPROOFING

ACCESSORY PRODUCTS

SOPREMA is an international manufacturer specializing in the production of waterproofing and insulation products, as well as vegetative and soundproofing solutions, for the building and civil engineering sectors.

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