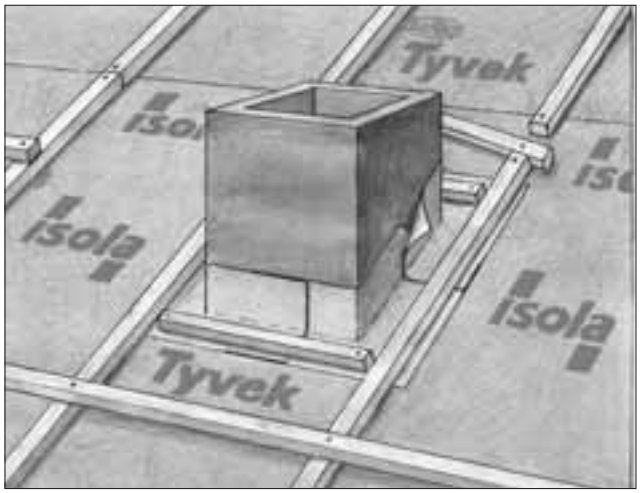
Installation

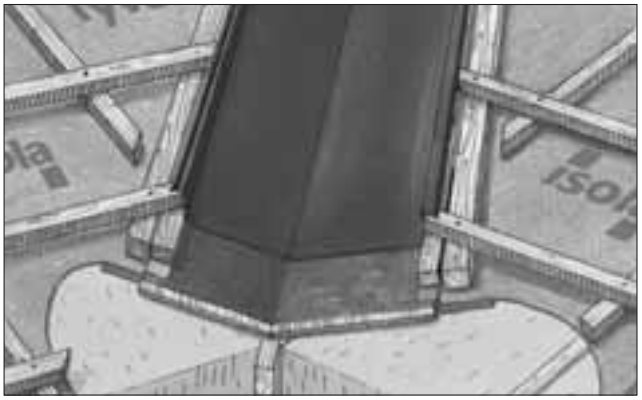
Openings:

1. Fit a support (noggins) around the opening.
2. Apply Isola Sealant to the support and then fit Pro Super.
3. Install an Isola Opening Fitting for round or square openings. (Remember to put Isola Sealant between Pro Super and the opening fitting.)
4. Fit clamping battens around the fitting and a bar to shed water at the back edge of the opening (pipe openings).



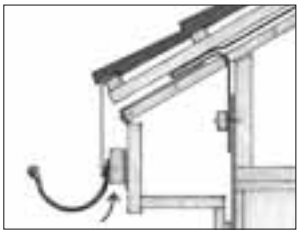
Valley:

1. Fit chipboard or plywood as a base.
2. Lay a membrane (Isola Isokraft) without counter-battens from the base of the roof to the ridge in the valley.
3. Fit Pro Super with an overlap in over the membrane along the outside edge of the valley.
4. Then clamp the overlap continuously with battens secured in the same way as the counter-battens (max. spacing between nails 30 cm).

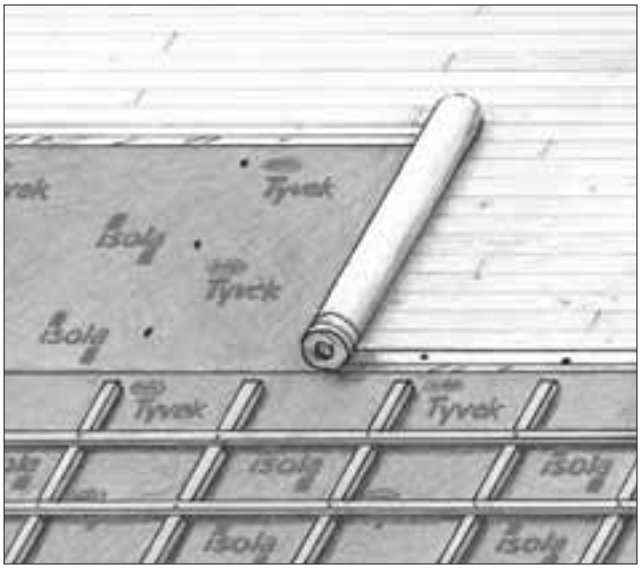


Installation on timber roofs (new buildings)

1. Install chipboard down to the transition between roof and wall (eaves) before fitting Pro Super.
2. Fold Pro Super back 15 cm and down against the wind barrier on the wall.
3. Clamp the sides and bottom edge with battens.
4. Then fit the rest of the roof with chipboard (as cornice).
5. Fit Pro Super under the fold and out to the fascia board.



