



SOLITEX WELDANO® 3000

system



Diffusion-open, weldable roofing underlay system

Rainproof or waterproof sub-roofs

SOLITEX WELDANO® 3000 system

Diffusion-open weldable roofing underlay membrane

Areas of application:

For use as a 3-ply diffusion-open homogeneously weldable, rainproof/watertight roofing underlay. Suitable for installation on pressure-resistant subsurfaces, e.g. wooden decking, wood-based panels and wood fibre underlay panels.

Advantages:

- ✓ Reliable seam tightness: homogeneously weldable
- ✓ High degree of occupational safety: non-slip and abrasion-resistant surface
- ✓ Protects structural elements against dampness: diffusion-open, rainproof against driving rain, and hail-resistant
- ✓ Easy to work with: robust with extremely high tear-resistance
- ✓ Suitable as a roofing underlay to meet the most stringent requirements
- ✓ Also keeps structural elements dry during the construction phase: excellent protection against driving rain thanks to monolithic membrane

SOLITEX WELDANO 3000
Diffusion-open, weldable roofing
underlay membrane



Further information on this system:



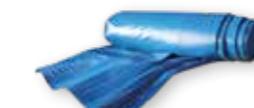
[proclima.info/en/
solitex-weldano-3000](http://proclima.info/en/solitex-weldano-3000)



SOLITEX WELDANO 3000/WELDANO-S 3000
Diffusion-open membrane that can be
homogeneously welded



[proclima.info/en/
solitex-weldano-3000/caws](http://proclima.info/en/solitex-weldano-3000/caws)



Cutting and welding service

Best possible protection from the outside for low-pitched roof structures

Sub-roofs serve as an independent sealing layer underneath the actual roof covering. They are installed as an additional measure to ensure either rainproofing or waterproofing of covered roof structures if the roof pitch is less than the standard roof pitch.

Sub-roofs are installed on a subsurface with sufficient load-bearing capacity, e.g. on even decking consisting of solid wood or wood-based panels with a pressure resistance of $\geq 100 \text{ kPa}$ ($\geq 14.5 \text{ psi}$) at 10% strain and/or a surface layer with a density of $\geq 150 \text{ kg/m}^3$ ($\geq 9.4 \text{ lb/ft}^3$).

There are two different sealing solutions (see Fig. 1 and Fig. 2) available from pro clima to seal the penetrations caused by nails or screws to ensure that the SOLITEX WELDANO sub-roof system is waterproof: the TESCON NAIDECK mono nail sealing tape for moderate rain loads, and covering of the counter battens with SOLITEX WELDANO-S 3000 welded strips for high loads. Covering of the counter battens with welded joints is recommended for roof pitches below 10° (2:12) to protect the roof structure against penetrating water. Any applicable national or local regulations and standards should be taken into account here. The main difference between these two sealing solutions concerns the position of the counter battens relative to the sealing layer. If a nail sealing tape is used, the counter battens are installed above the rainproof layer (see Fig. 1). Any precipitation water that enters must also be drained off in a reliable manner around the counter battens. In the SOLITEX

WELDANO 3000 system, this is achieved by installing TESCON NAIDECK mono nail sealing tape beneath the counter battens. If SOLITEX WELDANO-S 3000 strips are used, the counter battens are enclosed inside the sealing layer: the strips are welded around the counter battens. With regard to installation, however, it is often easier to first install the membrane flat on the decking, and then to fasten the counter battens and weld a SOLITEX WELDANO-S 3000 sealing strip over them, (see Fig. 2).

Important: The counter battens must be dry and chamfered on their upper side ($\geq 3 \text{ mm}$ [$1/8''$]) when they are installed. Ideally, kiln-dried battens should be used.

When SOLITEX WELDANO-S 3000 strips are used, the number of attachment nails or screws used to attach the horizontal roof battens should be kept to a minimum. The number of penetrations should also be kept to the minimum necessary. These must then be sealed to a sufficient height above the roofing underlay membrane and stuck or welded to the penetrating component in a waterproof manner, in accordance with the regulations.

Openings in the ridge area are not permitted on waterproof roofing underlays. In contrast, openings in the ridge area can be included on rainproof roofing underlays if an appropriate design structure is implemented. Rainproof and waterproof roofing underlays can be implemented in a practical, reliable manner using the SOLITEX WELDANO 3000 system.

