SOPRA-ISO V INSTALLATION GUIDE
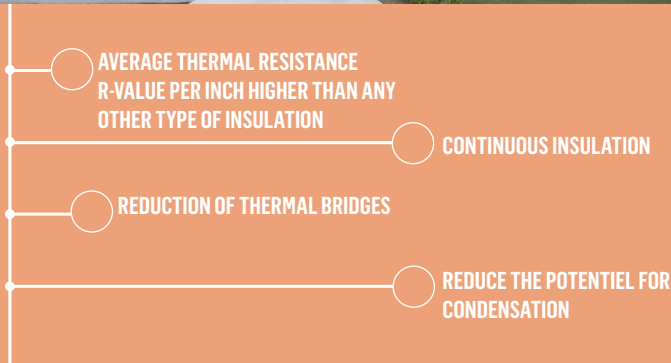
INTRODUCTION, PRODUCTS, APPLICATION, RESTRICTIONS, INSPECTION AND PREPARATION, INSTALLATION, STORAGE AND HANDLING

SOPREMA®

- AVERAGE THERMAL RESISTANCE R-VALUE PER INCH HIGHER THAN ANY OTHER TYPE OF INSULATION
- CONTINUOUS INSULATION
- REDUCTION OF THERMAL BRIDGES
- REDUCE THE POTENTIEL FOR CONDENSATION

SOPRA-ISO V

INTRODUCTION

Insulation boards enable reduction of heat and cold transfers between a building's interior and exterior. To perform properly, walls must be designed such that they offer high thermal resistance (R-value), and insulation must be continuous. It has been clearly demonstrated that continuous insulation is the most efficient method of building insulation for achieving energy savings. It eliminates thermal bridging through steel, wood and concrete structures. Polyisocyanurate is the material of choice for increasing the R-value of walls with boards of minimal thickness.

SOPRA-ISO V boards feature an excellent R-value and low water absorption, delivering unparalleled versatility for wall insulation applications. Their R-value per inch of continuous insulation is one of the highest among of all types of rigid insulation: the result is thinner walls and reduction of thermal bridges.
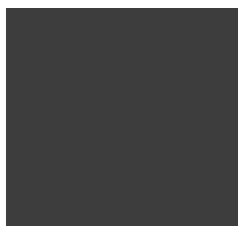
(CREDIT PHOTO: STÉPHANE GROLEAU)

PRODUCTS

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

Boards are available in 1.2 m (4 ft.) x 2.4 m (8 ft.) and in multiple thicknesses ranging from 13 to 102 mm (0.5 to 4.0 in.).

R-value and RSI SOPRA-ISO V PLUS		
Board thickness	RSI	R-value
13.0 mm (0.5 in.)	0.5	3.0
19.0 mm (0.75 in.)	0.8	4.5
25.4 mm (1.0 in.)	1.1	6.0
38.1 mm (1.5 in.)	1.6	9.0
50.8 mm (2.0 in.)	2.1	12.1
63.5 mm (2.5 in.)	2.7	15.3
76.2 mm (3.0 in.)	3.3	18.5
89.0 mm (3.5 in.)	3.8	21.7
102,0 mm (4,0 po)	4,4	25,0
(All values are nominal)		

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 aluminium facer on the top surface.

Boards are available in 1.2 m (4 ft.) x 2.4 m (8 ft.) and in multiple thicknesses ranging from 13 to 102 mm (0.5 to 4.0 in.).

R-value and RSI SOPRA-ISO V ALU		
Board thickness	RSI	R-value
13.0 mm (0.5 in.)	0.6	3.3
19.0 mm (0.75 in.)	0.9	4.9
25.4 mm (1.0 in.)	1.1	6.5
38.1 mm (1.5 in.)	1.7	9.8
50.8 mm (2.0 in.)	2.3	13.1
63.5 mm (2.5 in.)	2.9	16.4
76.2 mm (3.0 in.)	3.5	19.8
89.0 mm (3.5 in.)	4.1	23.3
102,0 mm (4,0 po)	4,7	26,8
All values are nominal)		

APPLICATIONS

SOPRA-ISO V PLUS and **SOPRA-ISO V ALU** insulation boards are designed for all types of construction—commercial, institutional and residential. They can be used on most surfaces using fasteners or adhesive, including concrete, wood, wood studs, steel studs, exterior grade gypsum, and air barrier / vapour barrier membranes.

