SOUDAL

Technical Data Sheet

SOUDATHERM ROOF 330

Technical data:

Basis	Polyurethane Adhesive
Consistency	Liquid
Curing system	Moisture curing
Skin formation (20°C and 60% R.H.)*	8 min
Curing time (20°C and 60% R.H.)*	40 min for beads with a diameter of 30mm
Walking on the boards after (20°C and 60% R.H.)*	After 1h (With uneven surfaces)
Burdening after (20°C and 60% R.V.)*	After 1h
Yield	120 m² insulation / canister
Consumption	80 - 100 g/m² (in the context of the ATG)
Temperature resistance	From -40°C to +90°C (for cured product)
Colour	Orange
Fire Rating (DIN 4102 part 1)	B3
Thermal Conductivity (EN 12667)	Ca. 0,036 W/m.K

(*)These values may vary depending on ambient factors such as temperature, humidity and type of substrate

Product:

Soudatherm Roof 330 is a polyurethane foam adhesive in canister format for the efficient, clean, economical and durable bonding of roof insulation panels. The characteristics of this foam adhesive make it also suitable for uneven surfaces. The adhesive can be applied efficiently and quickly with an adjustable gun system.

Characteristics:

- 1 canister of Soudatherm Roof 330 can bond up to 120 m² of insulation boards
- Gap filling capacity (up to 1cm under an insulation panel)
- Adhesive foam is a perfect insulator: also for filling the joints. Thermal conductivity: 0.036W/m.K
- Economical consumption: can be dosed and applied exactly as required
- Extreme time saving: more than 50% faster to apply than traditional liquid PU adhesives
- Open time: Max 8 min. (depends on temperature and relative humidity)
- Fast curing: fully cured after 1 hour
- Also suitable for vertical applications
- Resistant to wind uplift (tested by WTCB, Belgium and BDA, The Netherlands)
- Reduces weight and space
- Excellent adhesive properties
- Resistant to ageing (but not UV resistant)
- No flammable propellants: avoids the risk of fire / explosions on the roof
- No solvent content so fully compatible with polystyrene (PS)
- Flexible once cured, not brittle
- Can be used with surface temperatures from +5°C. Product temperature needs to be at least +10°C. Optimal yield and extrudability with a product temperature above 15°C

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Applications:

Bonding of common insulation materials
- PIR/PUR covered with
  - Mineral-coated glass fibre
  - Bituminous glass fibre (Sand surfaced or chipped, not on burnable PP surfaces)
  - Aluminium
- Expanded polystyrene (EPS)
- Mineral insulation materials (e.g. Perlite, Multipor®, Fermacell®)
- Extruded polystyrene (XPS) / Phenolic foam (PF): Only for the temporary fixation of the insulation in a ballasted roof (before the ballast is placed)
- Mineral wool: Rockwool, Glass wool, … (but on flat surfaces, Soudatherm Roof 170 is a better bonding solution)

On many types of surfaces:
- Insulation on insulation (multi-layer)
- Even and uneven surfaces
- Masonry surfaces (e.g. concrete, fibre cement, cellular concrete)
- Steel roof decks
- Bituminous roofing felts, sand surfaced or chipped
- Wooden boards, hard PVC, plaster, …
- On vapour barriers:
  - Check the technical data sheet of the vapour barrier to make sure it is suitable for insulation bonding
  - To be tested prior to use or used only with approval of the manufacturer of the barrier
  - Bituminous vapour barriers are possible
  - Aluminium coated vapour barriers: only with the approval of the manufacturer
- Doesn't bond to PP, PE or PTFE (Teflon)
- Always perform a prior adhesion test

Application temperature:

- Surface temperature: From +5 °C to +35 °C
- Ambient temperature: From +5 °C to +35 °C
- Canister temperature: From +10 °C to +35 °C (Optimal above +15 °C)

Packaging:

- Canisters of 10,4 kg (net weight)

Colour*:* Orange

Shelf life:

- 18 months in the unopened packaging in a dry location (with a storage temperature from 5°C to 25°C)
- After application, just lock the gun and it's closed. Gun and canister can be kept under pressure for 2 weeks without risk of curing.

