

# Majrex®

**System Guidelines**  
For Air Barrier  
and Vapor Control  
Installation

# Introduction

SIGA Majrex with Hygrobrid® technology is a directional, moisture-variable vapor control layer for interior roof, wall, and floor structures.

With the addition of compatible SIGA air-sealing components as outlined in these Guidelines, the SIGA Majrex system will also create a continuous interior air-barrier for high-performance constructions. This document is intended to portray standard installation practices and detailing methods. For procedures not found in this guide, please consult your local SIGA representative.

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# General Rules for Installation

- Install SIGA Majrex with the blank side facing the insulation
- Overlap adjoining sheets by 4" both vertically and horizontally
- Install SIGA Majrex flat and without tension. Ensure light slack (stress relief) at inside/outside corners.
- Suitable for containment of loose-fill insulation with adequate structural blocking and proper venting (see Part 4)
- Seal only with SIGA system components
- Ensure that surfaces to be bonded are structurally sound and free of dust and contaminants
- For non-service-cavity installations, plumbing and electrical trades should be completed before installing SIGA Majrex
- All insulation (except loose-fill-type), should be installed prior to SIGA Majrex
- Repair any small damages to SIGA Majrex using Rissan 60

# Applicable SIGA System components

RECOMMENDED USAGE	Mounting Membrane to Substrate	Membrane Overlaps	Pipe /Round Penetrations	Timber / Electrical Box Penetrations	Bridge Dissimilar Substrates	Window + Door Air-Sealing	Injection Holes	Damage Repairs to Air Barrier	Wires / Conduit	SUBSTRATES	Wood	Hard Plastics	Metal	Concrete / Masonry	Rigid Insulation XPS, EPS, PU		
																<b>Rissan® 60</b>	2.4" air-sealing tape
														<b>Dock-skin®</b>		<b>Rissan® 100</b>	3.9" split-backed sealing tape
																<b>Fentrim® IS 20</b>	2.9" & 3.9" prefolded window perimeter tape
																<b>Twinet®</b>	0.78" double sided mounting tape

## Key design considerations

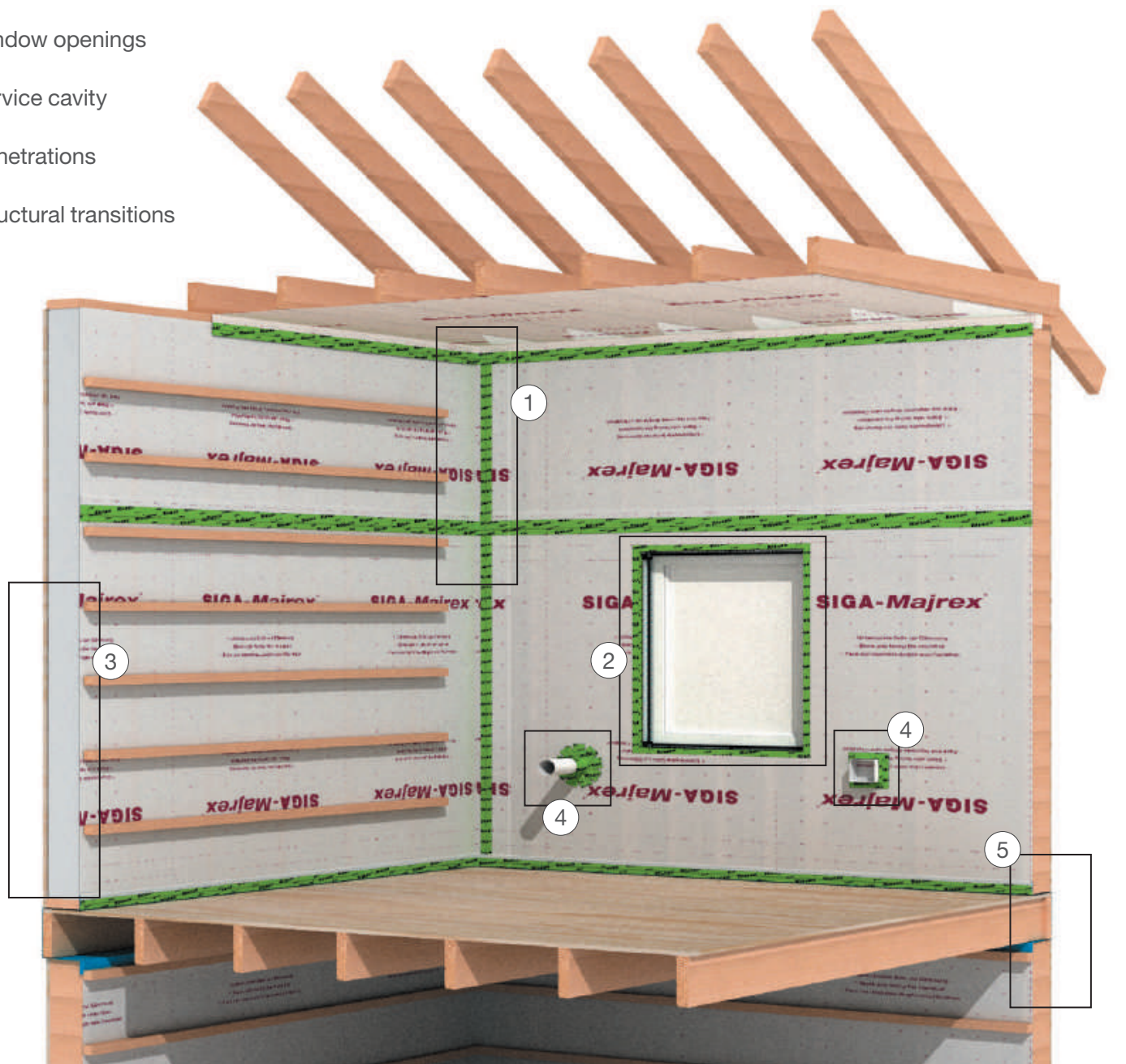
SIGA Majrex is matched to the physics present in 'heating' climate zones, where the building envelope must manage outward vapor-drive during the winter. Consult a building design professional or SIGA Application Advisor to determine the proper use for your region. Not for use in permanent high-moisture environments such as saunas or swimming pools.

Some recommendations in this document require assembly which overlaps unrelated construction

sequences. Early planning and staging of materials for these processes can save considerable time and improve the performance of the assembly.

