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SOUDATHERM ROOF

The fastest roof bonding system

SOUDAL - Experts in sealants, foams and adhesives

Founded in 1966 by current Chairman Vic Swerts, Soudal has grown at over 10% per year, every year. Its success is based on the quality of its products and its ability to stay at the cutting edge of technology through innovation.

Quality

Every week 3 million cartridges are manufactured in over one million square feet of highly automated production facilities on various continents according to exacting quality standards. To maintain these standards, Soudal became the first company in its industry to achieve the ISO9001 quality certification. Product consistency and full traceability are therefore ensured across the huge range of over 1000 chemical formulations.

Innovation

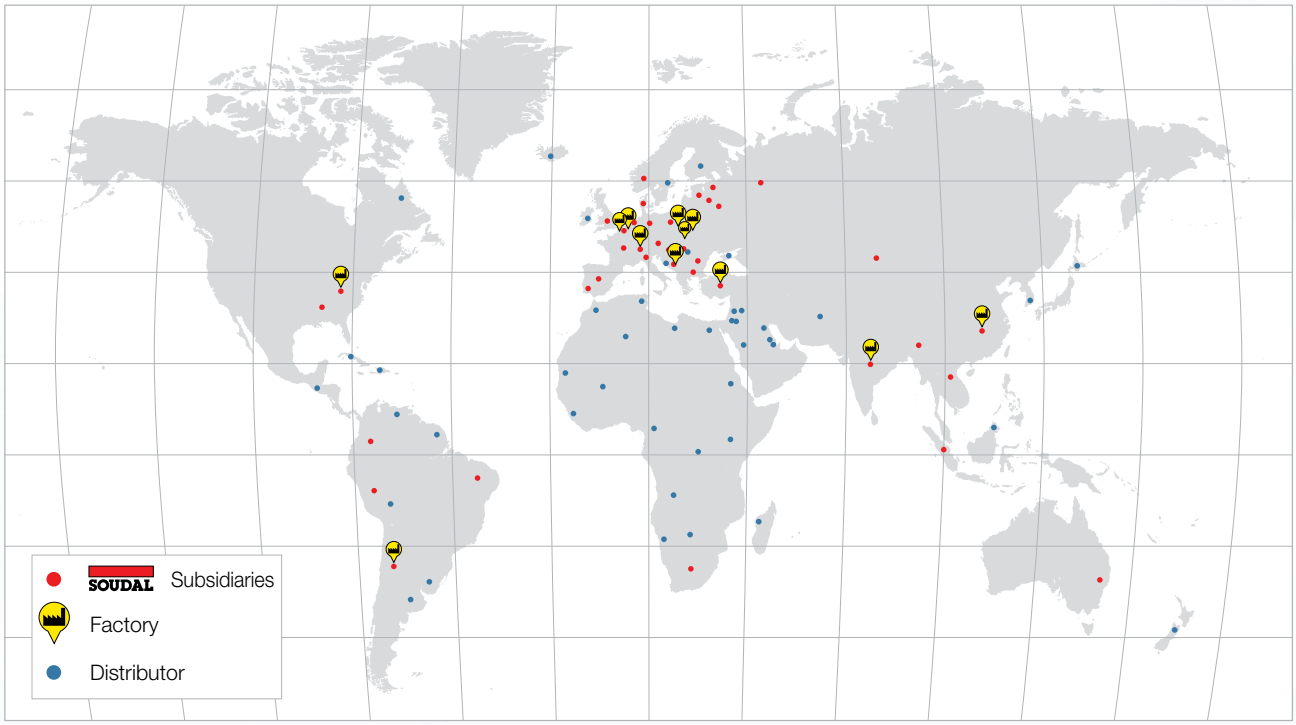
Highly qualified scientists, engineers and application technicians develop state of the art formulas, packaging and accessories to perfectly suit the demands of both the market and end users. Driven by the will to continuously improve and to provide better and more environmentally friendly solutions for its customers, Soudal is leading from the front in product innovation.