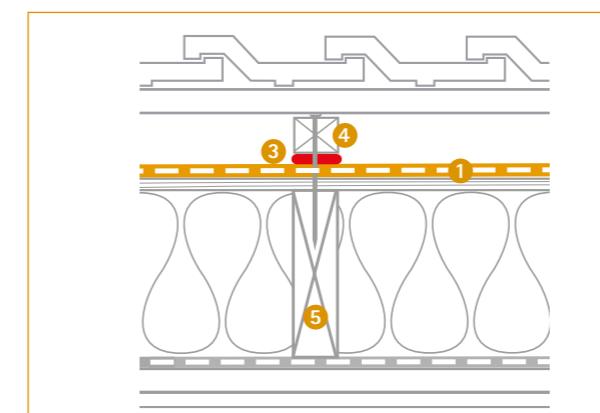


Fig. 1: Counter batten with nail sealing tape on the seal membrane

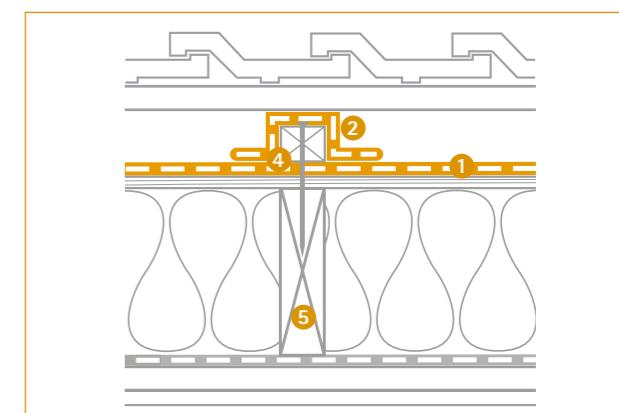


Fig. 2: Counter batten integrated into the sealing layer

- 1 SOLITEX WELDANO 3000 weldable roofing underlay membrane
- 2 SOLITEX WELDANO-S 3000 weldable roofing underlay strip
- 3 TESCON NAIDECK mono nail sealing tape
- 4 Counter batten
- 5 Rafter

Further information

Technical Support
[page 15](#)



Installation steps



1 Fit the flashing

If there are longitudinal joints with the eave flashing, first install



SOLITEX WELDANO-S 3000 sealing strips parallel to the eave (lower edge flush with the edge of the decking).



2 Install the membrane and overlap

Roll out the membrane parallel to the eave and use clout nails or fastening staples that are at least 10 mm (3/8") wide and 8 mm (5/16") long approximately 2 cm (3/4") away from the edge of the membrane to fasten the membrane in the overlap



area in a manner that protects against moisture. At the bargeboard, guide the membrane up to the upper edge of the counter batten or the bargeboard itself. Allow for an overlap of at least 10 cm (4") between the membranes. The marking that is printed onto the membrane will serve as a guide here.



3 Overlap with WELDANO TURGA solvent welding agent

Use the brush provided in the bottle to apply solvent welding agent inside the overlap at the welded joint. Press the bottle lightly here. The effective joint width (area covered with solvent welding agent) must be at least 3 cm (1 1/4") wide and



must extend as far as the edge of the overlapping membrane. The solvent welding agent should flow out slightly from the edge of the welded joint to ensure that the edge is welded too. Remove any other excess solvent welding agent with a cloth.



4 Rub the overlap into place and check it

Place one membrane on top of the other immediately, ensuring there are no folds or creases, and press into place (e.g. using a pro clima ROLLFIX silicone roller).



other immediately, ensuring there are no folds or creases, and press into place (e.g. using a pro clima ROLLFIX silicone roller). The heat-welded joint should be checked subsequently for leaks (e.g. using a nail or the tip of a pencil).



