MINERAL Design SELF-ADHESIVE

SELF-ADHESIVE WATERPROOFING MEMBRANE FOR LAYING ON HEAT-SENSITIVE SURFACES
SELF-PROTECTED WITH CERAMIC-COATED MINERAL GRANULES IN DIFFERENT COLOURS AND DIFFERENT TYPES OF PATTERNS FOR DECORATING AND DEVELOPING THE DESIGN OF VISIBLE ROOFS

• MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER: WITH OVERLAPPING TORCH-BONDING SELVEDGE
• MINERAL DESIGN SELF-ADHESIVE EP SELFLAPS POLYESTER: WITH OVERLAPPING SELF-ADHESIVE SELVEDGE

MINERAL DESIGN SELF-ADHESIVE

MINERAL DESIGN SELF-ADHESIVE is the new version of MINERAL DESIGN which is applied cold. It is the same membrane but its lower face is spread with a special elastomeric self-adhesive mix by simple pressure at room temperature, made up of a special mixture of select Venezuelan bitumen, tackifying resins and radial and linear thermoplastic elastomeric polymers, with long-lasting adhesive properties over time.

The graph shows how, unlike standard self-adhesive bitumen mixes, the MINERAL DESIGN SELF-ADHE-

TO SET THE ROOF PERFECTLY

HOW TO WATERPROOF AND IMPROVE THE APPEARANCE OF ROOFS, ALSO ON HEAT-SENSITIVE LAYING SURFACES

If the waterproof covering comprises the final (visible) part of a roof, problems can arise relating to the environmental impact or the overall appearance of structures, which are more complicated if the laying surface is heat-sensitive.

To overcome these inconvenience, it is advisable to use a product that guarantees full waterproofing but also fulfils the aesthetic requirements of the roof and can be applied cold.

MINERAL DESIGN SELF-ADHESIVE

The graph shows how, unlike standard self-adhesive bitumen mixes, the MINERAL DESIGN SELF-ADHE-

HOW TO WATERPROOF AND IMPROVE THE APPEARANCE OF ROOFS, ALSO ON HEAT-SENSITIVE LAYING SURFACES

If the waterproof covering comprises the final (visible) part of a roof, problems can arise relating to the environmental impact or the overall appearance of structures, which are more complicated if the laying surface is heat-sensitive.

To overcome these inconvenience, it is advisable to use a product that guarantees full waterproofing but also fulfils the aesthetic requirements of the roof and can be applied cold.

MINERAL DESIGN SELF-ADHESIVE

The graph shows how, unlike standard self-adhesive bitumen mixes, the MINERAL DESIGN SELF-ADHE-

HOW TO WATERPROOF AND IMPROVE THE APPEARANCE OF ROOFS, ALSO ON HEAT-SENSITIVE LAYING SURFACES

If the waterproof covering comprises the final (visible) part of a roof, problems can arise relating to the environmental impact or the overall appearance of structures, which are more complicated if the laying surface is heat-sensitive.

To overcome these inconvenience, it is advisable to use a product that guarantees full waterproofing but also fulfils the aesthetic requirements of the roof and can be applied cold.

MINERAL DESIGN SELF-ADHESIVE

The graph shows how, unlike standard self-adhesive bitumen mixes, the MINERAL DESIGN SELF-ADHE-

HOW TO WATERPROOF AND IMPROVE THE APPEARANCE OF ROOFS, ALSO ON HEAT-SENSITIVE LAYING SURFACES

If the waterproof covering comprises the final (visible) part of a roof, problems can arise relating to the environmental impact or the overall appearance of structures, which are more complicated if the laying surface is heat-sensitive.

To overcome these inconvenience, it is advisable to use a product that guarantees full waterproofing but also fulfils the aesthetic requirements of the roof and can be applied cold.

MINERAL DESIGN SELF-ADHESIVE

The graph shows how, unlike standard self-adhesive bitumen mixes, the MINERAL DESIGN SELF-ADHE-

HOW TO WATERPROOF AND IMPROVE THE APPEARANCE OF ROOFS, ALSO ON HEAT-SENSITIVE LAYING SURFACES

If the waterproof covering comprises the final (visible) part of a roof, problems can arise relating to the environmental impact or the overall appearance of structures, which are more complicated if the laying surface is heat-sensitive.