Commitment to customers

Apart from offering an extensive range of high quality products, Soudal offers ongoing commitment to providing outstanding service, guaranteed delivery times and a personalised approach to on-going partnerships with existing customers. Soudal's legendary flexibility in production and logistics stands it in good stead. Technical support is also a vital component of Soudal's commitment to customer service. This approach to customer service, together with an innovative and high quality product range has proved to be a winning formula.

Soudal Worldwide

Soudal is a leading independent global manufacturer of sealants, adhesives, PU foams and building chemicals for the construction, retail and industrial markets, with over 40 subsidiaries and sales to more than 130 countries worldwide, on all continents. Soudal is constantly listening to its customers and provides tailor- made solutions for the professional and DIYer alike.



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SOUDATHERM ROOF 330
Polyurethane foam adhesive in a canister

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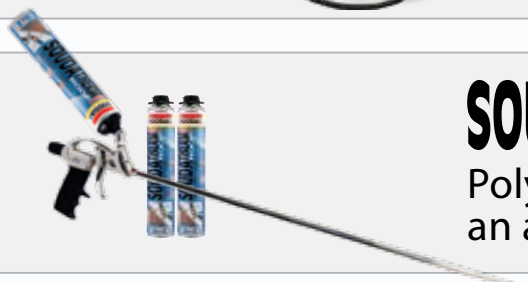

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Polyurethane foam adhesive in an aerosol can

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Summary table

SOUDATHERM ROOF 330

Polyurethane foam adhesive in a canister

Moisture curing one-component PU adhesive for the efficient, clean, economical and durable bonding of roof insulation panels.

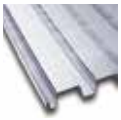
Insulation materials:

- Expanded polystyrene (EPS)
- PIR-/PUR covered with:
  - Mineral-coated glass fibre
  - Bituminous glass fibre
  - Aluminium*
- Mineral insulation boards (e.g. Perlite, Multipor®, Fermacell®, …)
- Mineral wool

* Consult the insulation manufacturer's technical data for confirmation that insulation materials are suitable for bonding.

Surfaces**

Old bituminous roofing felts, sand surfaced or chipped

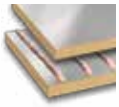

Steel roof decks

Bituminous vapour barriers

Concrete, fibre cement, cellular concrete, wooden boards, hard PVC, plaster

Aluminium coated vapour barriers***

Use on both even and uneven surfaces


Insulation on insulation e.g. in multi-layer and tapered systems

Vertical and horizontal application

** Not suitable for use on vapour barriers containing PE, PP or PTFE (Teflon)

*** Check the technical data sheet of the vapour barrier to make sure it is suitable for insulation bonding.

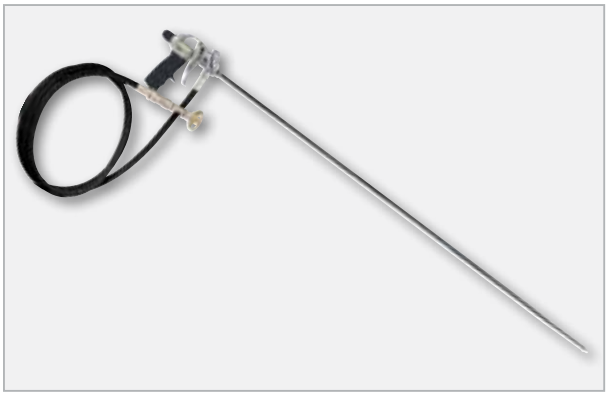
Characteristics:

- 1 canister of Soudatherm Roof 330 can bond up to 120 m^2 of insulation boards (When using the Soudatherm Roof Applicator Gun)
- Extreme time saving: more than 50% faster to apply than traditional liquid PU adhesives
- Gluing and joint filling
- Fast & efficient completion of large scale roofing projects.
- Ideal solution for the renovation of old bituminous rooftops
- Fast curing: fully cured after 1 hour
- Economical consumption: can be dosed and applied exactly as required
- No perforation of surface or vapour barrier
- Avoids the risk of creating cold bridges
- Gap filling capacity (up to 1cm under an insulation panel)
- Excellent thermal insulation: thermal conductivity: 0.036W/m.K
- An enormous reduction in weight and space saving
- Resistant to wind uplift (tested by WTCB, BDA)
- Flexible once cured, not brittle like traditional adhesives
- No solvent content so fully compatible with polystyrene (PS)
- Open time: +/- 8 min. (depends on temperature and relative humidity)
- Curing time: Up to c.1 hour (depends on temperature and relative humidity)
- Surface temperature: above 5°C
- Product temperature (canister): minimum +10°C, ideal above +15°C (for optimal extrudability and yield in m^2)
- Shelf life: 18 months