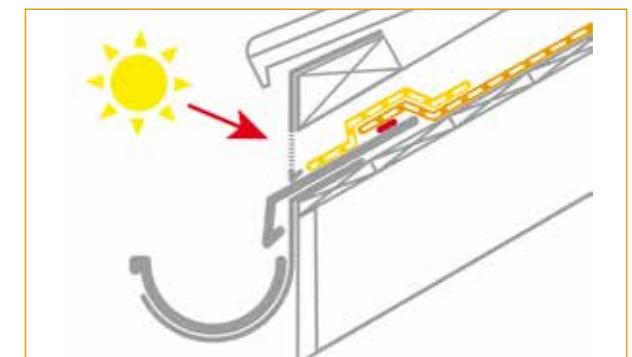
5 Alternative: Heat-welding the overlap using a hot air gun

Place the hot air nozzle into the overlap of the welded joint and move it along the edge. The effective joint width must be at least 2 cm (3/4") wide and must extend as far as the edge of the overlapping membrane. Place one membrane on top of the



6 Sealing at eaves

Install the membrane and weld it above the eave flashing using WELDANO-S 3000.



Clean the eave flashing and stick the lower edge of the membrane with ORCON CLASSIC. If a PVC-coated eave flashing is used, this can be directly welded to the roofing underlay membrane in a homogeneous manner in certain cases. This should be checked in advance.

UV protection for the membrane in the eaves area
Sealing at eaves: Apply the SOLTEMPA full-surface self-adhesive strip over the joint.

Installation steps continued

7 Installation in roof valleys

First install a membrane into the valley longitudinally. Then weld the horizontal membranes to the valley membrane in a windtight and waterproof manner, allowing 10 cm (4") of an overlap.


8 Counter battens not covered over

If a counter batten is to be fitted on top of the membrane and/or if the membrane is used as a temporary covering/seal during the construction phase, TESCON NAIDECK mono system nail sealing tape should generally be applied under the counter battens.


9 Counter battens covered over

Apply WELDANO-S 3000 sealing strips over the counter battens and weld them to the roofing underlay membrane on both sides. The counter battens must be dry. Alternatively, the roofing underlay membrane can also be installed directly over the counter battens.



... weld the seal flange to the roofing underlay membrane (using solvent welding agent or a hot air gun). Press the joint firmly into place and check for leaks.



Tip: For larger roof vents, WELDANO ROFLEX can be enlarged using a piece of membrane.


11 On steep roofs: Joint at pipe feed-throughs

Weld the grommet around the edges using the WELDANO TURGA solvent welding agent or hot air. The effective joint width (area covered with solvent welding agent) must be at least 3 cm (1 1/4") wide and must extend as far as the edge of WELDANO ROFLEX PLUS. Use a roller to press the grommet in place.



Prepare a sealing strip of SOLITEX WELDANO-S 3000 to suit the roof pitch and pipe diameter.



Guide the sealing strip around the pipe and weld to one another and to the sealing flange of the grommet using WELDANO TURGA. Use a roller to press the bond in place.



In addition, stick the sealing strip of SOLITEX WELDANO-S 3000 to the pipe and in the overlap area of the sealing strip using pro clima TESCON VANA. You're finished!


12 On slightly slanted roofs: Joints with protruding building components (e.g. chimneys)

Clean the subsurface. Weld the component to the roofing underlay membrane using a strip of SOLITEX WELDANO-S 3000 on each side and the WELDANO INVEK system shaped element (using solvent welding agent or a hot air gun) in a waterproof manner,


Further steps

Complete installation instructions for sealing pipes on pitched roofs can be accessed online at:
proclima.info/en/solitex-weldano-3000/application-guide



Installation steps continued



ensuring there are no folds or creases. Press the joint firmly into place and check for leaks. Form the inner corners in an analogous manner using the WELDANO INCAV system shaped element. Cover to a height of at least 15 cm (6") on the protruding building component and stick using ORCON CLASSIC.



Put the membrane in place on the adhesive bed, leaving slack to allow for expansion. Do not press the adhesive completely flat so as to allow for relative motion between components.



14 Installation of a water deflector
Create a water deflector with a lateral fall above the integrated roof element and stick it to the membrane. Form the water deflector in such a way that moisture is guided through a gap in a counter batten into the next adjacent field that does not have an integrated roof element.



15 Sealing at skylights
Seal the skylight all around the window up to the upper edge of the frame using SOLITEX WELDANO 3000. Weld the membrane in the corners using the WELDANO TURGA solvent welding agent.

Affix SOLITEX WELDANO 3000 to the frame using pro clima TESCON VANA. You're finished!