Remember to mount the gutter on blocks for ventilation. Alternative ventilation at eaves: see Alt. 2 on page 3.



Pro Super

Diffusion-Permeable Roofing Underlay with self-adhesive overlap

System components:

Isola Stay
- 1.0 mm galvanised steel, length 3.10 m

Isola Opening Fitting
for single pipe
- square, 4 corners with sealant and 1.5 mm CPE film

Isola Opening Fitting
with dividers for double pipe
- square, 4 corners with sealant and 1.5 mm CPE film

Isola Opening Fitting
- round with sealant and 1.5 mm CPE film

Isola Isokraft
- for valleys

Isola Roofing Underlay
- for projections at base of roof > 40 cm

Technical approval

Pro Super Diffusion-Permeable Roofing Underlay has been tested by the Norwegian Building Research Institute (NBI). Based on its tests, NBI has drawn up a Technical Approval, which provides information on applications and important detail solutions. The technical approval serves as documentation for the properties of the roofing underlay system.

Manufacturer:
DuPont Engineering Products S.A.
Luxembourg

Product specification

Material description: Pro Super Diffusion-Permeable Roofing Underlay is a spunbonded felt fabric made from polyethylene fibre laminated with polypropylene felt. Weight approx.195 g/m^2 .

Roll size: 1.50 m x 50 m
Content per roll: 75 m^2 (coverage approx. 70 m^2)

Property	Value	Test method
Water tightness, material	Impermeable at 2 kPa	NS-EN 1928
Rain tightness, construction**	Impermeable with 15° pitch and 400 Pa pressure difference	NT Build 421
Air tightness, material	0.002 m^3/(m^{2}hPa) NS 3261	Equivalent to
Air tightness, construction**	0.002 m^3/(m^{2}hPa)	NS-EN 12114
Water vapour resistance	0.07 · 10^9 (m^{2}sPa)/kg	NS-EN ISO 12572 (50/93% RH, 23°C)
Sd value (equivalent air layer)	14 mm	
Static point load resistance *	2.4 kN	SP 0487
Tensile strength		
– longitudinal	510 N/ 50 mm	NS-EN ISO 12311-1/
– transverse	530 N/ 50 mm	prEN 13859
Nail resistance		
– longitudinal	323 N	NS-EN ISO 12310/
– transverse	360 N	prEN 13859
Elongation at break		
– longitudinal	19%	NS-EN ISO 12311-1/
– transverse	22 %	prEN 13859
Flammability	Flammable	ISO 1182

* Tested on fully installed Pro and Pro Super with rafter spacing c/c of 1.2 m
** This value is for fully installed Pro Super

DUPONT Tyvek®

NBI TEKNISK GODKJENNING – BYGGFORSK – Nr.2043 – NORGES BYGGFORSKNINGSINSTITUTT

NBI – Technical Approval

Isola as
N-3945 Porsgrunn
Tel. +47 3557 5700
Fax: +47 3555 4844
www.isola.no

isola®

Dry and healthy buildings

Installation instructions

2:830
Mars. 2003

Pro Super

Diffusion-Permeable Roofing Underlay with self-adhesive overlap

Combined roofing underlay and wind barrier for horizontal installation

isola®

Dry and healthy buildings

Pro Super for horizontal installation

Combined roofing underlay and wind barrier with self-adhesive overlap

Area of use:

Pro Super is used as a combined roofing underlay and wind barrier on insulated pitched timber roofs with raised, ventilated roofing and external downpipes. Pro Super has a self-adhesive overlap and so can be fitted horizontally directly on the rafters. See fig. 1.