ATTACHING BOARDS

■ Wood or metal studding
Boards must be attached using fasteners at 305 mm (12 in.) on centre at board perimeter, and at 406 mm (16 in.) on centre onto the vertical studs.

Boards are lightweight and easily installed on wood or metal studs using fasteners such as 50 mm (2 in.) or larger washers with the fasteners, Wind Devil 2 by Wind-Lock, Insulfast System by Ramset or equivalent.

■ Concrete or cinderblock walls
With masonry :
Boards must be installed using Sopraseal LM 200 T adhesive and supported with masonry anchors.

With exterior cladding:
Boards must be attached using fasteners spaced at 305 mm (12 in.) o.c. at board perimeter, and at 406 mm (16 in.) o.c. elsewhere.

For concrete walls, use Insulfast System by Ramset, X-IE by Hilti or equivalent fasteners. Use 50 mm (2 in.) or larger washers with the fasteners.

Mechanical fastening (minimum penetration by substrate type)
- Wood stud screws : 19 mm (3/4 in.)
- Metal stud screws: 6.5 mm (1/4 in.)
- Concrete screws: 19 mm to 32 mm (3/4 to 1 1/4 in.)

305 mm (12")

SOPRA-ISO V PLUS

406 mm (16")
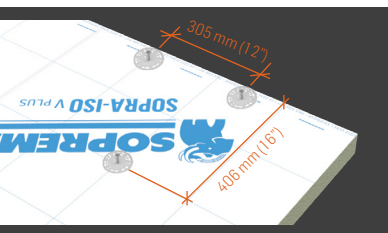
Sopraseal LM 200 T

Fasteners on concrete walls

Fasteners on wood or metal studs

RESTRICTIONS

- SOPRA-ISO V insulation boards cannot be used as structural elements.

- SOPRA-ISO V insulation boards must not be exposed for more than 60 days.

- SOPRA-ISO V insulation boards cannot be used as a nailing base, regardless of the type of cladding.

- SOPRA-ISO V insulation boards are designed solely for above-grade wall applications.

INSPECTION AND PREPARATION PRIOR TO INSTALLATION

- Before installation, inspect Sopra-Iso V insulation boards to ensure none has been damaged during shipping or handling. Damaged boards must not be installed.

- Discard any damaged boards.

- Keep Sopra-Iso V boards away from any flame at all times.

- If installing Sopra-Iso V boards in windy conditions, take necessary measures to ensure boards are not damaged.

- If installing Sopra-Iso V boards directly on wood or metal studding, studs must be spaced no wider than 610 mm (24 in.) o.c.

- All boards must be dry before installation; do not install any board that is wet or has been damaged by moisture.

INSTALLATION

INSTALLATION ON SUPPORT PANELS

1 Before installing **SOPRA-ISO V ALU** or **SOPRA-ISO V PLUS** insulation boards, ensure underlying air barrier membrane has been properly installed per manufacturer recommendations and is undamaged.

2 Install **SOPRA-ISO V ALU** or **SOPRA-ISO V PLUS** boards horizontally or vertically, and with printed side facing outward. Use boards at full length to minimize number of joints required.

3 Install first row of **SOPRA-ISO V ALU** or **SOPRA-ISO V PLUS** boards at bottom of wall, at same height as support panel.

4 Stagger **SOPRA-ISO V ALU** or **SOPRA-ISO V PLUS** board joints compared with those of support panels. Butt boards against one another perfectly without applying excessive pressure.

5 Adjust all boards so as to leave no space between board joints or around penetrations.

6 Cut boards as needed at penetrations and openings, and to accommodate exterior cladding fasteners. Seal around penetrations using a sealant product.