Substrates

Suitable for installation on firm subsurfaces that provide sufficient pressure resistance when using a roller to press down on the welding bond, e.g. wooden decking, wood-based panels and wood fibre underlay panels. The subsurface must be dry, free of frost, clean and free of any sharp-edged or pointed objects. There must be no water-repellent substances (e.g. grease or silicone) on the membranes. Before welding is carried out, SOLITEX WELDANO 3000 should be wiped clean with a cloth. It is recommended that spot checks be performed to test the strength of the welded joints.

General conditions

SOLITEX WELDANO 3000 is to be installed horizontally (parallel to the eave). Unhindered drainage of water must be ensured. Cross joints are to be avoided. If membrane joints are necessary, they should be offset with respect to each other. When used to protect building structures during the construction phase, SOLITEX WELDANO 3000 roofing underlay membranes can be subjected to outdoor exposure for up to 4 months (or up to 6 months in climate zones that are comparable to Northern and Central Europe). The roof pitch must be at least 3° (0.6:12). National regulations should be taken into account here. Fasteners should not be applied on flat surface areas or in areas where water run-off is collected (e.g. in roof valleys). We recommend the use of corrosion-resistant fasteners. The membrane edges are to be welded using the WELDANO TURGA system solvent welding agent or a hot air gun. The welding area must be dry and free of frost, dust and grease. If dirt (e.g. oil) is stuck to the surface, moisten a cloth lightly with WELDANO TURGA system solvent welding agent and use it to clean off this dirt. Both sides of the membrane can be welded and are suitable as upper layers. Welding with a solvent welding agent can be carried out at temperatures above 0 °C / 32 °F. Please observe the hazard notices on the container.

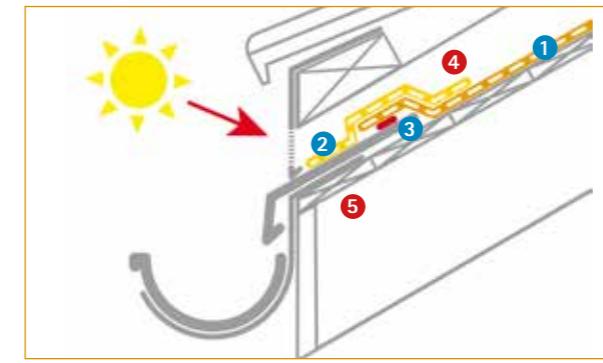
If a hot air gun is being used, we recommend a temperature of around 220 to 280 °C (430 to 530 °F) depending on the ambient temperature and wind conditions. Test this setting by carrying out a test weld on a sample piece of membrane. A 40 mm (1.6") nozzle width has been found to be suitable in practice for welded joints between surface membranes. A 20 mm (0.8") nozzle may be more suitable in certain cases for more intricate joints.

Note: If membranes that have been subjected to 2 months of outdoor exposure are to be welded, the exposed membrane surface must be gently roughened using sandpaper (150 - 250 grade) to remove a film depth of around 2-3 µm (0.08-0.12 mil) so that a reactive surface is accessible again. This applies both for hot-air welding and for solvent welding using WELDANO TURGA. The WELDANO ROFLEX pipe grommet is suitable for pipe diameters of 90 mm to 125 mm (3.5"-5") for roof pitches between 3° and 25° (between 0.6:12 and 5.5:12). The WELDANO ROFLEX PLUS pipe grommet is suitable for roof pitches up to 50° (14:12).

As an alternative to the use of the WELDANO ROFLEX, WELDANO INVEX or WELDANO INCAV system shaped elements, these elements can also be made by cutting appropriate shapes out of SOLITEX WELDANO 3000 membranes.

Important: The enclosed counter battens on the waterproof roofing underlay must be dry and chamfered on their upper side (≥ 3 mm; 120 mils) when they are installed. Ideally, structural timber should be used.