Pro Super can also be laid on sheathing. If the sheathing is diffusion-permeable, insulation can be fitted right up under the boarding without a traditional air gap. Pro Super combined with chipboard or other wooden boarding provides a diffusion-permeable solution. On this sort of base Pro Super acts as a roofing underlay and wind barrier. Other bases may be diffusion-impermeable, e.g. particleboard and plywood, in which case an air gap and separate wind barrier will be required.

Conditions for use:

Pro Super must have a base of insulation or other material to prevent flapping noise. It must not be open to the space below. See fig. 3. (The maximum projection at the base of the roof without insulation is 40 cm.)

Pro Super must not be used on a pitch of less than 15 degrees.

Pro Super does not provide adequate stiffening of the roof surface and so has to be cross-braced separately using perforated strips, roof boarding or stays. See fig. 4. (See Building Detail Sheet No. 520.241.)

Pro Super requires support at all openings and at the transition between roof and walls (noggins at the eaves!).

Roofs with Pro Super require ventilation between the roofing and underlay. For roofs with a maximum length of approx. 7 metres from base roof to ridge the minimum requirement for cross-batten thickness depends on the pitch. See table 1. In the case of larger pitched roofs the cross-batten thickness should be increased to 75 – 100 mm. In this case the cross-battens have to be built up in two or more operations with a maximum thickness of 36 mm for the first layer. Pro Super has to be installed in such a way that the roofing underlay forms a layer that is both airtight and rainproof.

In the case of a combined roofing underlay and wind barrier the roofing should be laid as soon as the underlay has been installed. Thermal insulation, vapour barriers and soffits should not be fitted before the roofing has been laid and Pro Super has been checked for satisfactory installation.

Pro Super is the most diffusion-permeable roofing underlay on the market, with its vapour permeation values exceeding all requirements by a considerable margin. If the building has got very wet during construction, condensation, frost or ice may still form on the underside of the membrane for a while once the building is in normal use. It will gradually dry up, with no damage being done to the roofing underlay.

Don't get any paint or solvents on Pro Super or use it with roofing that has been treated with creosote.