7 Attach boards using fasteners at intervals of 305 mm (12 in.) o.c. at board perimeter, and at 406 mm (16 in.) o.c. onto the vertical studs. Adjust fastener length to insulation thickness.

8 Ensure insulating board edges overlap at inside and outside wall corners. Fasten each board to nearest stud.

9 At tops of walls, install last row of **SOPRA-ISO V ALU** or **SOPRA-ISO V PLUS** insulation boards flush with tops of support panels.

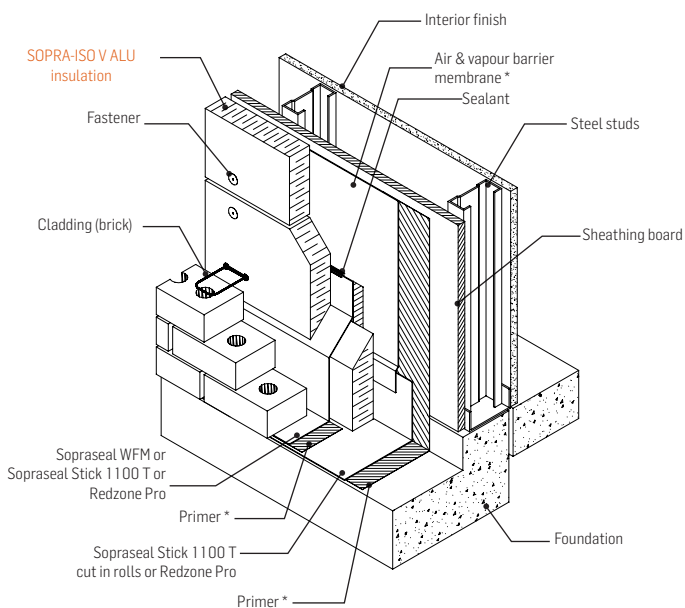**10** If necessary, seal all **SOPRA-ISO V ALU** or **SOPRA-ISO V PLUS** joints and fastener points.

Membrane for tape at joints and fasteners:
SOPRA-ISO V PLUS: Use **SOPRASEAL STICK FLASHPRO** without primer or RESISTO **REDZONE 25** previously primed with **SOPRASEAL STICK PRIMER** or RESISTO **EXTERIOR PRIMER,** centered over the joints.
SOPRA-ISO V ALU: Use **SOPRASEAL STICK FLASHPRO** or RESISTO **REDZONE 25** (don't require primer before the installation of the membrane), or use the RESISTO **METALIZED ADHESIVE TAPE** when the temperature is above 10°C and use the RESISTO **ALL-WEATHER FLASHING TAPE** for the temperature in between -15°C to 10°C, centered over the joints.

DETAIL

STUD WALL FOUNDATION JUNCTION
ON SUPPORT PANELS - SOPRA-ISO V ALU
(ISOV_03) Air & vapour barrier

SOPRA-ISO V ALU insulation

Fastener

Cladding (brick)

Sopraseal WFM or Sopraseal Stick 1100 T or Redzone Pro

Primer *

Sopraseal Stick 1100 T cut in rolls or Redzone Pro

Primer *

Interior finish

Air & vapour barrier membrane *

Sealant

Steel studs

Sheathing board

Foundation

* See reference table of SOPREMA and RESISTO membranes and primers.

DETAIL

STUD WALL FOUNDATION JUNCTION
ON SUPPORT PANELS - SOPRA-ISO V PLUS
(ISOV_06) Vapour permeable air barrier

SOPRA-ISO V PLUS insulation

Fasteners

Cladding (brick)