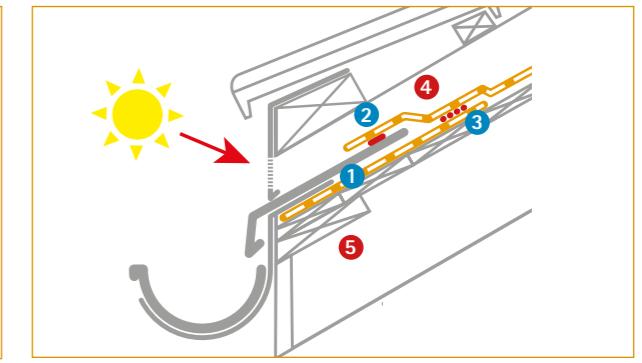
The SOLITEX WELDANO 3000 roofing underlay membrane is to be bonded in a windproof and waterproof manner at the eave flashing. The eave flashing can be installed as a drip board under the gutter or as a guide board that guides water into the gutters. To protect the roofing underlay membrane from direct sunlight on a permanent basis, the width of the guide board should be selected appropriately depending on the roof pitch and orientation of the building structure or else it should be installed with an eave membrane to provide UV protection, e.g. SOLTEMPA.



Sealing at eaves

(Take into account UV protection for the membrane in the eaves area!)

- 1 SOLITEX WELDANO 3000 weldable roofing underlay membrane
- 2 DUPLEX double-sided adhesive tape
- 3 WELDANO TURGA solvent welding liquid (Alternative: use a hot air gun)
- 4 Counter batten
- 5 Rafter



- 1 SOLITEX WELDANO 3000 roofing underlay
- 2 DUPLEX double-sided adhesive tape
- 3 WELDANO TURGA solvent welding liquid (Alternative: use a hot air gun)
- 4 Counter batten
- 5 Rafter



Further steps

Complete installation instructions for sealing pipes on pitched roofs can be accessed online at:
proclima.info/en/solitex-weldano-3000/application-guide



SOLITEX WELDANO® Cutting and welding service

Seal your roofs tight even more quickly and easily

Areas of application:

Do you have a roof structure that is to be installed with a roofing underlay membrane that is homogeneously welded together? If so, you no longer need to worry about the joining and cutting of the individual membranes. For roof areas of 50 m² and greater, pro clima will prepare your SOLITEX WELDANO 3000 roofing underlay membrane for you: in an automated, highly effective manner with reliable seal tightness and at a fair price. This saves valuable installation time on site and makes you less dependent on weather conditions. Please simply send us your roof drawing/description by e-mail when submitting your enquiry. Alongside standard roof shapes such as L-shapes and rectangles, we can also carry out pre-welding for special roof shapes such as those with roof features involving valleys.



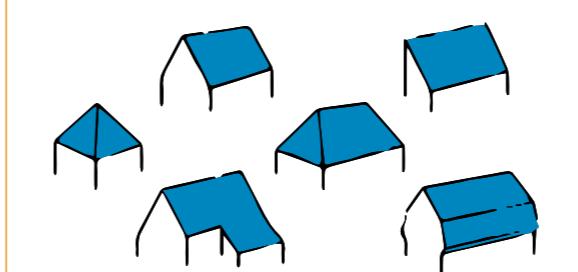
Advantages:

- ✓ Faster installation thanks to time savings on the building site
- ✓ Sheets that are cut, welded and delivered specifically for your project
- ✓ Reliable, uniform quality of work thanks to machine-welded seams
- ✓ Less dependency on building site conditions: no welding in the wet, faster protection against weathering
- ✓ Available for roof areas of 50 m² and greater



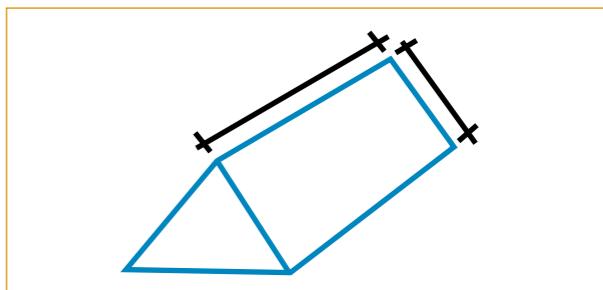
Order – roll out – your roof is sealed!

It's that easy!