When choosing the placement of SIGA Majrex in your high-performance wall assembly, consider implementing a service cavity between the Majrex and the interior finish. This wall design can effectively manage penetrations from interior finish, improve consistency of the cavity insulation, isolate plumbing and electrical routing, and offer additional structural support for preceding layers.

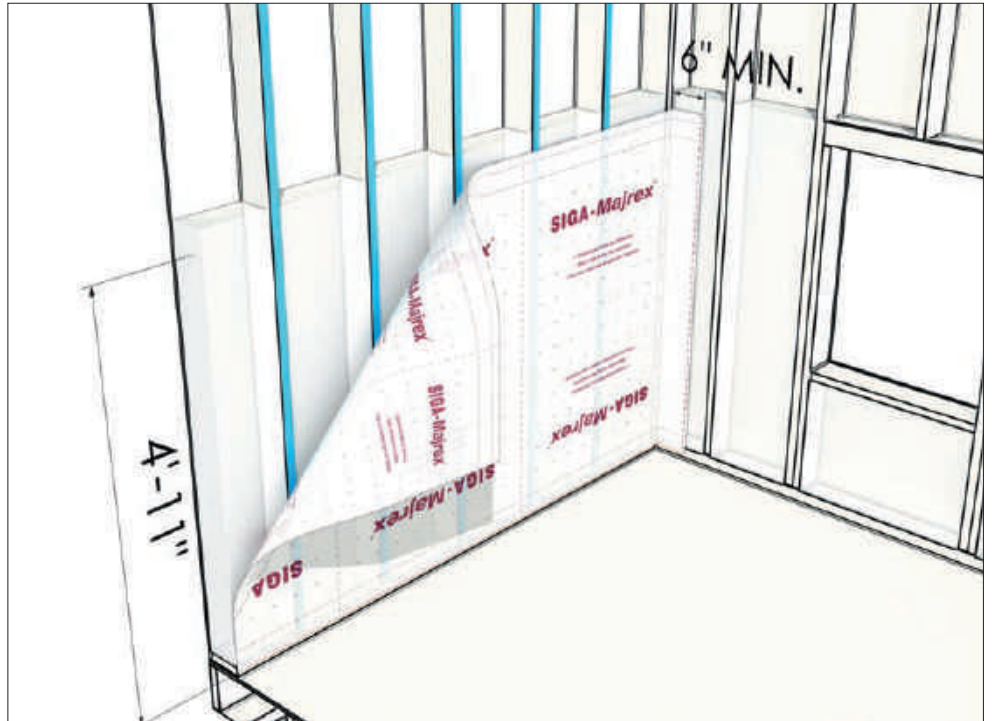
- ① planar transitions
- ② window openings
- ③ service cavity
- ④ penetrations
- ⑤ structural transitions



# Part 1: Mounting the Membrane

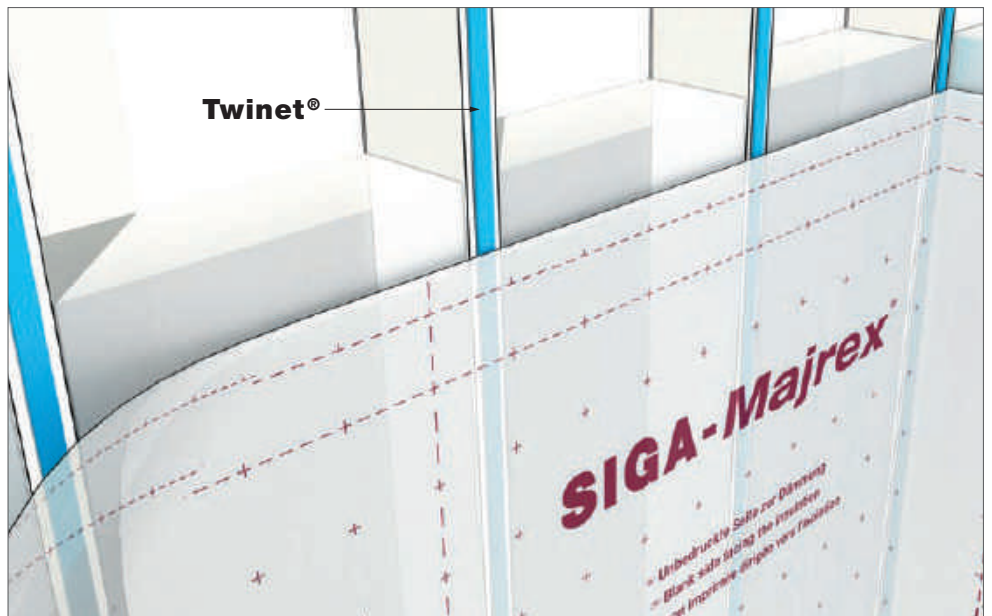
## Measuring & Layout

- Starting from any wall corner, measure length of Majrex to extend 6" past any inside or outside corner. Cut cleanly, using printed guide-marks.
- Mark a leveling line horizontally at 59" on each stud, or 59" up from the overlap guide on previous course of Majrex
- Proceed to Mounting Method A or B



