

# **PANDSER**<sup>®</sup> EPDM MANUAL

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#### PANDSER IS A EUROPEAN EPDM ROOF COVERING WITH A THICKNESS OF 1.14MM.

Want to put EPDM roof covering on a flat roof? This **manual** tells you how.

#### **PROPERTIES OF EPDM**

- Synthetic EPDM rubber (Ethylene Propylene Diene Monomer)
- 100% UV-resistant
- Permanently high elasticity. Up to 300% elasticity
- Tear, cracking, shrink and rot resistant
- Resistant to rooting by plants, also suitable for green roofs (e.g. sedum roofs)
- Resistant to temperature fluctuations between –35 °C and +120 °C
- Recyclable, carbon-neutral and eco-friendly
- Minimal pollution during the production process and on installation
- EPDM is free of external plasticizers and chlorine compounds
- High chemical resistance, resistant to alkalis and acids
- Extremely long life expectancy, at least 50 years
- Fire-retardant finish and detailing (resistant to airborne brands and radiant heat)
- Suitable for all types of flat and low-pitched roofs, and for both renovation and new build projects
- Easy, fast installation by professionals and DIYers alike



#### **TOOLS & ACCESSORIES**

- Pandser EPDM Prefab corners for external corners & dome lights
- Pandser EPDM Horizontal drainage unit (through-wall)
- Pandser EPDM Vertical drainage unit (downspouts or scuppers)
- Pandser EPDM Bonding contact adhesive for bonding EPDM to various substrates. 200-300 grams per  $M^2 / 1.5$ -2.0 M<sup>2</sup> per litre.
- Pandser EPDM Bonding contact adhesive for bonding EPDM to various substrates. One spray can covers 3M<sup>2</sup> / one canister covers 80 M<sup>2</sup>.
- PANDSER EPDM Adhesive & Sealant bonding adhesive to finish various details with a watertight seal and tools. One tube covers 9 m.
- Pandser EPDM Primer for bonding to absorbent substrates like concrete. Also suitable as a bonding primer for our Pandser EPDM ZK-B strips and Pandser Fastflash. Use 100-150 grams per M<sup>2</sup> / 7-8M<sup>2</sup> per litre.
- Pandser Fastflash Lead replacement

#### **EPDM TOOLS YOU WILL NEED**

- Seam rollers for finishing seams and bonding
- Scissors for cutting EPDM and Fast Flash
- Lead dresser
- Crayon markers for marking out the EPDM
- Pressure hose for Spraybond pressurized canister
- Spray gun
- Scouring sponges for applying primer.
- Roller and holders (long-haired paint rollers, remember to test them first to check they are resistant to the adhesive), roller holders, wood and plastic extension handles for the roller holders. You can also use a small roller to apply the primer.
- Oval pressure distribution plates. To install downspouts or duct penetrations (be careful to ensure these are made of sheet steel that is of sufficient thickness, otherwise they will become deformed in the insulation)
- Cartridge gun
- Big adhesive roller for applying the EPDM Bonding adhesive





#### MEASURING UP AND CUTTING THE ROLL OR ORDERING

#### **RECTANGULAR ROOF:**

Measure the total length of the roof + the upstanding edges at the sides. Add 20 cm and repeat for the width.

#### **PREPARING THE SUBSTRATE**

The substrate must be free of dust, dirt, moisture, anything sharp, oil and other materials that could cause damage to the EPDM roof covering or prevent the Pandser EPDM adhesive bonding effectively

#### **INSTALLING EPDM ROOF COVERING (USING BASE ADHESIVE)**

**1)** Unfold/unroll the EPDM roof covering over the roof. Make sure the membrane is spread evenly over the edges. Allow the membrane to relax into position for one hour and release stresses caused by being rolled up in the factory.

2) At the shortest side, fold/roll the EPDM roof covering back to halfway.

**3)** On the part where the folded back membrane will be fitted, apply a continuous strip of the EPDM base adhesive to the roof. The best way to do this is to drill around 5 x 8 mm holes in the bottom of the can. Then distribute the adhesive by letting it pour out over the roof surface. The adhesive is applied in lines on the roof surface. The EPDM base adhesive is applied on one side on the roof with the exception of the last 20 cm. Do not apply the EPDM base adhesive to the last 20 cm of the roof. Use the Pandser EPDM Spraybond for this, as well as for the walls and upstanding edges.



**4)** Roll the EPDM roof covering back over the substrate that has the adhesive applied, and carefully apply pressure with a soft brush. Avoid creases! Then sweep the EPDM rubber membrane with a soft brush, applying pressure from the middle to the outside so that the EPDM makes good contact with the adhesive and any air bubbles are removed. Repeat this procedure for the other half of the roof.