Safety recommendations:

- Observe the standard industrial hygiene procedures.
- Wear protective goggles and gloves.
- Remove cured adhesive mechanically, never remove with a flame.
- For further information on product safety and handling, refer to the information on the container.

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Test reports:

- WTCB CAR11087/1:
  Recticel EUROTHANE SILVER on Steeldeck
- WTCB CAR11071/1:
  Recticel EUROTHANE Bi3 on Steeldeck
- WTCB CAR11071/2:
  Recticel Eurothane Silver on Steeldeck
- WTCB CAR11087/2:
  Recticel POWERDECK F on Steeldeck
- BDA 0268-L-12/1:
  Kingspan TR27 on Steeldeck
- BDA 0111-L-12/1:
  Kemiroof EPS 100 on beton
- BDA 0099-L-12/1:
  PH-EPS 100 on Steeldeck
- BDA 0098-L-13/1:
  Unilin Utherm Roof PIR-L on Steeldeck
- BDA 0116-L-13/1:
  Kingspan TR27 on Iconal Eshabase TK 40
- BDA 0078-L-13/1:
  Kingspan TR27 on PDT ALUTRIX 600/FR
- Carlisle Eurone 28/08/2012:
  MWR - BONDROCK MV on PDT ALUTRIX 600/FR
- Carlisle Eurone 08/08/2013:
  Recticel Powerdeck F on PDT ALUTRIX 600/FR
- BDA 0294-L-13/1:
  Knauf DDP on Sonravap Fix Alu TS1000
- BDA 0293-L-13/1:
  Linitherm PAL (SK) on Mogaplan DS PYE V 60 AL
- BDA 0004-L-14/1:
  Kingspan TR24 on Royalvap ALU ZK
- BDA 0274-L-14/1:
  Rockwool Rhinoxx on beton
- BDA 0007-L-14/1:
  Kingspan TR27 on Royalpol 260P14
- BDA 0006-L-14/1:
  Isobouw Polyton^{HR} 2400 on Royalpol 260P14
- BDA 0273-L-14/1:
  Recticel EUROTHANE SILVER on ALUTRIX 600/FR
- BDA 0208-L-14/1:
  Wiporit EPS on Alutrix 600/FR
- BDA 0355-L-14/1:
  Isobouw Polyton^{HR} Flex on Royalpol 260P14
- BDA 0293-L-10/11:
  Renolit Alkortec A35198 on Recticel Powerdeck F
- BDA 0363-L-19/1:
  Firestone Resista AK on Firestone V-Gard
- BDA 0015-L-18/1:
  IsoBouw Flachdach-Dämmplatte EPS 035 DAA dh150 on Hasse Hasodritt Vapor
- WTCB CAR15106:
  Knauf Thane MulTTi on ALUTRIX 600/FR
- WTCB CAR11320:
  Recticel Powerdeck F on Steeldeck
- WTCB CAR14180/1:
  Unilin Utherm Roof PIR K FRA 80 on Sonrema Elastonhene 25
- WTCB CAR 15137:
  IKO Enertherm Alu on MEPS 25
- WTCB CAR15292:
  Recticel Autonro Si on Axter Hyrene SPOT
- WTCB CAR19-070-02:
  Unilin Utherm Roof PIR K FRA 80 on Siplast Irex Profil
- WTCB CAR19-233-02:
  Unilin Utherm Roof PIR K FRA 80 on Imper Unovel 25 E G

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Working method:

- The materials should be clean and free of dust and grease. Loose parts should be removed and the surface should be coated with a primer if necessary.
- For renovation and especially ballasted roofs, make sure the bonding surface is firmly attached to the substructure.
- At least 4 beads / m² (30mm diameter) should be applied (80 to 100 g/m²). On the corners and the edges of the roof, at least 8 beads are recommended. The correct number of beads (and thus the usage of adhesive) can be calculated according to EN 1991-1-4. The region, the roof area, the location and structure height and also the location on the roof (middle, corners or edges) are factors that have to be taken into account.
- On uneven surfaces (for example old bituminous roofing felts), more adhesive (thicker beads up to 50 mm or beads extruded with the Soudatherm Applicator) needs to be applied in order to make sure that there is at least 40% adhesive transfer between surface and insulation panel. The maximal acceptable unevenness beneath the insulation panels is 1 cm.
- In the case of steeldeck, the adhesive is applied in beads on the top (upper side) of the steeldeck. In case that a vapor barrier is present on the steeldeck, the adhesive should still be applied on the top (upper side) of the steeldeck in beads and not in e.g. a zigzag pattern between the tops.
- When the boards are pulled back or displaced during the curing of the adhesive (and the filling adhesive layer is broken), it's necessary to apply extra adhesive to get a good bond.
- Cured adhesive should be removed mechanically.
- The installer must ensure that the adhesive is fully cured before the membrane is applied to the insulation board.
- After 30 minutes, the roofing membrane can be placed on the insulation panels. Limit walking on the panels to a minimum during the first 60 minutes (Certainly with uneven surfaces).