## Mounting Method A – Wood or Metal framing, with Twinet mounting adhesive

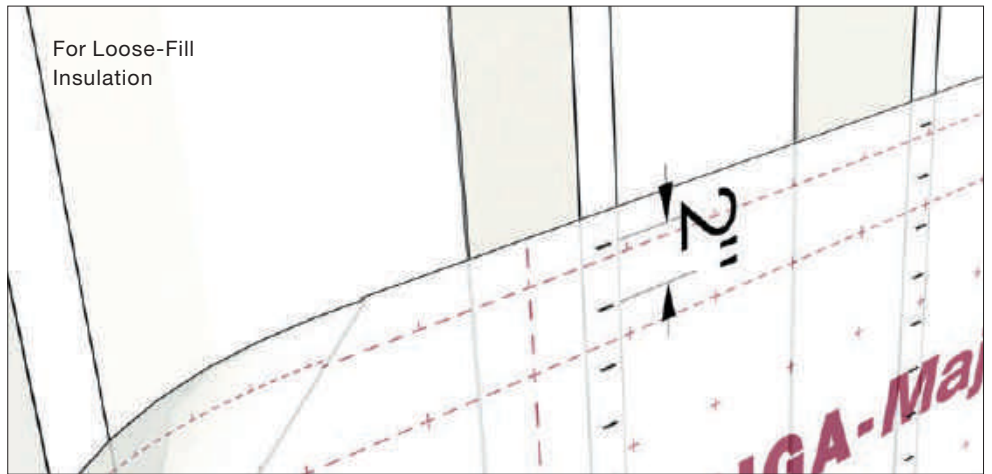
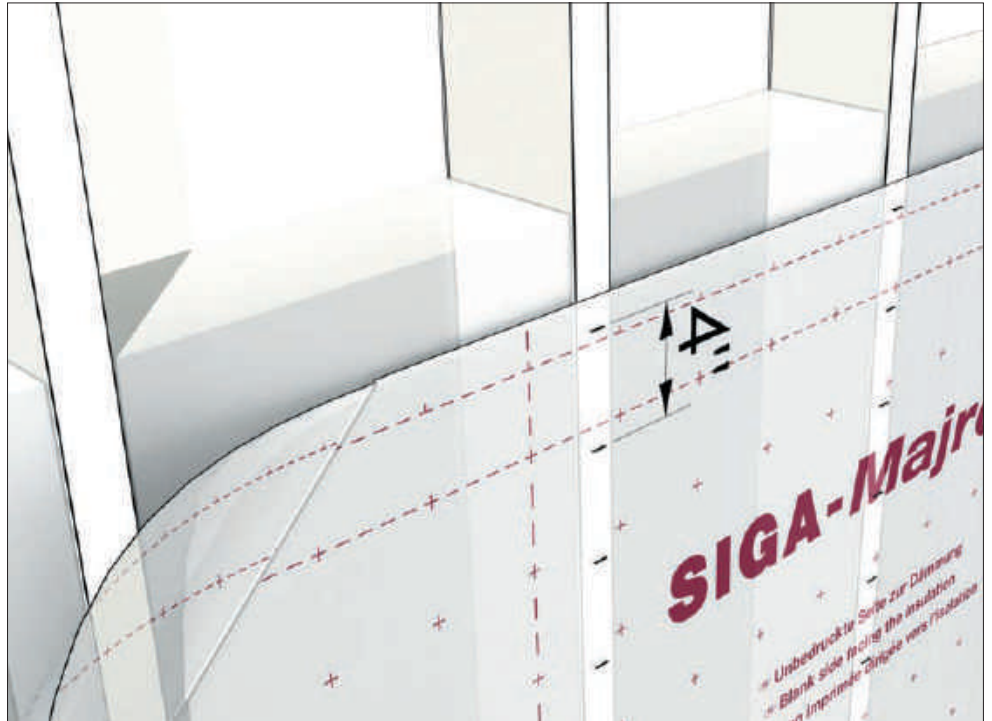
- NOTE: Twinet (blue in the drawing) is not designed for structural fastening of Majrex. Mechanically attached battens or interior sheathing must be installed after mounting with Twinet.
- Apply Twinet to each stud and remove backing strip.
- Align Majrex sheet along level marks and press onto exposed Twinet.
- Maintain plumb alignment and avoid tension when applying to the wall
- Repeat for next course. Use printed guide-marks to maintain a 4" horizontal overlap.





## Mounting Method B – Wood framing, with T50 staples

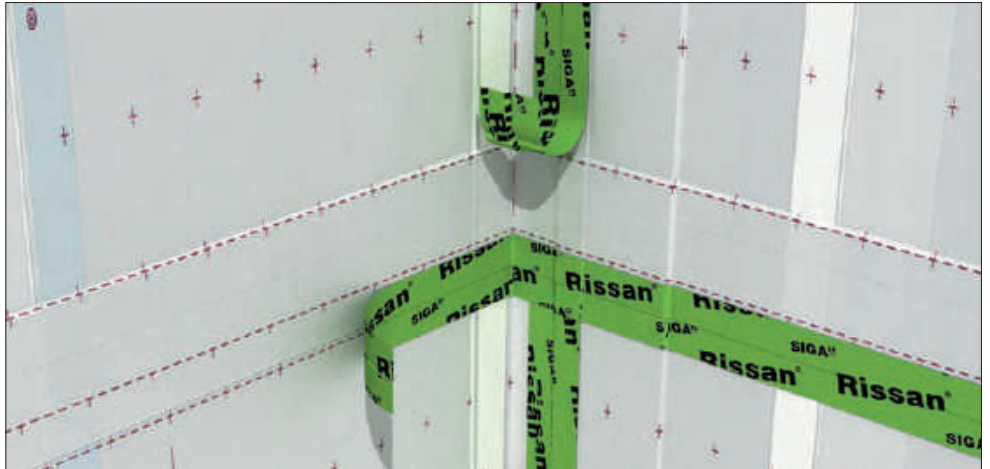
- Align Majrex sheet along leveling marks and staple at the top edge to each stud
- Maintain plumb alignment and avoid tension when applying to the wall
- Continue stapling at each vertical stud, spacing at every 4" for batt insulation or every 2" for loose-fill insulation (see Part 4)
- Repeat for next course. Use printed guide-marks to maintain a 4" horizontal overlap.
- For improved air-sealing, cover staples with Rissan



## Part 2: Creating Air-Barrier Continuity

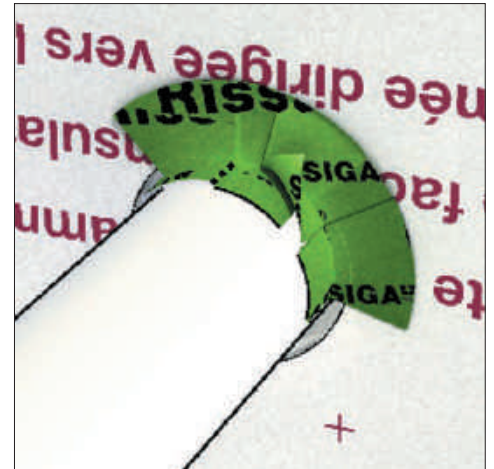
### Sealing Overlaps with SIGA Rissan 60

- Align Rissan with printed tape-centering guidelines on factory edges
- Remove backing strip and Apply to Majrex without tension or creases.
- Press on firmly.