#### **FINISHING THE EDGES & BONDING**

Fold the EPDM membrane back at the edge of the roof by at least 20 cm as far as the roof surface and apply adhesive to both the membrane and the substrate. Apply the adhesive from 10cm on the roof surface to the top of the roof edge. Use Pandser EPDM Spraybond for this part of the process. Wait until the adhesive is touch dry, and only then install the roof covering. Press the EPDM firmly into place using the EPDM seam roller.



## INSTALLING EPDM ROOF COVERING (WITH FULL SPRAYBOND ADHESIVE OR BONDING CONTACT ADHESIVE)

**1)** Unfold/unroll the EPDM roof covering over the roof. Make sure the membrane is spread evenly over the edges. Allow the membrane to relax into position for one hour and release stresses caused by being rolled up in the factory.

2) At the shortest side, fold the EPDM roof covering back to halfway.

**3)** Apply adhesive to max. 2 metres EPDM and the substrate using the pressurized canister (Pandser EPDM Spraybond) or using a roller (Pandser Bonding Adhesive contact adhesive) and wait until the adhesive is touch dry (how long this takes is dependent on the weather). Now roll the EPDM back into place evenly over the substrate, avoid creating tension in the membrane. Repeat this procedure until you get to the edge of the roof. Then roll the other half of the roof covering back and repeat the procedure as described above.

#### **FINISHING THE EDGES & BONDING**

Fold the EPDM membrane back at the edge of the roof by at least 20 cm as far as the roof surface and apply adhesive to both the membrane and the substrate. Apply the adhesive from 10cm on the roof surface to the top of the roof edge. Use Pandser EPDM Spraybond for this part of the process. Wait until the adhesive is touch dry, and only then install the roof covering. Press the EPDM firmly into place using the EPDM seam roller or similar tool.

### **INTERNAL CORNER**

To avoid leaks, fold the membrane into the corner. Do not cut into the material.

1) Fold the corners to a point

**2)** Flatten the corners and bond them to the edge of the roof using Pandser EPDM Spraybond and seal with Pandser EPDM Adhesive & Sealant.



#### **INCORPORATING DOWNSPOUTS**

Use the pre-formed downspouts or through-wall drains. Two types are available: right-angled drain (throughwall outlet, 90° or 45°) or round (downspout/scupper, 90° or 45°). See the Pandser brochure for information on available diameters

**1)** Determine where you want to install the drain and mark it out using a Pandser EPDM crayon marker.

**2)** Cut a hole smaller than the drain in the place where you want to install the drainage outlet and push the drainage unit through the hole. Due to the elasticity of the material, the EPDM will pull tightly over the drainage unit. Saw off the drainage pipe to the right length.



## INCORPORATING DUCT PENETRATIONS, VENTILATION AND BREATHER PIPES

Determine the cross-section of the duct penetration and cut out a circle with scissors. The hole you cut out should be around 1/3 of the diameter of the duct.

Diameter of duct penetration

- 50 70 mm cut out 20mm circle
- 71 110 mm cut out 30mm circle
- 111 130mm cut out 40mm circle
- 131 160mm cut out 50mm circle
- 161 190mm cut out 60mm circle
- 191 220mm cut out 70mm circle

Place the EPDM roof seal over the opening where the duct penetration is to be installed. If the penetration is already in place in the roof before installation of the EPDM, this will not be possible. In this case, you will need to cut the EPDM in the shortest line from the edge of the membrane to the duct penetration.

**1)** Using scissors cut out the opening depending on the diameter of the duct penetration, and place the duct penetration on the EPDM. Secure the duct penetration with the appropriate fixings depending on the substrate (where the roof base is made of concrete with a slope this will not be possible; in this case, you could see whether the duct penetration can be secured against the concrete arches on the underside of the roof using brackets).

**2)** Cut a circular-shaped flap of EPDM; the outer diameter must be bigger than the base plate of the duct penetration (around 20 cm extra all the way round), the diameter of the opening should be as described above.

**3)** Pull the flap over the duct penetration; due to the restricted diameter of the opening an upstanding edge a few centimetres in height is automatically formed. This will not be high enough (the standard specifies that EPDM must be 150 mm above the roof base when finished).

To create the height needed, cut a strip of EPDM 15 cm in width that is long enough to go round the duct penetration with an overlap. Apply this by placing the strip all the way round the duct penetration with the Pandser EPDM Adhesive & Sealant applied.

Bond the horizontal part of the flap to the base plate using EPDM Bonding or Spraybond contact adhesive. Do not apply adhesive to the last 2 centimetres of the flap so that you can seal this with Pandser EPDM Adhesive & Sealant.