Sopraseal WFM or
Sopraseal Stick 1100 T or
Redzone Pro

Primer *

Sopraseal Stick 1100 T
cut in rolls or Redzone Pro

Primer *

Interior finish

Vapour permeable air barrier membrane*

Sealant

Insulation

Steel studs

Vapour barrier

Primer*

Sheathing board

Foundation
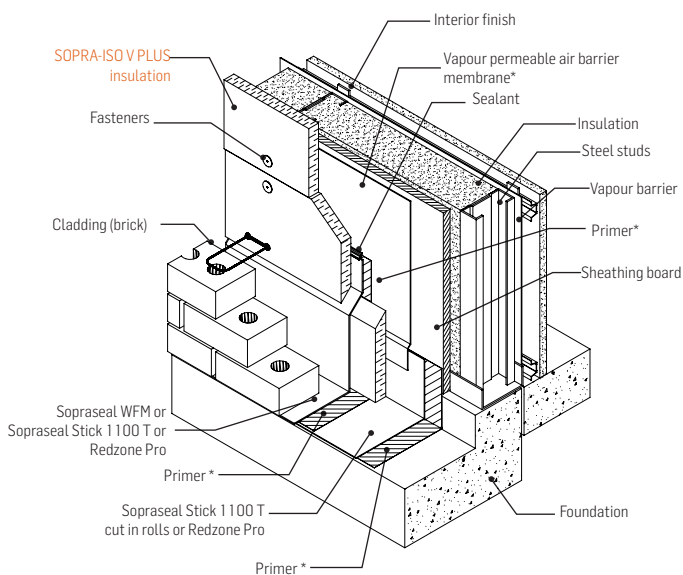
* See reference table of SOPREMA and RESISTO membranes and primers.

DETAIL

PIPE PENETRATION - SOPRA-ISO V ALU
(ISOV_04) Air & vapour barrier

Fasteners

Sealant around penetration

Pipe

100 mm (4")

100 mm (4")

-Interior finish
-Steel studs
-Sheathing board
-Primer *
-Air & vapour barrier membrane*
-SOPRA-ISO V ALU insulation
-Air space
-Cladding (brick)
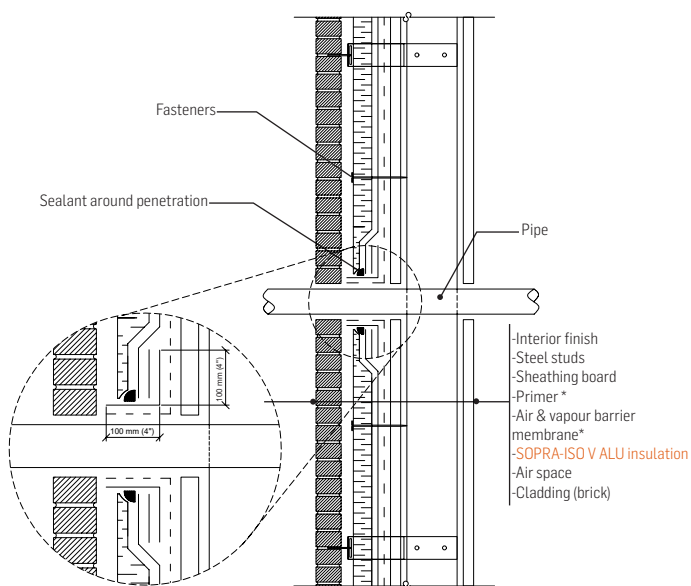
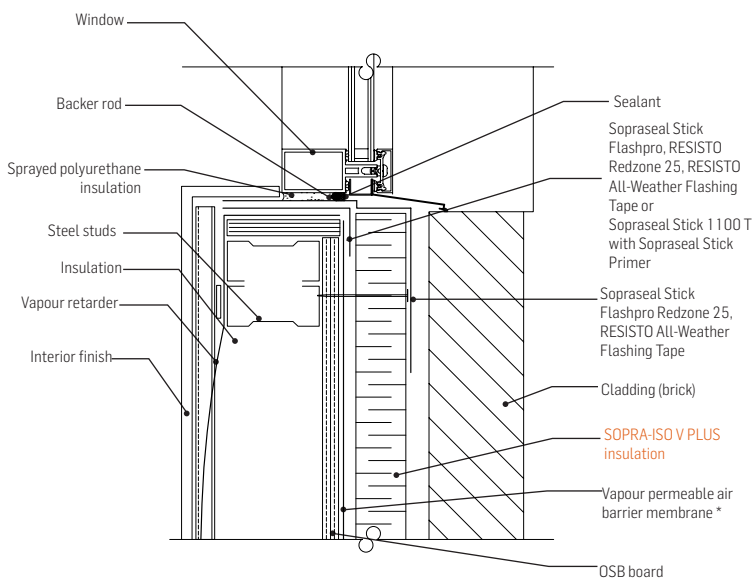* See reference table of SOPREMA and RESISTO membranes and primers.