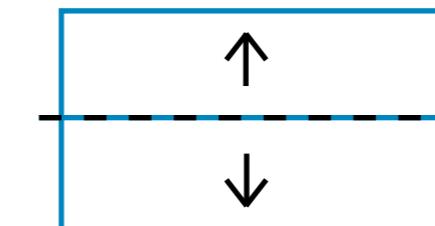
1 Your roof design

What type of roof is involved? Gable roof, pitch roof, tented roof, etc. Please specify the type of roof and provide an outline sketch of the roof with the actual lengths and surface areas. Please also take into account special structures such as adjacent valleys, etc.



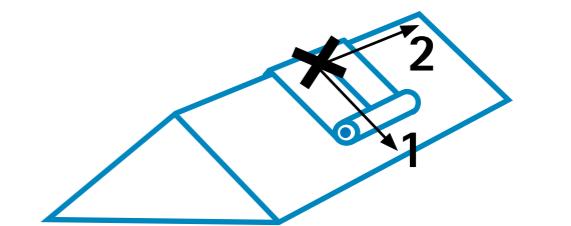
2 Specification of eave length and bargeboard length

Please specify in your drawing the dimensions of the bargeboards and eaves and all dimensions – e.g. valley lengths – to be taken into account in determining the surface area.



3 Specification of ridge position and water run-off direction

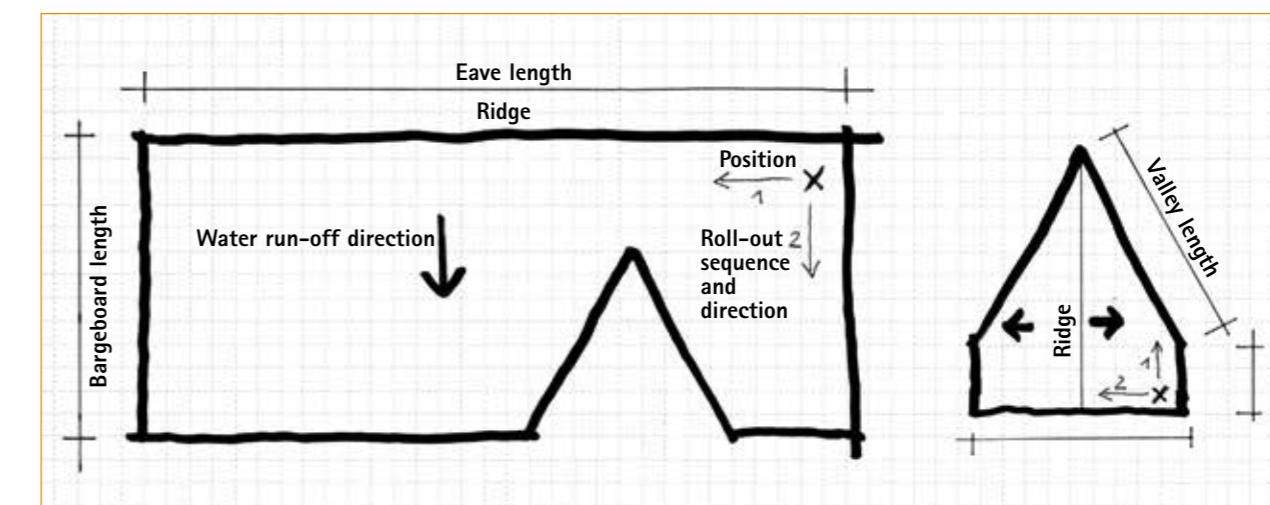
Please indicate on your drawing the position of the ridge with a line and the water run-off direction with a direction arrow.



4 Specification of positioning and roll-out direction (longitudinal and perpendicular)

The pre-fabricated sheeting is generally delivered to your building site as a package that is rolled in two directions. Have you planned a specific roll-out position, direction and sequence? If so, please mark the positioning point with a cross. Ideally, you should indicate the sequence of roll-out directions with arrows and sequential numbering (1, 2).