Soudatherm Roof 330 Applicator Guns

2 versions: barrel lengths 60 cm and 100 cm

- Length of the hose: 200 cm
- Ergonomic use
- Exact dosing, for the optimal yield: 120 m^2/canister
- Low expansion
- Internal Teflon coating prevents curing inside the gun
- After use: Lock gun and leave the pressure on the system (do not close the valves on the canister or hose). The system can be stored like this for a time span of up to 2 weeks without the risk of internal curing.
- The gun and hose can be cleaned with Soudal Gun & Foam Cleaner and the special cleaning adaptor that is supplied with the guns.



Soudatherm Roof 330 Replacement hose

- Length of the hose: 200 cm

Soudatherm Roof 330 Cleaning Adaptor

- Allows guns and hoses of **Soudatherm Roof 330** to be cleaned with Soudal Gun & Foam Cleaner
- Included in the box of the gun
- Also sold separately (per 3 pcs)

Soudal Gun & Foam Cleaner

- Fast removal of non-cured PU Foam and PU Adhesives on non-porous surfaces, tools, materials and accessories.
- For internal and external cleaning of gun, hose, valve and adaptor
- Attach the Cleaning Adaptor, flush the hose and gun completely with Soudal Gun & Foam Cleaner.
- Detach Soudal Gun & Foam Cleaner immediately after the cleaning session.
- Make sure no cleaning agent remains in the hose and gun after the session.

Soudatherm Roof Backpack

- Especially developed for efficient use of canisters of Soudatherm Roof
- Less interruptions to work, faster application, better movement

Soudatherm Tank Heater

- Avoids a lower yield at temperatures
- The canister is completely emptied
- 100% safe heating
- Low power consumption in watts = lower heating costs
- Electrical supply can be connected to the cigarette lighter socket
- Can also be used to heat up a canister (takes + - 2 hours)
- 1 year warranty (2 years for 220V / 12V adapter)

Soudatherm Roof 330 is already successfully tested on wind uplift resistance at:

Insulation	Logo Insulation	Vapour barrier	Surface	Test certificats	ATG
Recticel Eurothane Bi3 (PUR bituminous glass fibre)	RECTICEL insulation	—	Steeldeck	CAR 11071-1 & CAR 11090-R	atg
Recticel Eurothane Silver (PIR aluminium)	RECTICEL insulation	—	Steeldeck	CAR 11071-2 & CAR 11087-1	atg
Recticel Eurothane Silver (PIR aluminium)	RECTICEL insulation	Resitrix Alutrix 600	Steeldeck	BDA 0273-L-14/1	
Recticel Powerdeck F (PIR mineral-coated glass fibre)	RECTICEL insulation	—	Steeldeck	CAR 11087-2 & CAR 11320	atg
Kingspan TR24 (PIR mineral-coated glass fibre and bituminous glass fibre)	Kingspan	Royalvap Alu ZK	Steeldeck	BDA 0004-L-14/1	
Kingspan TR27 (PIR mineral-coated glass fibre)	Kingspan	—	Steeldeck	BDA 0268-L-12/1	
Kingspan TR27 (PIR mineral-coated glass fibre)	Kingspan	Icopal Eshabase TK40	Wood	BDA 0116-L-13/1	
Kingspan TR27 (PIR mineral-coated glass fibre)	Kingspan	Resitrix Alutrix 600	Steeldeck	BDA 0078-L-13/1	
Kingspan TR27 (PIR mineral-coated glass fibre)	Kingspan	Royalpol260P14	Concrete	BDA 0007-L-14/1	
Unilin Utherm Roof PIR-L (PIR aluminium)	UNILIN FOR SMART LIVING	—	Steeldeck	BDA 0098-L-13/1	
Rockwool Rhinoxx (MWR with mineral-coated glass fibre on the upper side)	ROCKWOOL®	—	Hercuton TT concrete	BDA 0274-L-14/1	
Knauff DDP (naked MWR)	KNAUF	Soprema Sopravap Fix Alu TS	Wood	BDA 0294-L-13/1	
Knauf Thane MulTTi (PIR Alu-Kraft)	KNAUF	Resitrix Alutrix 600	Wood	CAR 15106	
Kemiroof EPS100 (naked EPS)	KEMISOL ISOLATIE	—	Steeldeck	BDA 0099-L-12/1	
Isobouw Polytop HR 2100 (EPS bituminous glass fibre on the upper side)	IsoBouw	Royalpol260P14	Concrete	BDA 0006-L-14/1	
Isobouw Polytop^{HR} Flex (EPS^{HR} mineral coated glass fibre on the upper side)	IsoBouw	Royalpol260P14	Concrete	BDA 0355-L-14/1	
PH-EPS 100 (naked EPS)	Dämmen ist PHILIPPINE ZUKUNFT	—	Hercuton TT concrete	BDA 0111-L-12/1	
Wiporit EPS (naked EPS)	JAEGER Spezial-Dämmstoffe	Resitrix Alutrix 600	Wood	BDA 0208-L-15/1	
Linitherm PAL (SK) (PIR aluminium)	LINITHERM® insulation systems	Mogat G200 DD	Wood	BDA 0293-L-13/1	
IKO enertherm Alu (PIR aluminium)	IKO enertherm	MEPS 25PV/SPP	Wood	CAR 15137	