DETAIL

SEALING OF WINDOWS - SOPRA-ISO V PLUS
(ISOV_09) Vapour permeable air barrier

Window

Backer rod

Sprayed polyurethane insulation

Steel studs

Insulation

Vapour retarder

Interior finish

Sealant

Sopraseal Stick Flashpro, RESISTO Redzone 25, RESISTO All-Weather Flashing Tape or Sopraseal Stick 1100 T with Sopraseal Stick Primer

Sopraseal Stick Flashpro Redzone 25, RESISTO All-Weather Flashing Tape

Cladding (brick)

SOPRA-ISO V PLUS insulation

Vapour permeable air barrier membrane *

OSB board

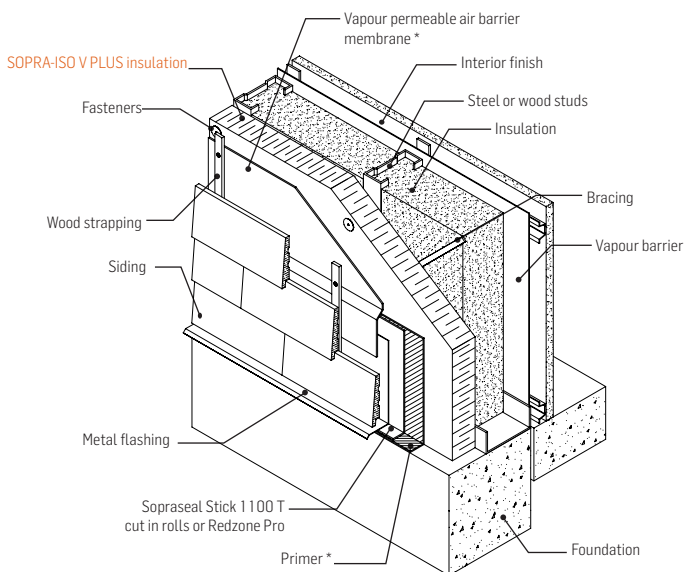* See reference table of SOPREMA and RESISTO membranes and primers.

INSTALLATION

INSTALLATION ON WOOD OR METAL STUDDING

1 Before installing **SOPRA-ISO V PLUS** insulation boards, ensure studs are spaced no wider than 610 mm (24 in.) o.c.

2 Install **SOPRA-ISO V PLUS** boards horizontally or vertically, and with printed side facing outward. Use boards at full length to minimize number of joints required.

3 Install first row of **SOPRA-ISO V PLUS** boards at bottom of wall, at the same height as the sole or sill plate.

4 Stagger **SOPRA-ISO V PLUS** board joints by at least 406 mm (16 in.). Butt boards against one another perfectly without applying excessive pressure.

5 Adjust all boards so as to leave no space between board joints or around penetrations.

6 Cut boards as needed at penetrations and openings, and to accommodate exterior cladding fasteners. Seal around penetrations using a sealant product.

7 Attach boards using fasteners aligned with the vertical studs. Adjust fastener length to insulation thickness.

8 Ensure insulation board edges overlap at inside and outside wall corners. Fasten each board to nearest stud.

DETAIL

STUD WALL FOUNDATION JUNCTION
ON WOOD OR METAL STUDDING -
SOPRA-ISO V PLUS
(ISOV_08) Vapour permeable air barrier

Vapour permeable air barrier membrane *
SOPRA-ISO V PLUS insulation
Interior finish
Fasteners
Steel or wood studs
Insulation
Wood strapping
Bracing
Siding
Vapour barrier
Metal flashing
Sopraseal Stick 1100 T cut in rolls or Redzone Pro
Primer *
Foundation