This example provides guidance:



Order and inquiry form

The order form can be accessed online at:
proclima.info/en/caws-formular



Note

If you have any questions on this service, please contact our Technical Support: [see page 15](#)

Technical specs



SOLITEX WELDANO® 3000 / WELDANO®-S 3000 / WELDANO® INCAV / INVEX

Membrane, both sides	Polyurethane
Substructure fleece	Polyester
Colour ¹²³	blue
Surface weight ¹²	EN 1849-2
Thickness ¹²³	EN 1849-2
Strip length ³	150 mm ; 5 7/8"
Water vapour resistance factor μ^{12}	EN ISO 12572
s_d value ¹²³ / g value ¹²³	EN ISO 12572
Vapour permeance ¹²³	ASTM E 96
Fire rating ¹²³	EN 13501
Outdoor exposure ¹²³	4 months
Hail impact resistance class (Switz.) ¹²	VKF / AEAI ¹²
Minimum roof pitch ¹²	3°
Water column ¹²³	EN ISO 811
Watertightness non-aged/aged ^{*123}	EN 13859-1 / EN 1928, GHS
Resistance to driving rain ¹²	TU Berlin, GHS
Tensile strength MD/CD ¹²	EN 13859-1 (A)
Tensile strength MD/CD aged ^{*12}	EN 13859-1 (A)
Elongation MD/CD ¹²	EN 13859-1 (A)
Elongation MD/CD aged ^{*12}	EN 13859-1 (A)
Nail tear resistance MD/CD ¹²	EN 13859-1 (B)
*) Durability after artificial ageing with 5,000 h of UV ageing instead of 336 h ¹²³	EN 1297 / EN 1296
Flexibility at low temperature ¹²³	EN 1109
Abrasion-resistance ¹²	GHS
Temperature resistance ¹²³	permanent -40 °C to 100 °C; -40 °F to 212 °F
Thermal conductivity ¹²	0.04 W/(m·K) ; 0.3 BTU·in/(h·ft²·F)
Sub-roof underlay (Switz.) ¹	SIA 232/1
Sub-roof underlay (Germany) ¹	on an individual contractual basis
Roofing underlay membrane ¹	ZVDH-Produktdatenblatt
Temporary roof covering; suitable as ... ¹	ZVDH
CE labelling ¹²	EN 13859-1

¹ SOLITEX WELDANO 3000 ² SOLITEX WELDANO-S 3000 ³ WELDANO INCAV / INVEX

WELDANO® ROFLEX / WELDANO® ROFLEX PLUS

	WELDANO ROFLEX	WELDANO ROFLEX PLUS
Material	Polyurethane	Polyurethane-polyester composite, middle part extendible
Colour	blue	blue / anthracite
Thickness	-	2 mm ; 79 mils
Pipe diameter	90 - 125 mm ; 3.5" - 5"	90 - 125 mm ; 3.5" - 5"
s_d value / g value	-	0.6 m / 3 MN·s/g
Vapour permeance	-	5.5 US perms
Outdoor exposure	3 months	3 months
Temperature resistance	permanent -40 °C - 80 °C; -40 °F - 176 °F	permanent -40 °C - 100 °C; -40 °F - 212 °F

SOLTEMPA

3 x Fleece	Polypropylene microfibre
2 x Membrane	monolithic TEEE
Adhesive	special acrylate adhesive
Release film	silicone coated PE film, split 30/250 mm
Colour	black
Surface weight	EN 1849-2
Thickness	EN 1849-2
Water vapour resistance factor μ	EN ISO 12572
s_d value / g value	EN ISO 12572
Vapour permeance	18.2 US perms
Fire rating	EN 13501-1
Outdoor exposure	6 months, permanent against diffuse UV light in the eave area
Water column	EN ISO 811
Watertightness, non-aged/aged*	EN 13859-1
Tensile strength MD/CD	EN 13859-1 (A)
Tensile strength MD/CD, aged*	EN 13859-1 (A)
Elongation MD/CD	EN 13859-1 (A)
Elongation MD/CD, aged*	EN 13859-1 (A)
Nail tear resistance MD/CD	EN 13859-1 (B)
*) Durability after artificial ageing with 10,000 h of UV ageing instead of 5,000 h	EN 1297 / EN 1296
Flexibility at low temperature	EN 1109
Temperature resistance	permanent -40 °C to 100 °C ; -40 °F to 212 °F
Thermal conductivity	0.04 W/(m·K)
CE labelling	EN 13859-1

WELDANO® TURGA

Component	Tetrahydrofuran (90 %), Cyclohexanone (10 %)
Colour	transparent
Application temperature	> 0 °C, optimally 18-20 °C ; 32 °F, optimally 64-68 °F
Storage	15 °C to 25 °C ; 60 °F to 77 °F, dry and well ventilated, only in the original container, keep away from heat and sources of ignition