Fig. 1

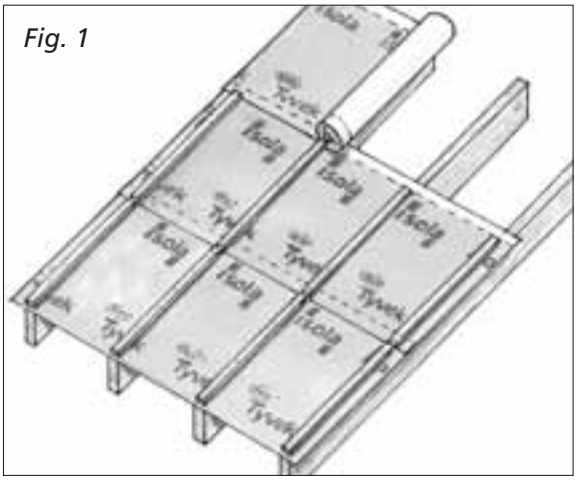


Fig. 2

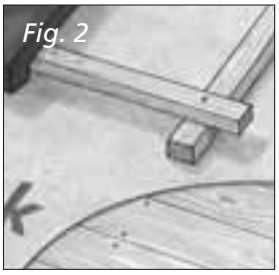


Fig. 3

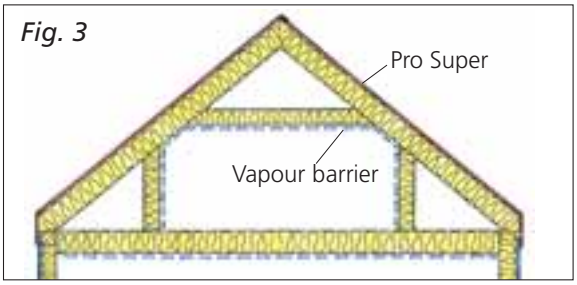


Fig. 4

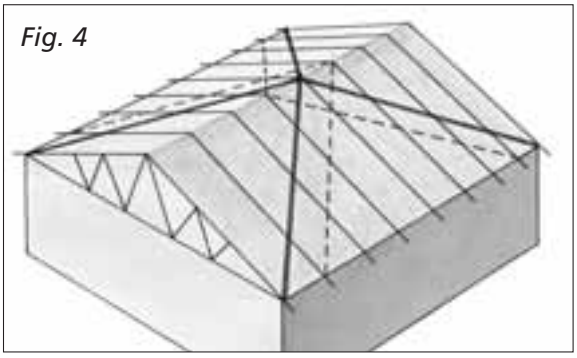


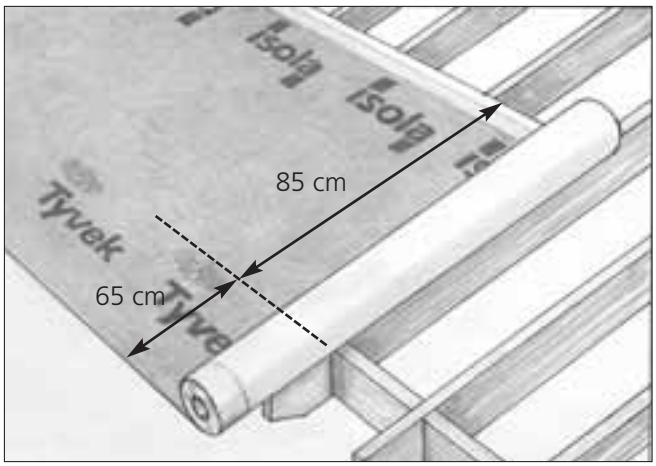
Table 1

Pitch	Counter-batten thickness
15 -34°	36 mm
35 - 40°	30 mm
>40°	23 mm

Installation

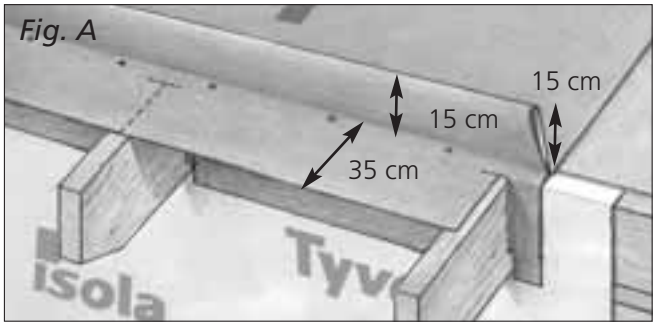
Unrolling along the base of the roof:

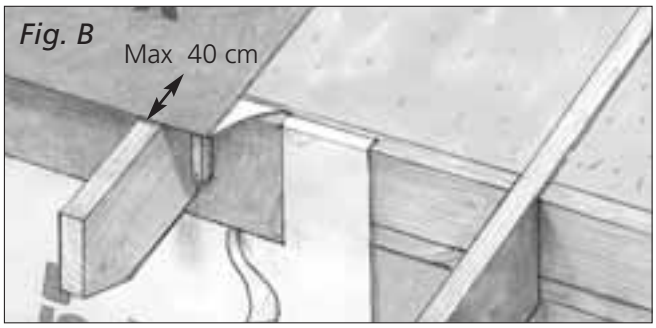
1. Insert noggins between the rafters before unrolling starts.
2. Measure 85 cm from the outside of the noggins along a few reference rafters and mark off (65 cm has to be folded and taken down over the noggins/top sill of wall).
3. Unroll Pro Super in its full width along the base of the roof. (Cut to length before work starts or fit a horizontal board to support the roll.)
4. Pull taut and secure to the rafters with felt nails as you go along.



Finishing at eaves/base of roof:

1. Pull the membrane back and make a fold along the base of the roof as shown in fig. A (width approx. 15 cm).
2. Make sure that the remaining membrane is long enough to be stuck/clamped to the top sill (approx. 35 cm).
3. Secure the membrane to the top of the noggins using felt nails.
4. Make a t-shaped cut in the membrane over each rafter for the part of the membrane to be folded down onto the noggins/top sill of wall.
5. Clamp the membrane to the top sill and rafters with the adhesive edge of the membrane/clamping battens.
5. If the projection is larger than 40 cm, fit Isola Roofing Underlay under the fold and out into the eaves box/to the fascia board. (See fig. B and cross-section of eaves/base of roof.)