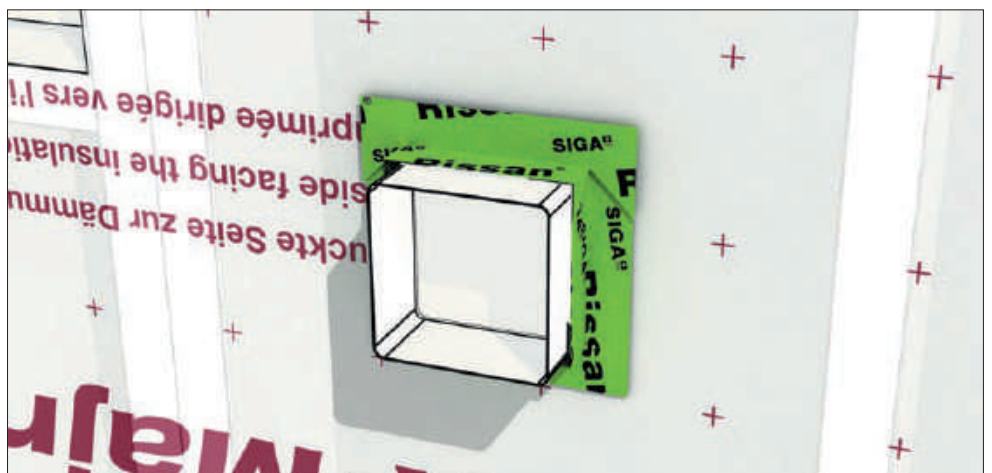
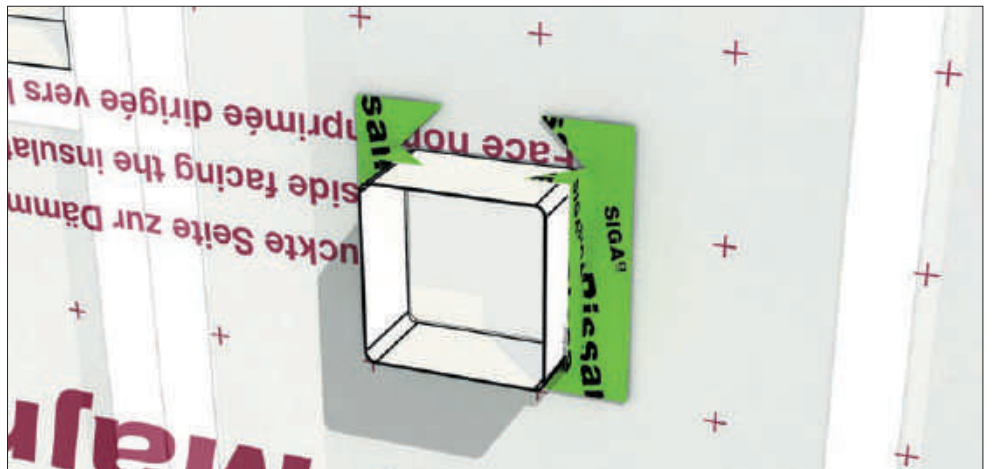
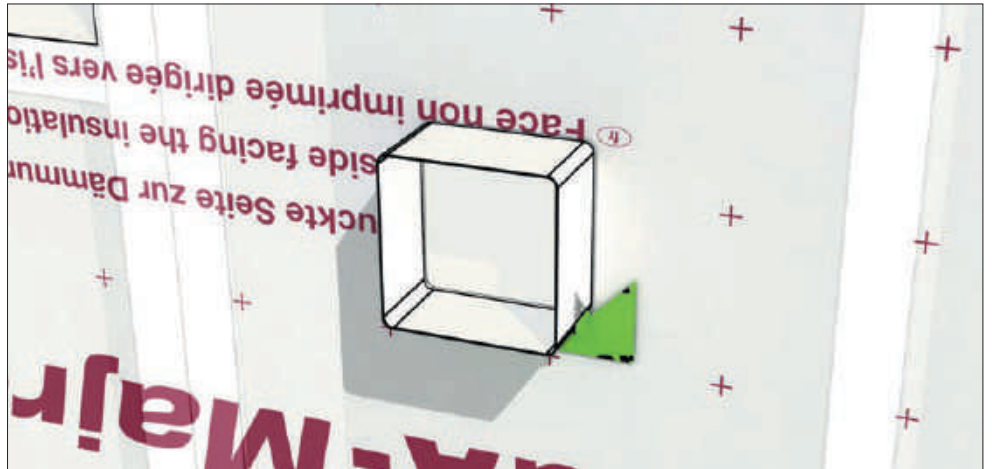
### Sealing Round Penetrations (Pipe/Conduit) with SIGA Rissan 60

- Trim Majrex cleanly around the penetration
- Cut several short lengths of Rissan
- Fold tape in half, lengthwise. Apply to penetration, then to Majrex
- Press on firmly.
- Repeat, overlapping each piece of tape to assemble a gasket