Summary of August 2015. For an update of this review and calculation values Technical Service can be contacted via ts@soudal.com.

On systems that are not listed in the above table, a combination with a recommended adhesive consumption can be approved by Technical Service (ts@soudal.com).

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SOUDATHERM ROOF 250

Polyurethane foam adhesive in an aerosol can

Moisture curing one-component PU adhesive for the efficient, clean, economical and durable bonding of roof insulation panels.

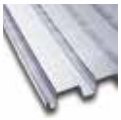
Insulation materials:

- Expanded polystyrene (EPS)
- PIR-/PUR covered with:
  - Mineral-coated glass fibre
  - Bituminous glass fibre
  - Aluminium*
- Mineral insulation boards (e.g. Perlite, Multipor®, Fermacell®, …)
- Mineral wool

* Consult the insulation manufacturer's technical data for confirmation that insulation materials are suitable for bonding.

Surfaces**

Old bituminous roofing felts, sand surfaced or chipped

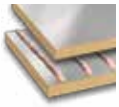

Steel roof decks

Bituminous vapour barriers

Concrete, fibre cement, cellular concrete, wooden boards, hard PVC, plaster

Aluminium coated vapour barriers***

Use on both even and uneven surfaces


Insulation on insulation e.g. in multi-layer and tapered systems

Vertical and horizontal application

** Not suitable for use on vapour barriers containing PE, PP or PTFE (Teflon)

*** Check the technical data sheet of the vapour barrier to make sure it is suitable for insulation bonding.

Characteristics:

- 1 can of Soudatherm Roof 250 can bond up to 12 m^2 of insulation boards
- Extreme time saving: more than 30% faster to apply than traditional liquid PU adhesives
- Gluing and joint filling
- Fast & efficient completion of large scale roofing projects
- Ideal solution for the renovation of old bituminous rooftops
- Fast curing: fully cured after 1 hour
- Economical consumption: can be dosed and applied exactly as required
- No perforation of surface or vapour barrier
- Avoids the risk of creating cold bridges
- Gap filling capacity (up to 1cm under an insulation panel)
- Excellent thermal insulation: thermal conductivity: 0.036W/m.K
- An enormous reduction in weight and space saving
- Resistant to wind uplift (tested by IFI, BDA)
- Flexible once cured, not brittle like traditional adhesives
- No solvent content so fully compatible with polystyrene (PS)
- Open time: +/- 8 min. (depends on temperature and relative humidity)
- Curing time: Up to c.1 hour (depends on temperature and relative humidity)
- Surface temperature: above 5°C
- Product temperature (can): minimum +5°C, ideal above +10°C (for optimal extrudability and yield in m^2)
- Shelf life: 18 months