To overcome these inconvenience, it is advisable to use a product that guarantees full waterproofing but also fulfils the aesthetic requirements of the roof and can be applied cold.

MINERAL DESIGN SELF-ADHESIVE

The graph shows how, unlike standard self-adhesive bitumen mixes, the MINERAL DESIGN SELF-ADHE-

HOW TO WATERPROOF AND IMPROVE THE APPEARANCE OF ROOFS, ALSO ON HEAT-SENSITIVE LAYING SURFACES

If the waterproof covering comprises the final (visible) part of a roof, problems can arise relating to the environmental impact or the overall appearance of structures, which are more complicated if the laying surface is heat-sensitive.

To overcome these inconvenience, it is advisable to use a product that guarantees full waterproofing but also fulfils the aesthetic requirements of the roof and can be applied cold.

MINERAL DESIGN SELF-ADHESIVE

The graph shows how, unlike standard self-adhesive bitumen mixes, the MINERAL DESIGN SELF-ADHE-

HOW TO WATERPROOF AND IMPROVE THE APPEARANCE OF ROOFS, ALSO ON HEAT-SENSITIVE LAYING SURFACES

If the waterproof covering comprises the final (visible) part of a roof, problems can arise relating to the environmental impact or the overall appearance of structures, which are more complicated if the laying surface is heat-sensitive.

To overcome these inconvenience, it is advisable to use a product that guarantees full waterproofing but also fulfils the aesthetic requirements of the roof and can be applied cold.

MINERAL DESIGN SELF-ADHESIVE

The graph shows how, unlike standard self-adhesive bitumen mixes, the MINERAL DESIGN SELF-ADHE-
MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER

The lower adhesive face of MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER is protected with silicone-coated film, split into two overlapping halves, which is removed while laying. The upper face is self-protected with ceramic-coated mineral granules, except for a smooth side strip for overlapping, which is protected by a hot-melt Flam-in-a film. MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER was designed to obtain as long-lasting a seal on the overlaps as that provided by traditional polymer bitumen membranes. In fact, it is possible to bond the overlaps using a torch or hot air. In order to allow autogenous heat bonding, the lower face has a 6 cm strip along the edge of the membrane opposite to the overlapping strip without slate on the upper face, which is not spread with the self-adhesive mix, but is sand blasted. This special configuration of the “OVERLAPS” membrane allows cold adhesion on the laying surface and heat sealing of the overlaps also on heat-sensitive insulation such as expanded polystyrene.

ADVANTAGES

• MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER is a waterproofing membrane which combines, with its high water tightness performance, a decorative effect better than that offered by ordinary self-protected membranes. This adds value to the waterproofing work and solves environmental impact problems.

• MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER light weight makes it possible to obtain the decorative aspect of tiles, shingles and flooring even on light roof covering.

• It is quicker to lay than traditional tiles and bituminous tiles.

• Unlike tiles of any kind, it can be applied vertically and on gentle pitches to create a seamless covering with perfectly sealed and lasting overlaps.

• MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER is glued cold and can be applied on heat-sensitive surfaces.

APPLICATION FIELDS

With MINERAL DESIGN the pitched roof of a school, church or apartment block can be covered with colour, actually with colours. MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER represents the evolution of the MINERAL DESIGN membrane. Now designers not only have a new tool for decorating roofs with special patterns that create new and unprecedented compositions, but torch-sensitive surfaces can also be decorated without any problems. The MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER membrane is used to create thick waterproof coverings that are intended to be left exposed on heat-sensitive or easily combustible laying surfaces, such as expanded polystyrene panels or wooden roofs.

METHOD OF USE AND PRECAUTIONS

• MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS adheres to the most common building materials used: metal surfaces, Plywood, OSB, polyethylene foam and extruded foam, polyurethane foam coated with bitumen felt paper on ROLLBASE HOLLAND etc. On porous surfaces such as cement and brick/tile, on an old bituminous coat, the surface to be covered should be prepared with a coat of 250 or 500 g/m² INDEVER PRIMER E primer, which is also recommended on metal surfaces.

• To prevent humidity building up and keep the wood dry and to allow the roof to be disassembled to recover the clean boards and prevent contact with fresh, resinous wood which can stain the underlying material, before gluing the adhesive exposed membrane to the old boards, on wooden roof boards or boards exposed directly to occupied spaces, first cover them with the ROLLBASE HOLLAND vapour separation and diffusion layer nailed on in a staggered pattern with flat head nails every 33 cm and 10 cm on the overlaps. The adhesive membrane is then installed over this layer.

