

Installation instructions for Kerabit 3D

Kerabit 3D is suited to roofs with a pitch of 1:5 or steeper. Prior to installation, store the membrane rolls in an upright position for at least 24 hours at a temperature of over +15 °C. Open the membrane rolls beforehand to allow them to straighten out. This will prevent the finished surface from folding. The time needed for the membrane to straighten out depends on the temperature (about 1–4 hours). When the roofing is being installed the temperature must be over +10 °C.

The material can be laid onto a substrate of rough tongued and grooved boards or moisture proof construction panels with tongued and grooved longitudinal edges (e.g. Kerabit OSB roofing board). Kerabit 3D can be cut using a hook-bladed utility knife. For gluing, use Kerabit sealing glue. Always unwind the membrane rolls in the same direction to avoid colour variations. The membrane can be installed either horizontally or vertically. In renovation construction it can be laid directly onto existing flat bituminous roofing. Any folds/pockets must be cut and glued and nailed to the substrate before installing the new roofing.

1. Before starting the installation make sure that the underframe ventilation is sufficient and working. The ventilation can be boosted by installing Kerabit ridge vents (suited for roofs with a pitch of 1:1–1:5).

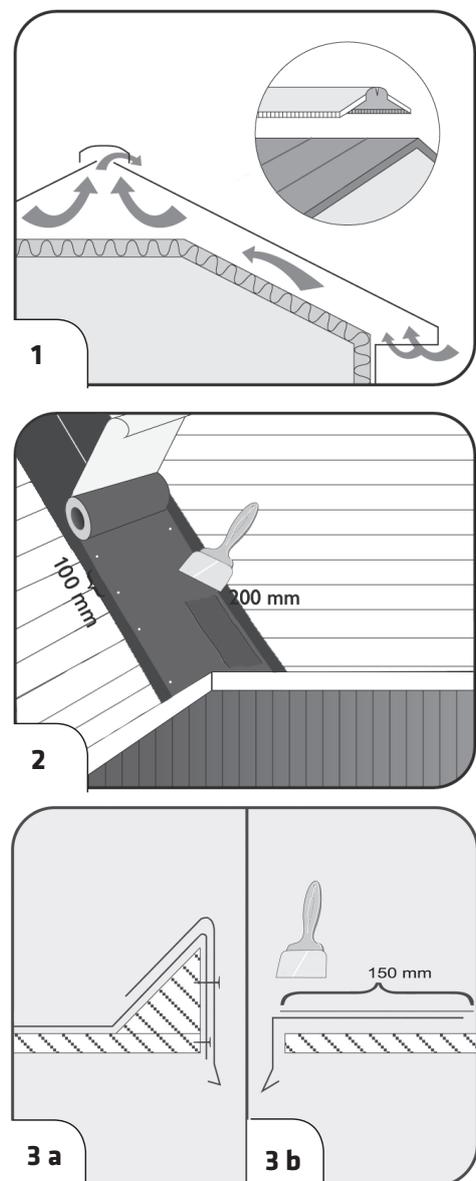
Measure the roof and plan the positioning of the membranes so that the black stripes are placed symmetrically on the roof. You can cut the membranes on both edges of the roof to measure if necessary.

2. Inner mitres i.e. inner folds are made two-fold. The installation is started by attaching a Kerabit 2500 UB underlay membrane. The underlay membrane is glued with Kerabit sealing glue to the entire surface (glue layer of about 1 mm). Install an eaves flashing on the lower eave. Install the flashing sections with an overlap of 3 cm and nail them in a zigzag pattern with 10 cm spacing. Fasten a Kerabit mitre membrane with a pre-glued underside of the same colour as the roofing on top of the underlay membrane and nail it down at the edges with 10 cm spacing.

Installation

Align the membrane parallel to the gable eave and nail the upper edge onto the ridge with 4 or 5 nails. Prenail the membrane with about 1 m spacing through the protective plastic cover of the top side adhesive edge. Glue the lower edge of the membrane sheet onto the lower eaves flashing.

3. Remove the protective plastic cover from the underside adhesive edge and fasten Kerabit 3D at the gable eave on top of the triangular batten so that it extends 1.5 cm below the lower edge of the underlay boarding (Figure 3 a).



If you choose the method shown in Figure 3 b for the gable eave, fasten the gable eaves flashing the same way as the lower eaves flashing. Align the membrane on top of the gable eave and nail the upper edge onto the ridge with 4 or 5 nails. Pre-nail the membrane with about 1 m spacing through the protective plastic cover of the top side adhesive edge. Remove the protective plastic cover from the underside adhesive edge and press the membrane against the gable eaves flashing. Glue the lower edge of the membrane onto the lower eaves flashing. The membrane needs to be fastened to the gable eaves flashing on the opposite side of the pane using sealing glue.

4. Align the next membrane and nail the upper edge onto the ridge with 4 or 5 nails. Prenail the membrane with about 1 m spacing through the protective plastic cover of the top side adhesive edge. Bend the membrane edge facing the eave to the side from on top of the first membrane sheet.

Remove the protective plastic cover from the top side adhesive edge of the first membrane and nail the membrane down in a zigzag pattern with 15 cm spacing to the substrate. Note! The minimum distance of the nails from the edges of the adhesive strip must be 1.5 cm.

Remove the protective plastic cover from the underside adhesive edge of the second membrane and press the adhesive edges against each other (so that the zigzag nailing of the first membrane is covered). Repeat the same steps until the pane is finished.

Place the surface membranes on top of the inner fold membrane with a 20 cm overlap. Use an alignment board to cut the membrane ends parallel to the inner fold and fasten with sealing glue.