* See reference table of SOPREMA and RESISTO membranes and primers.
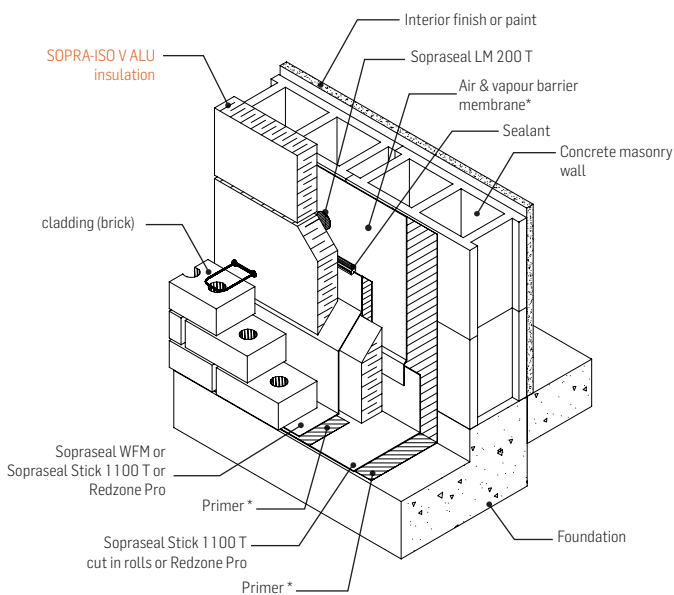
INSTALLATION

INSTALLATION ON CONCRETE WALL

1 Before installing **SOPRA-ISO V ALU** insulation boards, ensure underlying air barrier membrane has been properly installed per manufacturer recommendations and is undamaged.

2 Install **SOPRA-ISO V ALU** boards horizontally or vertically, and with printed side facing outward. Use boards at full length to minimize number of joints required.

3 Stagger **SOPRA-ISO V ALU** horizontal and vertical joints by at least 150 mm (6 in.). Butt boards against one another perfectly without applying excessive pressure.

4 Adjust all boards so as to leave no space between board joints or around penetrations.

5 Cut boards as needed at penetrations and openings, and to accommodate exterior cladding fasteners. Seal around penetrations using a sealant product.

6 Attaching boards:

<u>For masonry:</u> Attach boards using Sopraseal LM 200 T adhesive. Boards will also be supported with masonry anchors.

OR

<u>For cladding :</u> Attach boards using fasteners at intervals of 305 mm (12 in.) o.c. at board perimeter, and at 406 mm (16 in.) o.c. onto the vertical studs. Adjust fastener length to insulation thickness.

7 Ensure insulating board edges overlap at inside and outside wall corners.

8 If necessary, seal all **SOPRA-ISO V ALU** joints and fastener points. Use **SOPRASEAL STICK FLASHPRO** or RESISTO **REDZONE 25** (don't require primer before the installation of the membrane), or use the RESISTO **METALIZED ADHESIVE TAPE** when the temperature is above 10°C and use the RESISTO **ALL-WEATHER FLASHING TAPE** for the temperature in between -15°C to 10°C, centered over the joints.

DETAIL

FOUNDATION JUNCTION -
CMU WALL - SOPRA-ISO V ALU
(ISOV_02) Air & vapour barrier

SOPRA-ISO V ALU insulation

Interior finish or paint

Sopraseal LM 200 T

Air & vapour barrier membrane*

Sealant

Concrete masonry wall

cladding (brick)