Soudatherm Roof 250 applicator guns

2 versions: barrel lengths 60 cm and 100 cm

- Inclined adaptor for maximum yield
- Ergonomic use
- Exact dosing, for the optimal yield: 12 m^2/canister
- Low expansion
- Internal Teflon coating prevents curing inside the gun
- After use: Lock the gun with the screw at the back
- The gun and hose can be cleaned with Soudal Gun & Foam

Soudal Gun & Foam Cleaner

- Fast removal of non-cured PU Foam and PU Adhesives on non-porous surfaces, tools, materials and accessories.
- For internal and external cleaning of gun, hose, valve and adaptor
- Attach the Cleaning Adaptor, flush the hose and gun completely with Soudal Gun & Foam Cleaner.
- Detach Soudal Gun & Foam Cleaner immediately after the cleaning session.
- Make sure no cleaning agent remains in the hose and gun after the session.

Soudatherm Roof 250 is already successfully tested on wind uplift resistance at:

Insulation	Logo Insulation	Vapour barrier	Surface	Test certificats
EPS 040	KNAUF	AL+G200 S4	Steeldeck	IFI 22-09
Recticel Powerdeck F (PIR mineral-coated glass fibre)	RECTICEL insulation	Resitrix Alutrix 600	Steeldeck	IFI 23-09
Linitherm PAL (SK) (PIR aluminium)	LINITHERM® insulation systems	—	Insulation on insulation on Steeldeck	BDA 0293-L-13/1
Rockwool Bondrock MV (MWR with mineral-coated glass fibre on the upper side)	ROCKWOOL®	Hassodritt vapor	Steeldeck	BDA 0197-L-14/1

Summary of October 2014. For an update of this review and calculation values Technical Service can be contacted via ts@soudal.com.

On systems that are not listed in the above table, a combination with a recommended adhesive consumption can be approved by Technical Service (ts@soudal.com).

SOUDATHERM ROOF 170

Liquid polyurethane adhesive in a tin can

Moisture curing one-component PU adhesive for the efficient, clean, economical and durable bonding of roof insulation panels.

Insulation materials:

- Expanded polystyrene (EPS)
- PIR-/PUR covered with:
  - Mineral-coated glass fibre
  - Bituminous glass fibre
  - Aluminium*
- Mineral insulation boards (e.g. Perlite, Multipor®, Fermacell®, …)
- Mineral wool

* Consult the insulation manufacturer's technical data for confirmation that insulation materials are suitable for bonding.

Surfaces**

Old bituminous roofing felts, sand surfaced or chipped

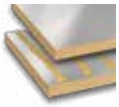
Concrete, fibre cement, cellular concrete, wooden boards, hard PVC, plaster

Bituminous vapour barriers

Only suitable for even surfaces

Aluminium coated vapour barriers***

Only suitable for horizontal application


Insulation on insulation e.g. in multi-layer and tapered systems

** Not suitable for use on vapour barriers containing PE, PP or PTFE (Teflon)

*** Check the technical data sheet of the vapour barrier to make sure it is suitable for insulation bonding.

Characteristics:

- Yield: +/- 6m² / kg, minimal 3 to 4 beads / m²
- Curing time: 2 – 6h
- Ready-to-use, 1 component
- Very high bond strength
- Resistant to wind uplift (tested by IFI)
- Moisture curing
- No solvents, so fully compatible with EPS
- Safe, no risk of fire
- Permanent elasticity, doesn't become brittle
- Minimal expansion, limited gap filling (Soudatherm Roof 250 and Soudatherm Roof 330 are better solutions for uneven surfaces up to 1 cm/m²)
- Ideal solution for mineral wool on flat roofs
- For vertical applications, use Soudatherm Roof 250 or Soudatherm Roof 330
- Avoids the risk of creating cold bridges
- No perforation of surface or vapour barrier
- No visible interior mechanical fixings when used on steel roof decks
- In insulation bonding, the cost per m² is not influenced by the thickness of the insulation
- Minimal surface temperature +5°C
- Minimal product temperature +5°C (for optimal yield and viscosity)
- Open time: max 30 Min (depends on temperature and relative humidity)
- Packaging: 2,2 kg and 5,5 kg
- Shelf life: 12 months