1. Close the Applicator Gun
   - The Applicator Gun has to be locked before being connected to the canister
   - The screw at the back of the gun has to be closed completely, by turning clockwise

2. Clean the nozzle
   - Check the nozzle for cured product
   - If there is any cured product blocking the nozzle, remove it mechanically
   - The Applicator Gun needle has to be completely visible

3. Connect hose to the canister
   - Close valve at the end of the hose
   - Close valve at the ton of the canister (by turning clockwise)
   - Connect the hose to the canister manually
   - Then tighten the hose to the canister with a wrench or spanner until firmly closed
4. Shake canister
   - Canister should be shaken thoroughly for 30 seconds in order to mix the components of Soudatherm Roof 330 completely
   - This assures an optimal adhesive quality and extrudability

- Repeat this action on a regular basis during use of Soudatherm Roof 330 to maintain a consistent quality

5. Open the valves
   - Open the valve on top of the canister by turning anti-clockwise
   - Open the valve at the end of the hose

6. Place canister in Soudatherm Roof 330 Backpack and buckle up
   - The canister is best carried in the specially designed backpack
   - The canister can be fixed with the safety buckle
   - The position on the back can be adjusted with the straps of the backpack for optimal comfort

7. Apply adhesive
   - Open the black screw at the back of the gun until the beads have the desired shape when pulling the trigger
   - We advise a preliminary test is undertaken into in a cardboard box or another container
   - The adhesive beads should have a uniform orange colour

8. Application interruption
   - During any short-term interruption to application, the screw at the back of the gun should be closed in order to prevent internal curing
   - For safety reasons during a longer interruption of several hours, for example during transport, we advise closing the valve on the canister as well.
   - After transport, the valve on the canister should be re-opened to keep the pressure within the system and to prevent the adhesive curing internally
   - The system can be stored like this for a time span of up to 2 weeks. If the storage period, without use, is longer than 2 weeks, we advise that the system is cleaned completely
   - Storing the gun/hose longer than 2 weeks without cleaning, increases the risk to have cured adhesive inside the hose. In that case there will be a pressure drop while extruding Soudatherm Roof 330. The use of replacement gun/hose will be advisable to proceed under good conditions.

9. Changing the canister
   - Make sure the canister is completely empty
   - Close off the valve on the canister (by turning clockwise)
   - Close off the valve at the end of the hose
   - Detach the hose from canister
   - Shake the new canister thoroughly for 30 seconds
   - Clean the valve of the hose and the valve of the canister with Soudal Gun & Foam Cleaner
   - Connect the hose to the new canister – see operation 3

10. Cleaning the gun and hose
   - Close off the valve on the canister (by turning clockwise)
   - Close off the valve at the end of the hose
   - Detach the hose from canister
   - Clean the valve of the hose and the valve of the canister with Soudal Gun & Foam Cleaner

- Attach the cleaning adaptor to the hose manually
- Then tighten with wrench or spanner until firmly closed
- Attach Soudal Gun & Foam Cleaner to the Cleaning Adaptor and flush the system completely
- Detach Soudal Gun & Foam Cleaner immediately after the cleaning session
- Make sure no cleaning agent remains in the hose and gun after the session

11. Disposal
    - The canister is a disposable container and is not suitable for reuse or refill.
    - To be in suitable condition for disposal the canister needs to be completely empty and depressurized.
    - If necessary, the canister should be re-shaken and the valve carefully opened above a waste container to remove any residual pressure and/or product.
    - The emptied, non-cleaned canister with opened valve can be disposed and processed according to the local and/or national regulations.