Sopraseal WFM or Sopraseal Stick 1100 T or Redzone Pro

Primer *

Sopraseal Stick 1100 T cut in rolls or Redzone Pro

Primer *

Foundation

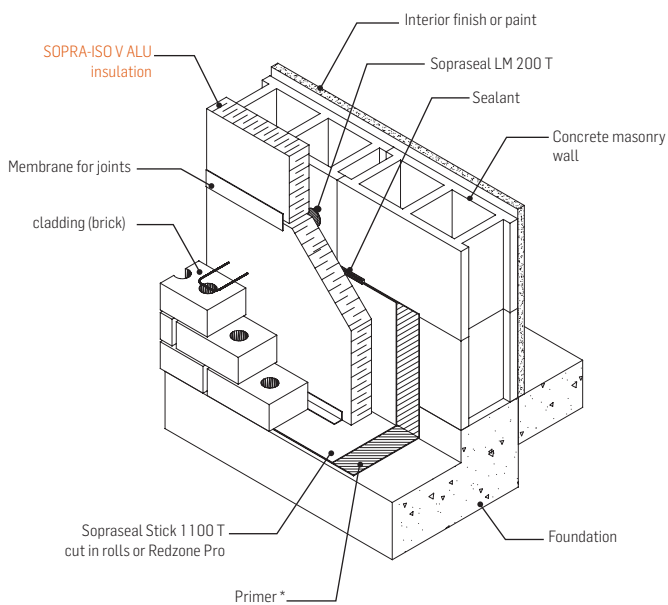* See reference table of SOPREMA and RESISTO membranes and primers.

INSTALLATION

INSTALLATION OF SOPRA-ISO V ALU ON CONCRETE WALL (AIR/ VAPOUR BARRIER)

1 Before installing **SOPRA-ISO V ALU** insulation boards, ensure surface is clean, dry, and free of debris and dust.

2 Install **SOPRA-ISO V ALU** boards horizontally or vertically, and with printed side facing outward. Use boards at full length to minimize number of joints required.

3 Stagger **SOPRA-ISO V ALU** board horizontal and vertical joints by at least 150 mm (6 in.). Butt boards against one another perfectly without applying excessive pressure.

4 Adjust all boards so as to leave no space between board joints or around penetrations.

5 Cut boards as needed at penetrations and openings, and to accommodate exterior cladding fasteners. Seal around penetrations using a sealant product.

6 Attaching boards :

For masonry: Attach boards using Sopraseal LM 200 T adhesive. Boards will also be supported with masonry anchors.

OR

For cladding : Attach boards using fasteners at intervals of 305 mm (12 in.) o.c. at board perimeter, and at 406 mm (16 in.) o.c. onto the vertical studs. Adjust fastener length to insulation thickness.

7 Ensure insulation board edges overlap at inside and outside wall corners.

8 Seal all **SOPRA-ISO V ALU** joints and fastener points. Use **SOPRASEAL STICK FLASHPRO** or RESISTO **REDZONE 25** (don't require primer before the installation of the membrane), or use the RESISTO **METALIZED ADHESIVE TAPE** when the temperature is above 10°C and use the RESISTO **ALL-WEATHER FLASHING TAPE** for the temperature in between -15°C to 10°C, centered over the joints.

DETAIL

FOUNDATION JUNCTION -
CMU WALL (AIR/ VAPOUR BARRIER) -
SOPRA-ISO V ALU
(ISOV_01) Air & vapour barrier

SOPRA-ISO V ALU insulation

Interior finish or paint

Sopraseal LM 200 T

Sealant

Concrete masonry wall

Membrane for joints

cladding (brick)

Sopraseal Stick 1100 T cut in rolls or Redzone Pro

Foundation

Primer *

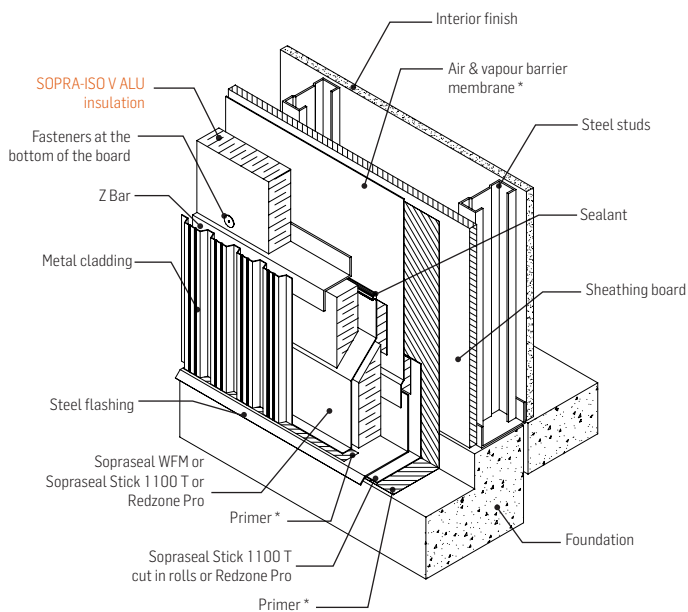* See reference table of SOPREMA and RESISTO membranes and primers.