Soudatherm Roof 170 is already successfully tested on wind uplift resistance at:

Insulation	Logo Insulation	Vapour barrier	Surface	Test certificats
Rockwool Bondrock MV (MWR with mineral-coated glass fibre on the upper side)	ROCKWOOL®	AL+G200 S4	Steeldeck	IFI 21-09

Summary of October 2014. For an update of this review and calculation values Technical Service can be contacted via ts@soudal.com.
On systems that are not listed in the above table, a combination with a recommended adhesive consumption can be approved by Technical Service (ts@soudal.com).

Summary table

SOUDATHERM ROOF

Insulation	330	250	170	Mechanical fixing	Hot bitumen	Cold bitumen
PIR-/PUR covered with Mineral-coated glass fibre	✓	✓	✓	✓	✓	✓
PIR-/PUR covered with Bituminous glass fibre	✓	✓	✓	✓	✓	✓
PIR-/PUR covered with Aluminium	✓	✓	✓	✓	✓	✓
Expanded polystyrene (EPS)	✓	✓	✓	✓	✗	✗
Mineral wool	✓	✓	✓	✓	✓	✓
Multilayer, insulation on insulation	✓	✓	✓	✓	✓	✗

Surfaces

Old bituminous roofing felts	✓	✓	✓	✓	✓	✓
Concrete surface	✓	✓	✓	✗	✓	✓
Wooden surface	✓	✓	✓	✓	✓	✓
Steel roof deck	✓	✓	✓	✓	✗	✗
Aluminium coated vapour barrier	✓	✓	✓	✓	✓	✓
Bituminous vapour barriers	✓	✓	✓	✓	✓	✓
Vertical application	✓	✓	✗	✓	✗	✗

Temperature

Minimal surface temperature	5°C	0°C	5°C	< 0°C	< 0°C	5°C
Minimal product temperature	10-15°C	5-10°C	5-10°C	< 0°C		5°C

Summary table

✓ The best solution
✓ Possible, but not recommended
✗ Not recommended

Remarks
• For glued roofs delamination strength of the facing should be at least 80 kPa (TR 80)
• For glued roofs delamination strength of the facing should be at least 80 kPa (TR 80) • If there is a polypropylene fleece, this must first be burned away
• delamination strength of at least 80 kPa (TR 80) and Alu not coated with PE or PP • The insulation panel must be approved for bonding by the manufacturer
• Only use solvent-free adhesives • Soudatherm Roof 170 contains no solvents, unlike several other PU adhesives on the market
• Liquid glue penetrates better into the mineral wool • Liquid glue only to be used at a flat surface • When using Soudatherm Roof 330, we recommend to use the Soudatherm Roof Applicator • When using Soudatherm Roof 250 we recommend to spray thicker beads (diameter of 4 to 5 cm) with the Soudatherm Roof Gun
• With mechanical fixing, longer screws result in a higher cost per square meter. The cost per sqm for a glued roof is independent of the thickness of the insulation board.
• Liquid adhesives do not fill any irregularities, only applicable on flat surfaces • With mechanical fixing there is a possibility of damaging electrical wires
• It is very labour-intensive and time-consuming to drill in concrete
• The liquid adhesive can drain from the edges • For steel deck it is recommended to use flexible products because of the movement of the steel deck
• Perforating of vapour barriers can cause cold bridges. Make sure the vapour barrier is permitted for a glued roof by the manufacturer
• Perforating of vapour barriers can cause cold bridges
• The liquid adhesive or bitumen can drain from the edges
• At lower temperature brittleness results in poor adhesion
• At low temperatures the efficiency and workability decreases.