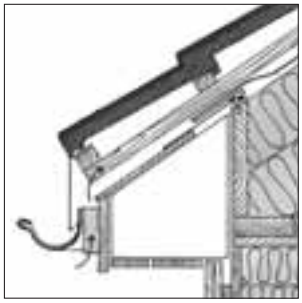


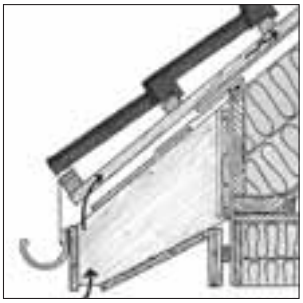


Alternative ventilation at base of roof:

Alt. 1:
Mounting gutter hooks on blocks at least 30 mm thick (roofing underlay drainage outside fascia board).

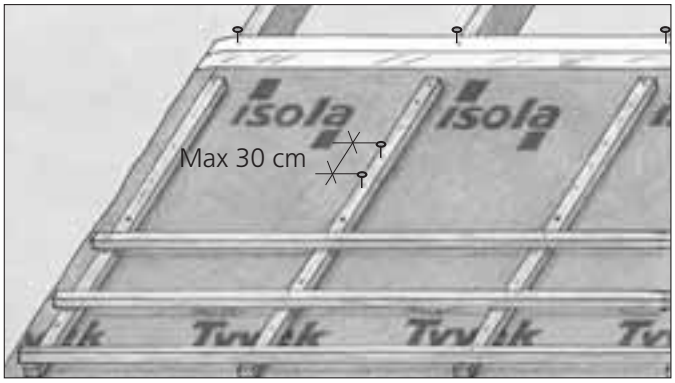
Alt. 2:
Min. air gap of 50 mm in eaves box (roofing underlay drainage behind fascia board).


Alt. 1


Alt. 2

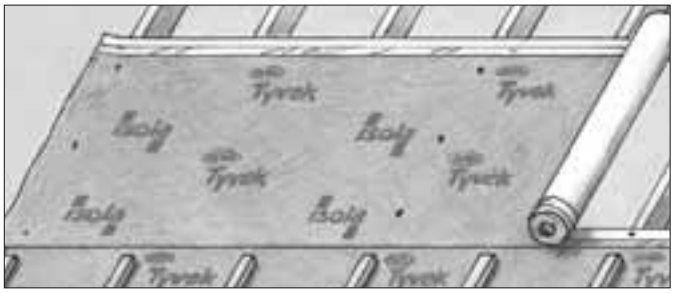
Installing counter-battens and battens:

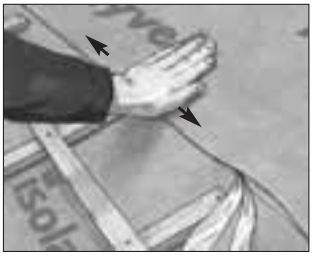
1. Fit counter-battens up to the bottom edge of the adhesive area (nail length should be at least 2.5 x counter-batten thickness). Max. spacing between nails 30 cm.
2. Then fit battens up to the same height. Fit the first batten on its edge.
3. Secure the top flap of the membrane (at the top edge of the adhesive strip) to all the rafters with felt nails.



Overlap/removing film:

1. Unroll the next width of membrane with an overlap of approx. 9 cm with the width just fitted so that the adhesive strips coincide.
2. Secure the membrane to the rafters with felt nails.
3. Tear off the film on both adhesive strips at the same time, working from the centre of the roof towards the sides.
4. Press the overlap down with the palm of your hand as the film is removed.
5. NB: Exposed adhesive strips must be protected against precipitation. Fold the top adhesive strip back at the end of the day to keep it dry.





Finishing at ridge:

1. Cut the rafters horizontally at the top.
2. Lay a batten over the cut rafters.
3. Secure Pro Super to it with felt nails.
4. Then fit a clamping batten, nailing it in place in the same way as the counter-battens.
5. Fit blocks to provide ridge ventilation (see illustration)