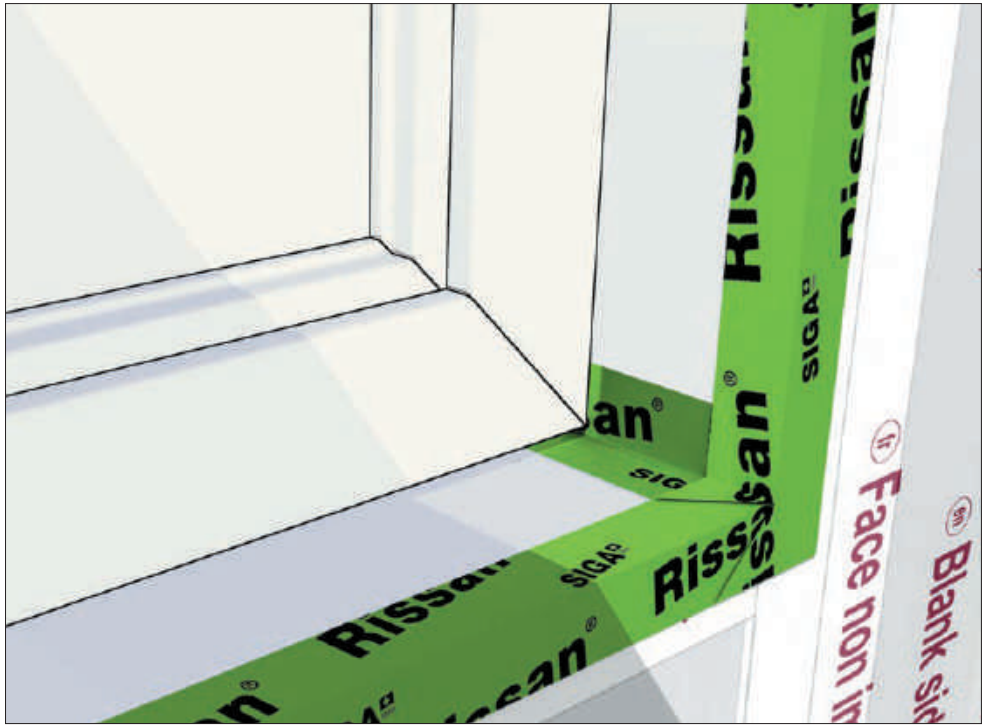
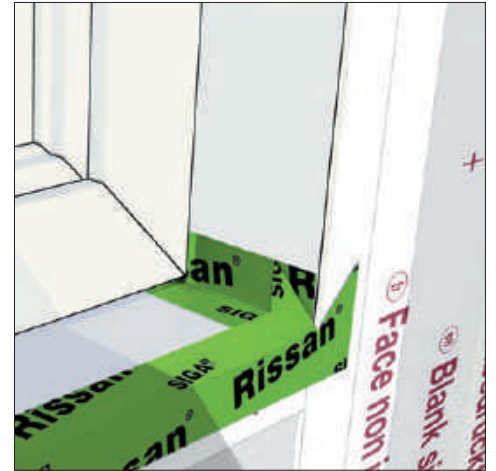
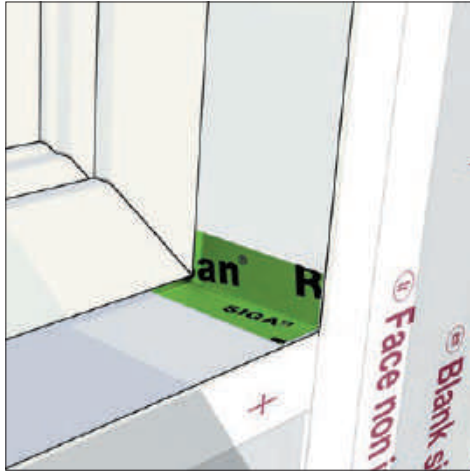
## Sealing Perpendicular Square Penetrations (Electrical Boxes/ Timbers) with Rissan 60

- Trim Majrex cleanly around the penetration.
- Cut pieces of Rissan to extend 1" past each end of the penetration
- Fold Rissan in half lengthwise and bond to penetration, then to Majrex
- Make 45° cuts at each end, from the inside corner outward
- Press on firmly, repeat for each face to assemble a gasket.



## Interior Rough Opening Transitions

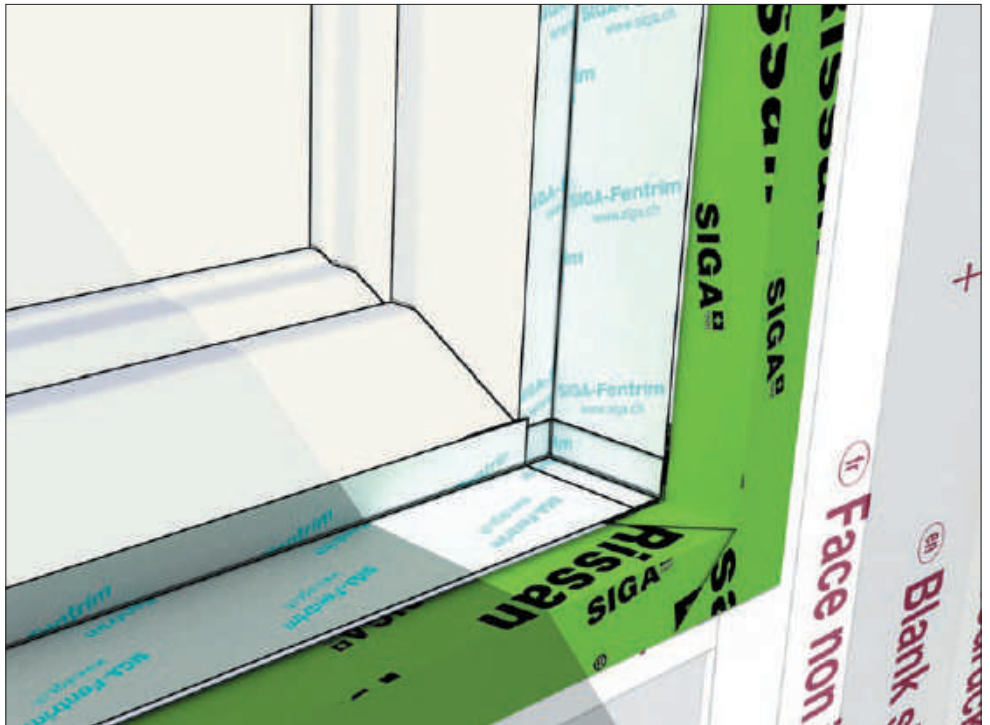
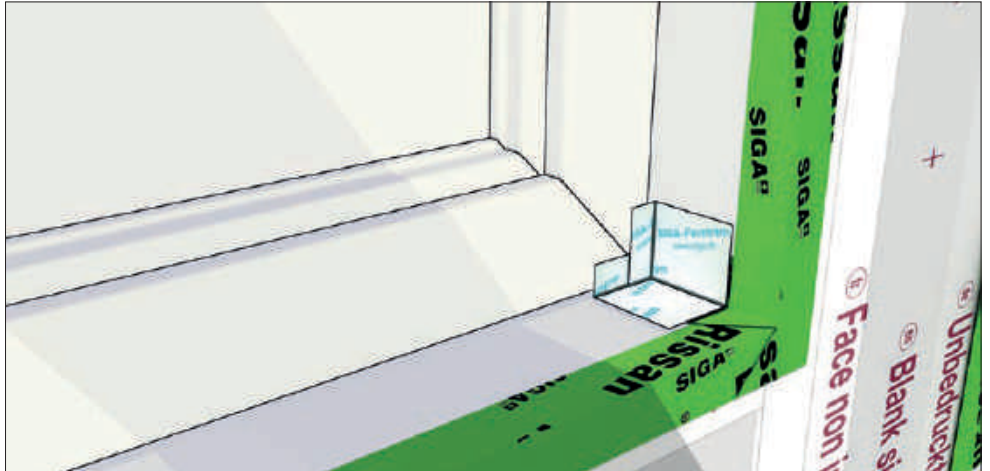
- Mount Majrex securely around perimeter of rough opening
- Trim Majrex flush with rough framing
- Verify that the interior face of the rough framing has been air-sealed. If not, use Rissan to tape each inside corner.
- Measure lengths of Rissan to extend 1" beyond each edge of the rough opening
- Fold Rissan in half lengthwise and apply lightly to Majrex – DO NOT PRESS
- Make 45° cuts at each end, from the inside corner outward
- Fold the length of Rissan into the opening and fold the shorter cut angle into the corner
- Press on firmly.
- Repeat to seal the entire perimeter of the opening