Supply forms

SOLITEX WELDANO® 3000 / WELDANO®-S 3000

Diffusion-open weldable roof lining membrane / Diffusion-open weldable roof lining strips

Product	Art.-No.	GTIN	Length	Width	Surface	Weight	SU	UE/pal.
SOLITEX WELDANO 3000	1AR03191	4026639231918	50 m	1.50 m	75 m ²	29 kg	1	20
SOLITEX WELDANO 3000	1AR03194	4026639231949	25 m	3.00 m	75 m ²	29 kg	1	20
SOLITEX WELDANO 3000	1AR03197	4026639231970	400 m	3.00 m	1200 m ²	408 kg	1	1
SOLITEX WELDANO-S 3000	1AR03198	4026639231987	25 m	0.375 m	9.375 m ²	3.45 kg	2	96

WELDANO® INCAV / INVEX

Shaped elements for interior/exterior corners

Product	Art.-No.	GTIN	Strip length	Strip width	Weight	SU
SOLITEX WELDANO INCAV	16361	4026639163615	15 cm	15 cm	0.15 kg	4
SOLITEX WELDANO INVEX	16366	4026639163660	15 cm	15 cm	0.285 kg	4

WELDANO® ROFLEX

Pipe grommet

Art.-No.	GTIN	Length	Width	for ø pipes	Weight	SU
16371	4026639163714	0.26 m	0.26 m	90-125 mm	0.085 kg	1

WELDANO® ROFLEX PLUS

Pipe grommet

Art.-No.	GTIN	Length	Width	for ø pipes	Weight	SU
1AR00452	4026639204523	480 mm	480 mm	90-125 mm	0.25 kg	1

SOLTEMPA

Full-surface adhesive sealing strip

Art.-No.	GTIN	Length	Width	Weight	SU
1AR02259	4026639222596	30 m	280 mm	3,5 kg	1

WELDANO® TURGA

Welding liquid

Art.-No.	GTIN	Content	Coverage for width: min. 30 mm (1.2")	kg/SU	SU	SU/pal.
16436	4026639164360	1 litre	approx. 200-250 m	0.925 kg	6	48

Bottle with brush 500 ml

Tool for application, ROLLFIX Roller

Product	Art.-No.	GTIN	Volume	Width	SU
Bottle with brush	16440	4026639164407	500 ml	(Brush) 35 mm	1
ROLLFIX	16439	4026639164391	-	(Roll) 40 mm	1



Technical support

Building physics, construction, systems or products – our technical experts in the areas of timber and general construction can help you quickly and simply in an expert manner and help you find solutions for cost-effective, reliable buildings that will deliver healthy living environments.

- ✓ Quick answers to your questions on construction and building physics
- ✓ pro clima's application engineers can help you with their specialist knowledge
- ✓ Advice on applications and use of systems and products
- ✓ Checking and evaluation of structures and components

Phone (EN): +49 (0) 62 02 – 27 82 45

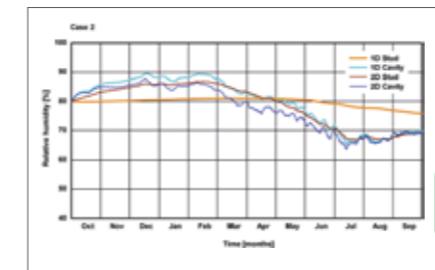
Contact information to access technical support in a range of countries:

proclima.com/service/technical-support

Component tests and building-physics assessments

Feel free to contact us with your questions on the moisture-related evaluation of components. We can check and evaluate your building components – including flat-roof structures with complex building-physics behaviour – and provide reassurance in terms of your liability as an advisor.

- ✓ Quick, free-of-charge evaluation of the moisture-related behaviour of components.
- ✓ Greater reassurance and reduced liability for your advice services
- ✓ Testing and evaluation with building-physics software from the Fraunhofer Institute for Building Physics
- ✓ Walls, ceilings/floors, pitched roofs
- ✓ Also for structures with complex building-physics behaviour, e.g. flat roofs



pro clima
Tested and recommended



MOLL

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Your pro clima partner