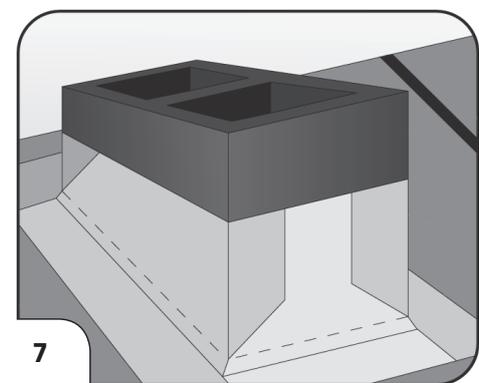
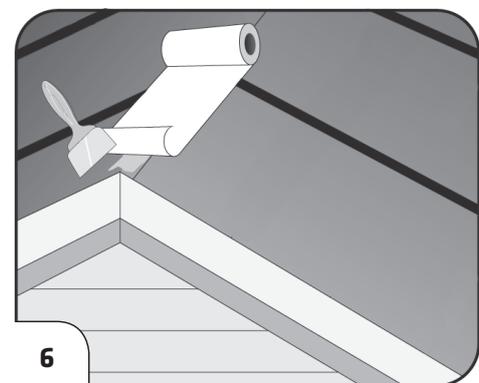
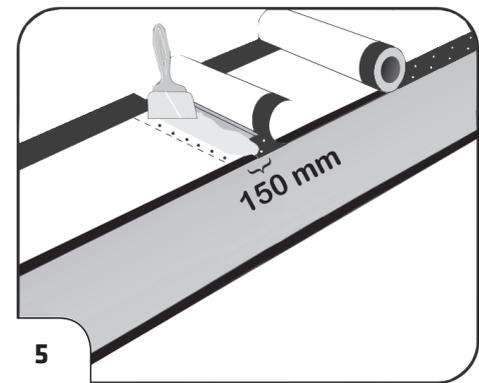
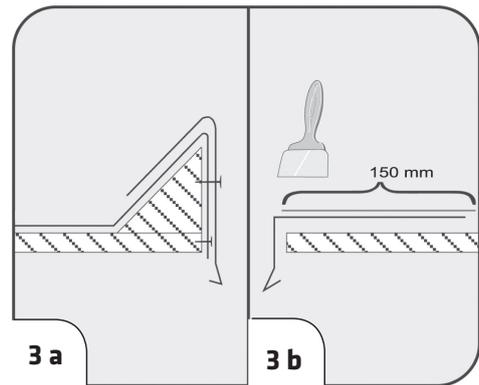
5. Nail the end of a finished roll with 10 cm spacing and glue the next membrane sheet from a new roll on top of the previous one with an overlap of 15 cm. For a perfect finish use masking tape.

6. Glue properly a Kerabit Eaves strip onto the ridge.

Ridge vents can also be used for the ridge to improve roof ventilation.

7. Install a triangular batten at the base of the chimney stack or another large lead-through in order to round off the corner. Install the surface membrane under and on both sides of the lead-through to the top edge of the triangular batten. The membrane to be placed over the lead-through will only be installed when the lead-through for the chimney stack has been completed as shown in Figure 7 a.

7. a For the bottom of the lead-through, cut a strip of Kerabit mitre membrane or Kerabit 3D and raise 30 cm of it against the sides of the lead-through. Under and on both sides of the lead-through, place the strips on top of the surface membrane and above the lead-through, under the surface membrane with an overlap of at least 15 cm. Glue the strips all the way round onto the substrate and the surface membrane. Secure the fastening of the raised portion mechanically by nailing. Secure the fastening of the surface membrane above the lead-through with sealing glue. To prevent water from entering between the membrane and the lead-through, protect the raised membrane strips with flashing.



7. b Sealing the chimney stack in log buildings: Make a plywood collar that is at least 40 cm high around the chimney stack and fasten it to the roof structure using the triangular batten. For the bottom of the lead-through, cut a strip of Kerabit mitre membrane or Kerabit 3D and raise 30 cm of it against the sides of the lead-through. Do not fasten any structural parts onto the chimney stack (always remember to leave a gap of over 10 mm between the chimney stack and other structures to allow for sinking). Leave a clearance of over 50 mm on the side of the chimney stack facing the ridge for roof structures that are subject to sliding. Cover the portion of the chimney stack protruding from the roof with sheet metal and protect the top section of the chimney stack e.g. with a tight, outward inclined reinforced concrete plate and/or sheet metal cladding.

7. c The easiest way to seal round lead-throughs is to use ready-made seals that are the shape of the lead-through. Cut the membrane sheets so that a joint is placed at the lead-through level. The membranes are placed on top of each other over a distance equalling the flange diameter plus 300 mm (see Figure 7 c). First install the membrane that will be placed under the flange. Measure the starting point: put the sealing flange in place temporarily and mark the distance of 150 mm away from the flange edge. Make a hole the size of the lead-through in the membrane and seal the membrane to the substrate with sealing glue. Install the lead-through seal, seal the flange edges with glue and nail the flange onto the substrate. Cut a hole the size of the bottom of the lead-through seal in the membrane that will be placed on top of the lead-through and place the membrane on top of the flange. Glue the membrane onto the flange and onto the lower membrane with sealing glue.

Lean-to roof

Fasten wooden triangular battens (50 x 50 mm cut to a triangular section) on the top edge and on the gable edges. Fasten Kerabit 3D at the eaves on top of the batten so that it extends over the batten and nail it to the outside of the batten. Install flashing with screws to the outside of the batten. The overlap of flashing is 3 cm.