## Window Air-sealing with Fentrim IS20

- Cut a 3" piece of Fentrim IS20 and make a crosscut at the center of the narrow 5/8" prefolded section
- Crease the center of the wide section and bond the 2 crosscut parts together, forming a corner
- Bond to both window and rough opening. Repeat at each corner.
- Cut full-length piece for window jamb
- Bond first to window, then bridge to rough opening
- Maintain consistent 5/8" contact with window frame
- Repeat for jamb, sill, head
- Press on firmly

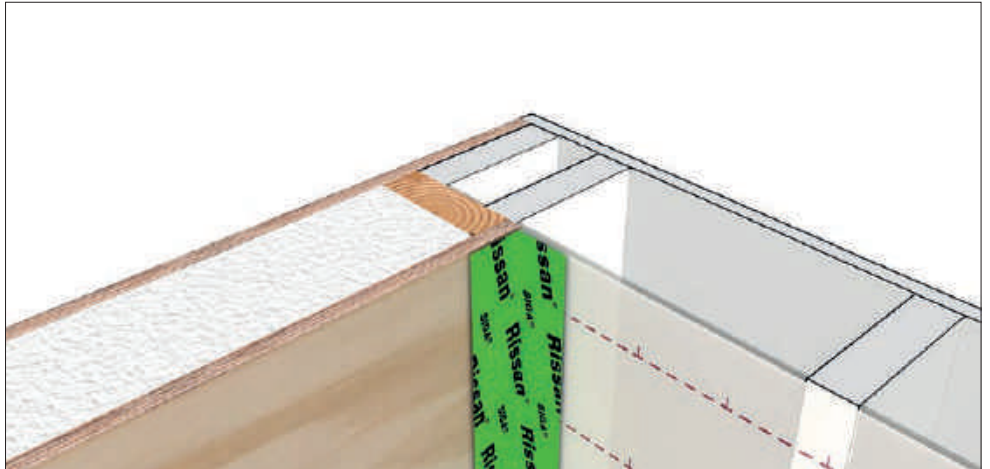


## Part 3: Interruptions in the Wall Plane

### Planar transition (Wood)

#### – Rissan 100

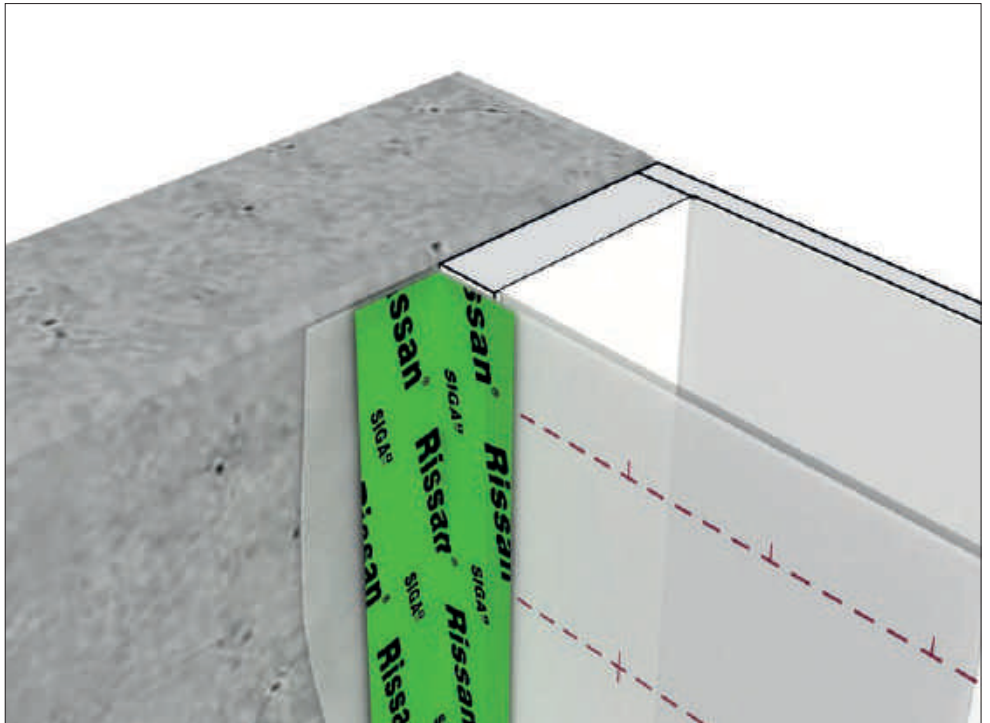
- Bond the perpendicular inside corner connection with split-backed Rissan 100
- Pre-fold the tape along the split and bond one surface at a time
- Bond without tension or tenting, and press on firmly