Summary table

SOUDATHERM ROOF

Characteristics	330	250	170	Mechanical fixing	Hot bitumen	Cold bitumen
Easy to use	✓	✓	✓	✓	✗	✗
The cost per m^2 is not influenced by the thickness of the insulation	✓	✓	✓	✗	✓	✓
Adhesive foam is a perfect insulator: also for filling the joints	✓	✓	✗	✗	✗	✗
No cold bridges	✓	✓	✓	✗	✓	✓
No perforation of surface or vapour barrier	✓	✓	✓	✗	✓	✓
No visible mechanical fixations on the inside of the building	✓	✓	✓	✗	✓	✓
No possible damage to electrical wiring	✓	✓	✓	✗	✓	✓
Flat membrane surface	✓	✓	✓	✗	✓	✓
No noise nuisance	✓	✓	✓	✗	✓	✓
No additional power source needed	✓	✓	✓	✗	✗	✓
Flexible once cured, not brittle	✓	✓	✗	✗	✗	✗
Economical consumption: can be dosed and applied exactly as required	✓	✓	✗	✓	✗	✗
No product loss during application	✓	✓	✗	✓	✗	✗
No long work interruptions or long cleaning procedures	✓	✓	✗	✓	✗	✗
Fast & efficient completion of large scale roofing projects	✓	✓	✗	✓	✗	✗
No odour nuisance	✓	✓	✓	✓	✗	✗
Minimal waste	✓	✗	✗	✓	✗	✗
Gap filling capacity on uneven surfaces	✓	✓	✗	✗	✗	✗
40% more expansion when using the Soudatherm Applicator, easy to use with renovation or with mineral wool	✓	✗	✗	✗	✗	✗
No solvent content so fully compatible with polystyrene	✓	✓	✓	✓	✗	✗
Safe, no risk of fire	✓	✓	✓	✓	✗	✗
Good resistance to freeze and dew cycles	✓	✓	✓	✓	✓	✓
Curing time	✓ 1h	✓ 1h	✓ 6h	✓ 0h	✗ >6h	✗ >6h
Possible to burn the membrane to the insulation (without deformation of the panel) after ...	✓ 1h	✓ 1h	✓ 6h	✓ 0h	✗ >6h	✗ >6h

Summary table

✓ The best solution
✓ Possible, but not recommended
✗ Not recommended

Remarks
• Longer screws result in a higher cost per sqm
• With mechanical fixing there is a possibility of damaging electrical wires
• For glued roofs, the roofing membrane will lie perfectly flat • This ensures that it is easier to sweep away snow or leaves
• It is possible to perform the work in public buildings during working hours without noise
• Important when installing insulation on a steel deck, the flexibility absorbs the movement of the steel deck
• When using the Soudatherm Roof Guns, one can be start and stop when he wants
• Soudatherm Roof guns close at the nozzle, so no product loss
• Canisters and aerosols with adhesive foam can be quickly and easily replaced
• The empty perforated canisters Soudatherm Roof 330 can be recycled as scrap metal
• Adhesive Foam can absorb irregularities better by its stable foam structure
• For large irregularities or mineral wool the Soudatherm Roof Applicator can be used • When using Soudatherm Roof 250 thicker beads must be sprayed
• Soudatherm Roof 170 contains no solvents, unlike several other PU adhesives on the market
• Soudatherm Roof 250 contains parts of flammable propellants • Soudatherm Roof 330 contains only non-flammable propellant, reducing the risk of fire

SOUDAL

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LOTTO SOUDAL Belgian Cycling Project

Entrepreneur of the Year® 2011
Belgium

Soudal is a leading independent global manufacturer of sealants, adhesives, PU foams and building chemicals for the construction, retail and industrial markets, with over 30 subsidiaries and sales to more than 100 markets worldwide, on five continents. From its base in Tamworth, centrally located in the middle of the UK, Soudal is constantly listening to its customers and provides tailor-made solutions for the professional and DIYer alike.

For more information visit our website: www.soudal.com.

The information provided in this brochure and our technical application instructions provided orally, written or by other means have been created to the best of our knowledge and merely serve as non-binding guidance, also with regard to any third parties. Soudal reserves the right, if considered appropriate, to modify these application instructions without prior notice. The user should always ensure that the most recent version is used. No part of this text may be changed without the consent of Soudal. These application instructions should be used in its entirety to avoid misuse of the products. The instructions are only valid for applications in Belgium and the Netherlands. For application outside this territory or more detailed information please contact the Soudal helpdesk.

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