INSTALLATION

INSTALLATION WITH Z BARS

1 Before installing **SOPRA-ISO V ALU** insulation boards, ensure underlying air barrier membrane has been properly installed per manufacturer recommendations and is undamaged.

2 Install **SOPRA-ISO V ALU** boards by sliding them along Z bars.

3 Stagger **SOPRA-ISO V ALU** vertical board joints by at least 150 mm (6 in.). Butt boards against one another perfectly without applying excessive pressure.

4 Adjust all boards so as to leave no space between board joints or around penetrations.

5 Cut boards as needed at penetrations and openings, and to accommodate exterior cladding fasteners. Seal around penetrations using a sealant product.

6 Attach boards using fasteners aligned with the vertical studs only at the bottom of the insulation board. Adjust fastener length to insulation thickness.

7 Ensure insulation board edges overlap at inside and outside wall corners. Fasten each board to nearest stud.

8 If necessary, seal all **SOPRA-ISO V ALU** joints and fastener points. Use **SOPRASEAL STICK FLASHPRO** or RESISTO **REDZONE 25** (don't require primer before the installation of the membrane), or use the RESISTO **METALIZED ADHESIVE TAPE** when the temperature is above 10°C and use the RESISTO **ALL-WEATHER FLASHING TAPE** for the temperature in between -15°C to 10°C, centered over the joints.

DETAIL

STUDS WALL FOUNDATION JUNCTION - WITH Z BARS - SOPRA-ISO V ALU
(ISOV_05) Air & vapour barrier

Interior finish

Air & vapour barrier membrane *

SOPRA-ISO V ALU insulation

Fasteners at the bottom of the board

Z Bar

Steel studs

Sealant

Metal cladding

Sheathing board

Steel flashing

Sopraseal WFM or Sopraseal Stick 1100 T or Redzone Pro

Primer *

Sopraseal Stick 1100 T cut in rolls or Redzone Pro

Primer *

Foundation

* See reference table of SOPREMA and RESISTO membranes and primers.

STORAGE AND HANDLING

SOPRA-ISO V boards are completely covered in a waterproof packaging designed to protect the boards during handling in factory and shipping only.

SOPRA-ISO V boards must be stacked and protected from inclement weather. When short-term outdoor storage is required, they must be stacked flat on pallets at least 100 mm (4 in.) above ground level, and covered with a waterproof covering. Do not allow water to pool on top of covering or beneath boards. Remove temporary **SOPREMA** packaging to prevent condensation from accumulating.

REFERENCE TABLE OF SOPREMA AND RESISTO MEMBRANES AND PRIMERS

	PRODUCTS	PRIMERS
NO- PERMEABLE AIR & VAPOUR BARRIERS	Self-adhesive membranes	
	Sopraseal Stick 1100 T Sopraseal Stick 130 & 130 S Redzone Pro	Sopraseal Stick PRIMER Elastocol Stick H$_2$O Elatocol Stick Zero RESISTO Exterior Primer RESISTO Exterior Low V.O.C. Primer RESISTO H$_2$O Primer
	Heat-welded membranes	
	Sopraseal 60 & 60 FF Sopraseal 180 HD & 180 HD FF	Elastocol 500
	Liquid applied	
	Sopraseal LM 200S Sopraseal LM 203	N/A
	Mechanically fastened	
	Sopraseal Xpress G	N/A
PERMEABLE AIR BARRIER	Self-adhesive membrane	
	Sopraseal Stick VP Redzone Stick VP	N/A
	Liquid applied	
	Sopraseal LM 200S	N/A

(CREDIT PHOTO: STÉPHANE GROLEAU)

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   COMPLEMENTARY 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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