### Planar transition (Masonry)

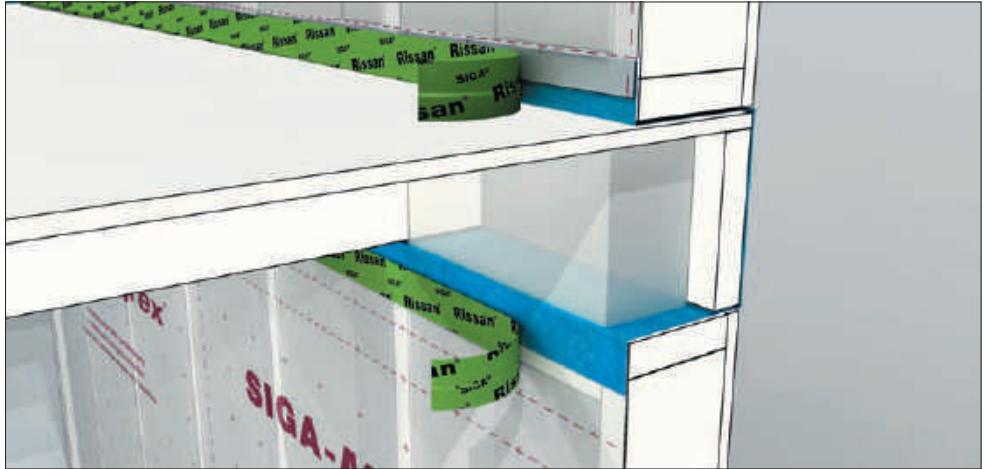
#### – Rissan 100 with Dockskin

- Apply an even coat of Dockskin primer to the masonry substrate
- Let dry (will appear transparent)
- Pre-fold Rissan 100 along the split backing and bond first to primed masonry
- Bond second to Majrex. Press on firmly.



## Floor to Floor transition Method A – Pre-stripping with WRB

- Pre-strip WRB through top-plate during framing
- Air-seal overlapping pieces of WRB with compatible tape
- Maintain 1.25" reveal when overlapping Majrex with WRB
- Bond WRB to Majrex using Rissan 60



## Floor to Floor transition Method B – Taping Joists with Rissan 60

- Cut Majrex flush to each joist and to the floor sheathing
- Fold Rissan 60 lengthwise, bond around joist profile and to the floor sheathing
- Outside corners of joists:
  - > Cut pieces of Rissan to extend 1" past each end of the penetration
  - > Fold Rissan in half lengthwise and bond to penetration, then to Majrex
  - > Make 45° cuts at each end, from the inside corner outward
- Inside corners:
  - > Abut and overlap straight pieces of Rissan, or
  - > Make a 45° fold in the Rissan to create compound corner

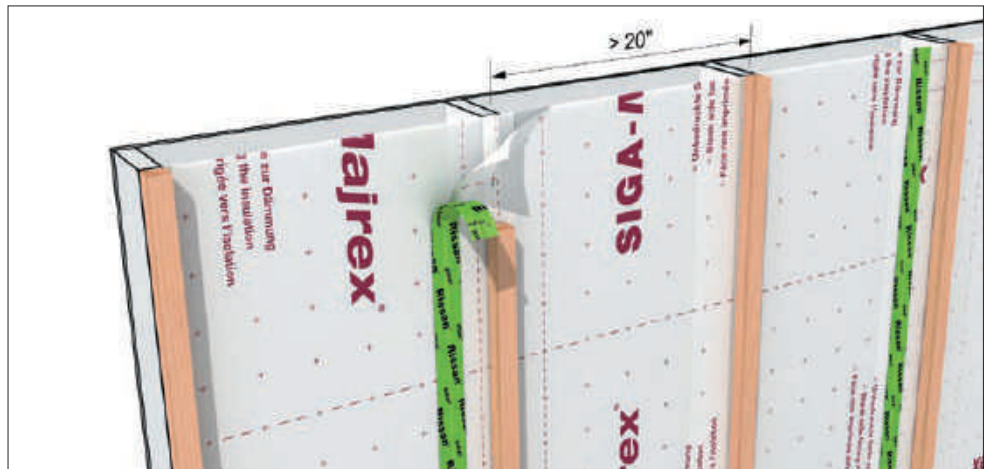
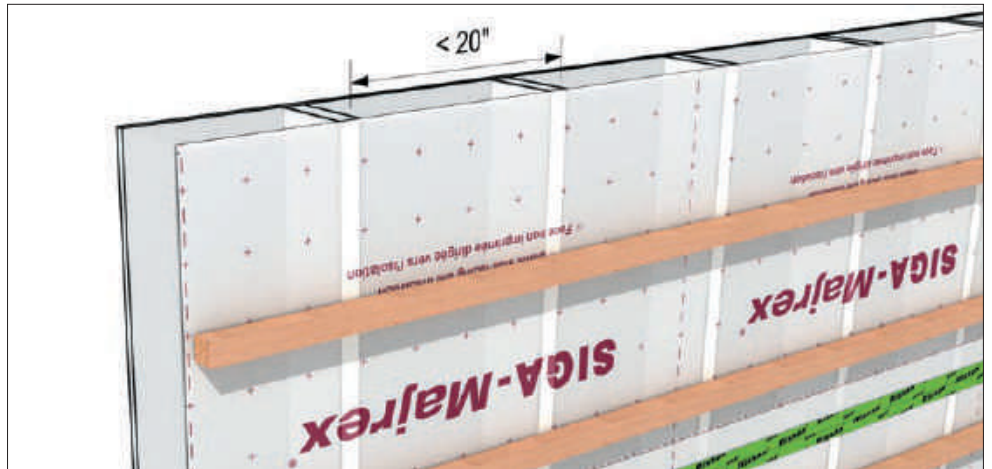




## Part 4: Special Requirements for Loose-fill Cavity Insulation

### Insulation Containment

- 2x thickness minimum for strapping to bear the weight of insulating material – REQUIRED for ceilings!
- For rafter spans less than 20":
  - > SIGA Majrex may be installed cross-wise or length-wise
  - > Re-inforce cross-wise tape joints with a perpendicular piece of Rissan
- For rafter spans wider than 20" or under heavy-weight insulation loads:
  - > install SIGA Majrex and strapping longitudinally (length-wise, in-line with the rafter/stud)
  - > align each membrane overlap on top of a rafter/stud



### Injection holes

- Always install loose-fill insulation material according to manufacturer's instructions
- Make an X-cut to the size of the pipe nozzle (3" + diameter), centered at top of each cavity
- Cut venting holes if necessary to adequately fill cavity, due to air-tightness of SIGA Majrex
- Use squares of Rissan 100 to patch holes after insulation has been installed





# SIGA Reliability

## Product Properties

SIGA products have the properties set forth in the corresponding Technical Data Sheets (available at <https://americas.siga.swiss/downloads>). However, SIGA excludes any liability for processing or use that does not comply with these Guidelines, or:

- in case of unusual influences on the product, in particular of chemical or mechanical nature
- if permanent mechanical strain (e.g. due to tensile forces resulting from insulation material weight) has an impact on the seal
- in case of multi-layered membranes or paneling materials without sufficient cohesive strength
- for Dockskin, if the adhesion is not executed with Wigluv, Rissan, Primur, Twinet, or Fentrim
- if SIGA Fentrim IS is plastered over directly
- in case of airtight sealing in sauna and swimming pool applications
- if SIGA Fentrim is applied directly on to a wood-based soft board
- if the requirements for a safe installation of the membrane are not fulfilled: The substrate must be free from any protruding, harmful objects such as screws etc.
- if the requirements for reliable bonding are not fulfilled: The substrate must be dry, uninterrupted, even, capable to bear loads, free of dust and grease and must not repel adhesives. Clean substrate before bonding and perform adhesion test on site. If necessary, strengthen with high performance primer SIGA-Dockskin. Caution! The bonds must not be under standing water. Creases or tensions in the membranes/ tape must be relieved by cutting and resealed.

In the IECC (2015) the United States are divided into 8 different climate zones. Accordingly, different zone-related requirements are to be considered with regard to the building shell. For information about the US climate zones, please refer to the International Energy Conservation Code. Consult your planner or building scientist to check whether your planned construction will meet the requirements of the respective climate zone.

**Guidelines:** These Guidelines can become invalid if new knowledge is acquired or new developments are made. The current version is available at [americas.siga.swiss](https://americas.siga.swiss)

**10-Year Limited Warranty:** For complete warranty details, consult your local Application Advisor or find the Limited Warranty document (available at <https://americas.siga.swiss/downloads>).

## Technical details:

**Adhesive:** SIGA high-performance adhesives are free of solvents, VOCs, high boilers, plasticizers, chlorine and formaldehyde. They cannot be removed after application.

**Installation Temperature:** From -10 °C / 14 °F

**Service Temperature Resistance (tapes):** -40 °C to +100 °C / -40 °F to 212 °F

**Service Temperature Resistance (membranes):** -40 °C to +80 °C / -40 °F to 176 °F

**Ageing resistance:** Durable adhesive power; made without rubber, resins or solvents to prevent embrittlement.

**Storage:** Store cool and dry in original box. Store Dockskin in a cool, dry and frost-protected place in original container. Store Majrex in a cool, dry and UV-protected place.

Developed and produced by: © SIGA



- ✓ **Hygrobrid®**  
increased safety in every construction
- ✓ **dimensionally stable**  
can be laid quickly and without wrinkles
- ✓ **printed cutting and laying aid**  
time saving

Modified PE/PA reinforced with PET fibres • Thickness: 12 mils  
 • Weight per unit area: 0.49 oz/sq ft 14.5 g/m², EN 13984, type A • UV  
 stable: 12 weeks • Fire behaviour: Class A (per ASTM E-84)  
 Hygrobrid® Dynamic Diffusion Equivalent: 0.097 <> 4.25 US Perms

## Product specifications

Article no.	8310-150050
Width	1.5 m / 4.9'
Length	50 m / 164'
Total Area/Roll	72 m² / 807 sq ft
Weight/Roll	13.5 kg / 29.8 lbs
Pallet	30 rolls

## Rissan® 60

single-sided high performance tape for air-sealing penetrations and overlaps of flexible sheet membranes and panelized materials



- ✓ **extremely strong adhesion**  
reliable, long-term building value
- ✓ **smooth carrier material**  
clings tightly around pipes and cables
- ✓ **elastic**  
keeps joints sealed despite structural movements

Special, reinforced PE film, elastic  
 The bond must not be under standing water

## Product specifications

Article no.	2510-6025
Box	10 rolls
width	60 mm / 2.4"
length	25 m / 82'



## Rissan® 100

single-sided high performance tape for air-sealing penetrations and overlaps of flexible sheet membranes and panelized materials



- ✓ **extremely strong adhesion**  
reliable, long-term building value
- ✓ **split backing material**  
easy and accurate inside corner installation
- ✓ **elastic**  
keeps joints sealed despite structural movements

Special, reinforced PE film, elastic  
 The bond must not be under standing water

## Product specifications

Article no.	2510-6025
Box	6 rolls
width	100 mm / 3.9"
length	25 m / 82'





- ✓ **extremely adhesive on both sides**  
quick, safe installation without stapler
- ✓ **protective coating prevents soiling**  
simple to apply up to the end
- ✓ **tearproof backing strip**  
saves time

Twinet is not suitable for permanent load-bearing applications • After installation, the vapour control layer must be additionally fastened, e.g. using jack rafters, counter battens, facing

## Product specifications

Article no.	6610-2050
Box	10 rolls
Pallet	75 boxes
Width	20 mm / 0.79"
Length	50 m / 164'
Non-woven carrier thickness	0.35 mm / 14 mils



# Fentrim® IS 20

Airtight high-performance tape for window and door frames, for indoor application



- ✓ **high adhesive strength at high and low temperatures**  
reliable, long-term building value
- ✓ **15 mm pre-folded, without backing strip**  
fastest bonding to window frames
- ✓ **bonding from -10°C / 14°F**  
fast and tight window installation all year-round

semi-impermeable special PO film (0.17 US perms), fleece-backed, formable, impermeable to water, UV-stable (atmospheric exposure 3 months), avoid permanent exposure to ponding water. Europ. Patent: 1339924 US Patent No. 7.445.828 B2

## Product specifications

Article no.	9611-156025 9611-158525
Box	8 rolls, 6 rolls
Pallet	35 boxes
Width	75 mm / 2.9" 100 mm / 3.9"
Length	25 m / 82'



# Dockskin®

High-performance primer for strengthening sandy and fibrous substrates



- ✓ **quick drying**  
saves time
- ✓ **strong penetration**  
extremely good adhesion on soft fibre boards, masonry and concrete
- ✓ **usable on cold substrates from -10° C / 14°F**  
solvent-free

Water-based, solvent-free acrylate-copolymer dispersion • Shelf life: 18 months from the date of sale if unopened • Clean the brush immediately with water • Keep out of reach of children!

## Product specifications

Article no.	5930
Box	8 bottles (2.2lbs ea.)
Coverage Rissan 100	~35 m / 115'



**Stick with us.**