• Visible sheets applied vertically should always be secured mechanically at the ends.

• Store the rolls in a dry place indoors and take them to the laying location only when about to be applied.

• Open the package immediately before laying.

• Polymer bitumen membranes are thermoplastic products and therefore they soften in the hottest hours of summer days whereas they harden in cold weather and the product's adhesive power is therefore reduced.

• Suspend laying by self-adhesion when the temperature falls below +5°C and/or facilitate laying with hot air appliances or with a torch at temperatures below +10°C and/or in particularly humid conditions.

• On slopes of over 15% the laying of the membrane must always be integrated with mechanical fastening at the ends of the sheets with at least 4 nails with 40 mm diameter washers or 40×40 mm.

• For slopes of between 15% and 100% the length of the sheet must not exceed 5 mt and for higher gradients than 100% to vertical the maximum permitted length is 2.5 mt.

• To ensure effective adhesion of the self-adhesive membrane to the laying surface, after laying the sheet, the membrane must always be compressed using a metal roller.

• To bond the longitudinal joints of 8 cm, first press with a roller along the inner edge of the self-adhesive overlap by 2 cm, which acts as a flame-protection strip and then you can safely torch-bond the remaining 6 cm. On the end joints, the overlapped part must not be less than roughly 12 cm, making sure to match-up the pattern with the next roll. The end overlaps will be torch-bonded, compressing the initial part of the overlap so that the flame does not reach the support.

Details of selvedge and flame-barrier overlap

Display on your smartphone the application instruction video

Self-adhesive overlap

“flame-barrier” overlap
MINERAL DESIGN SELF-ADHESIVE EP SELFLAPS POLYESTER

MINERAL DESIGN SELF-ADHESIVE EP SELFLAPS POLYESTER is similar to the OVERLAPS version of the membrane with the difference that the selvedge is self-adhesive and can be bonded without using a torch. It is to be used exclusively for laying on wooden boards and on surfaces of limited proportions (smaller than 200 m²).

To stabilise the overlap area further and to limit any tension that could strain it, MINERAL DESIGN SELF-ADHESIVE EP SELFLAPS POLYESTER is appropriately produced with a sanded edge of roughly 3 cm, to enable mechanical fixing with nails or staples before removing the protective silicone-treated strip of the self-adhesive selvedge and sealing the overlaps.

METHOD OF USE AND PRECAUTIONS

The sheets of MINERAL DESIGN SELF-ADHESIVE EP SELFLAPS POLYESTER are laid in the same way as for the OVERLAPS version and are secured every 10÷15 cm along the longitudinal overlap with nails with large heads of 1 cm in diameter or with a stapler.

On pitches above 15%, the measurements and the mechanical fixing method on the ends of the sheets is the same type as the previous case. The longitudinal overlaps are bonded by self-adhesion, making sure to compress thoroughly using a roller, whereas the end overlaps are bonded using cold adhesive HEADCOLL.

Decoration table

<table>
<thead>
<tr>
<th>Method of Use and Precautions</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slopes greater than 15%</td>
<td>Slopes between 15% and 100%</td>
</tr>
<tr>
<td>Slopes over 100%</td>
<td>Slopes over 100%</td>
</tr>
</tbody>
</table>

**Three-Dimensional**

- **Decoration: TILES**
- **Decoration: OVAL SLATE**

**Traditional decoration**

- **Decoration: SHINGLES**
- **Decoration: OVAL SLATE**

**Slopes greater than 15%**

- Maximum length: 5 metres
- Mechanical fixing every 20 cm with nail or screw with large washer

**Slopes between 15% and 100%**

- Maximum length: 5 metres

**Slopes over 100%**

- Maximum length: 2.5 metres

**Head laps**

- Straight cut
- Overlap zone of the membrane designed with a straight cut
- Cut following the curve of the tile and overlap on the membrane below
- Overlap zone of the membrane designed with the profile

**Ridges and Hips**

- Solution B: Cut a strip as illustrated
- Solution A: Cut the single slates
- Solution B: Cut a strip as illustrated
- Solution A: Cut the single slates
### TECHNICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Property</th>
<th>Standard T</th>
<th>MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER</th>
<th>MINERAL DESIGN SELF-ADHESIVE EP SELFLAPS POLYESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforcement</td>
<td>Standard T</td>
<td>“Non-woven” composite polyester stabilized with fibreglass</td>
<td>“Non-woven” composite polyester stabilized with fibreglass</td>
</tr>
<tr>
<td>Mass per unit area</td>
<td>EN 1848-1</td>
<td>±15%</td>
<td>±15%</td>
</tr>
<tr>
<td>Roll size</td>
<td>EN 1848-1</td>
<td>4.5 kg/m²</td>
<td>4.5 kg/m²</td>
</tr>
<tr>
<td>Watertightness</td>
<td>EN 1928-B</td>
<td>60 kPa</td>
<td>60 kPa</td>
</tr>
<tr>
<td>Maximum tensile force L/T</td>
<td>EN 12311-1</td>
<td>-20%</td>
<td>-20%</td>
</tr>
<tr>
<td>Elongation L/T</td>
<td>EN 12311-1</td>
<td>40/45%</td>
<td>40/45%</td>
</tr>
<tr>
<td>Resistance to impact</td>
<td>EN 12991-A</td>
<td>160/200 N</td>
<td>160/200 N</td>
</tr>
<tr>
<td>Resistance to static loading</td>
<td>EN 12730-A</td>
<td>15 kg</td>
<td>15 kg</td>
</tr>
<tr>
<td>Resistance to tearing (nail shank) L/T</td>
<td>EN 12310-1</td>
<td>-30%</td>
<td>-30%</td>
</tr>
<tr>
<td>Dimensional stability L/T</td>
<td>EN 1107-1</td>
<td>-0.30%</td>
<td>-0.30%</td>
</tr>
<tr>
<td>Flexibility to low temperature</td>
<td>EN 1109</td>
<td>-15°C</td>
<td>-15°C</td>
</tr>
<tr>
<td>Flow resist. at high temp.</td>
<td>EN 1110</td>
<td>90°C</td>
<td>90°C</td>
</tr>
<tr>
<td>*after ageing</td>
<td>EN 1296-1110</td>
<td>-10°C</td>
<td>-10°C</td>
</tr>
<tr>
<td>UV ageing</td>
<td>EN 1297</td>
<td>NPD</td>
<td>NPD</td>
</tr>
<tr>
<td>Reaction to fire</td>
<td>EN 13501-1</td>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td>Euroclass</td>
<td></td>
<td>F roof</td>
<td>F roof</td>
</tr>
<tr>
<td>External fire performance</td>
<td>EN 13501-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal specifications</td>
<td></td>
<td>0.2 W/mK</td>
<td>0.2 W/mK</td>
</tr>
<tr>
<td>Heat capacity</td>
<td></td>
<td>5.40 KJ/K</td>
<td>5.40 KJ/K</td>
</tr>
</tbody>
</table>

Compliant with EN 13707 in terms of the resistance factor to steam penetration for reinforced polymer-bitumen membranes, the value of $\mu = 20000$ may be considered, unless declared otherwise.

### COMPOSITION OF THE MEMBRANE

#### MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER

- **Compressive load**
- **Elastic load**
- **Tearing load**
- **Resistance to ageing**
- **Resistance to static loading**
- **Resistance to impact**
- **Dimensional stability**
- **Flexibility to low temperature**
- **Flow resist. at high temp.**
- **UV ageing**
- **Reaction to fire**
- **Euroclass**

#### MINERAL DESIGN SELF-ADHESIVE EP SELFLAPS POLYESTER

- **Compressive load**
- **Elastic load**
- **Tearing load**
- **Resistance to ageing**
- **Resistance to static loading**
- **Resistance to impact**
- **Dimensional stability**
- **Flexibility to low temperature**
- **Flow resist. at high temp.**
- **UV ageing**
- **Reaction to fire**
- **Euroclass**

### PRODUCT FINISHING

- **Tiles**
- **Oval slate**
- **Shingles**
- **Oval slate**

CERAMIC-COATED MINERAL GRANULES. On the visible face of the membrane, a protective coating made up of ceramic-coated granules of various colours is hot bonded. This mineral shield protects the membrane from ageing caused by UV rays.

REMOVABLE SILICONE-COATED FILM. The lower face of the membrane is covered in a silicone-coated film which preserves the adhesive mix. The colour combinations shown in the table are the only possible ones.

---

© INDEX