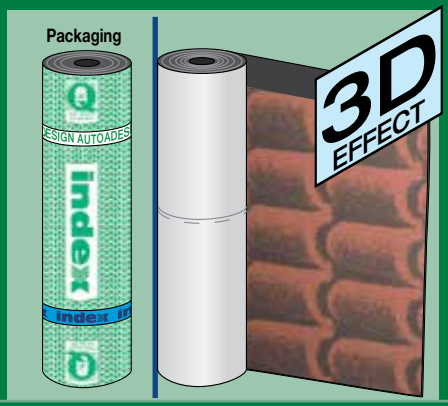


MINERAL *Design* SELF-ADHESIVE

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

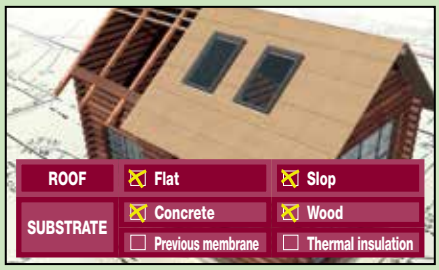
- MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER: WITH OVERLAPPING TORCH-BONDING SELVEDGE
- MINERAL DESIGN SELF-ADHESIVE EP SELFLAPS POLYESTER: WITH OVERLAPPING SELF-ADHESIVE SELVEDGE

GRANTS *LEED* CREDITS

TO SET THE ROOF PERFECTLY

CATEGORY	CHARACTERISTICS				ENVIRONRMENTAL							METHOD OF USE	
EP S		SUPER ADHESIVE		Reazione al fuoco		ASBESTOS FREE	TAR FREE	CHLORINE FREE					
SPECIAL ELASTOPLASTOMERIC FOR SPECIFIC USES	WATER-PROOF	SUPER-ADHESIVE	DECORATIVE	REACTION TO FIRE	ECO GREEN	ASBESTOS FREE	TAR FREE	CHLORINE FREE	RECYCLABLE	NON DANGEROUS WASTE	EXHAUSTED OIL FREE	PRESSURE APPLICATION	NAILING

1 PROBLEM

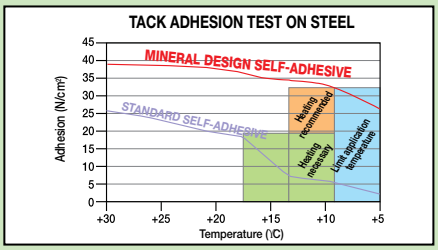


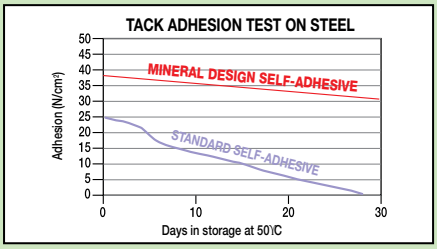
HOW TO WATERPROOF AND IMPROVE THE APPEARANCE OF ROOFS, ALSO ON HEAT-SENSITIVE LAYING SURFACES

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 water-proofing but also fulfils the aesthetic requirements of the roof and can be applied cold.

2 SOLUTION

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-ADHESIVE**, adhesive mix maintains its adhesive properties during the storage test and the next graph shows how its special formulation with 'anti-frost' additives allows it to maintain its high adhesive power even at low temperatures during the cold adhesive test.





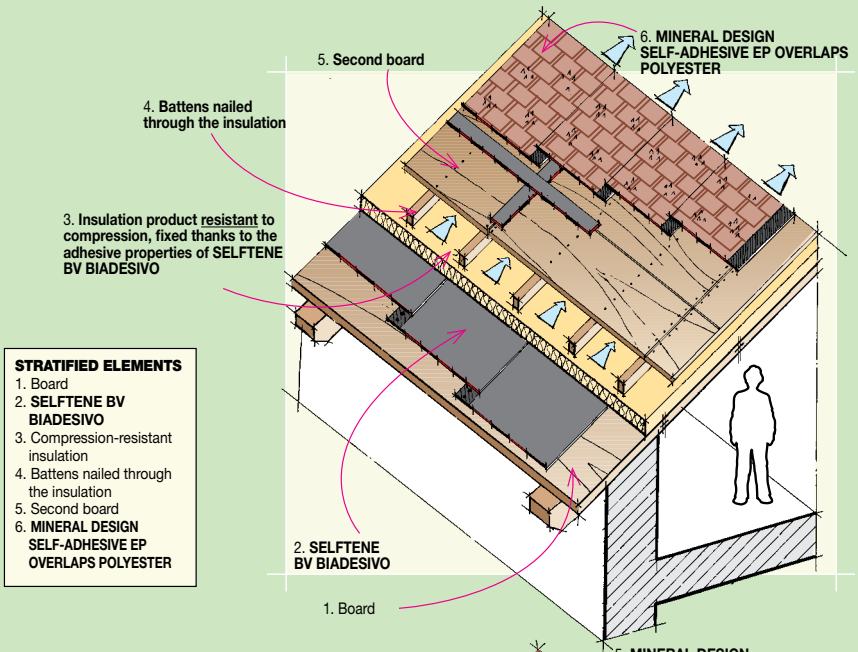
INTENDED USE OF "CE" MARKING SPECIFIED ACCORDING TO THE AISPEC-MBP GUIDLINES

EN 13707 - REINFORCED BITUMEN SHEETS FOR ROOF WATERPROOFING

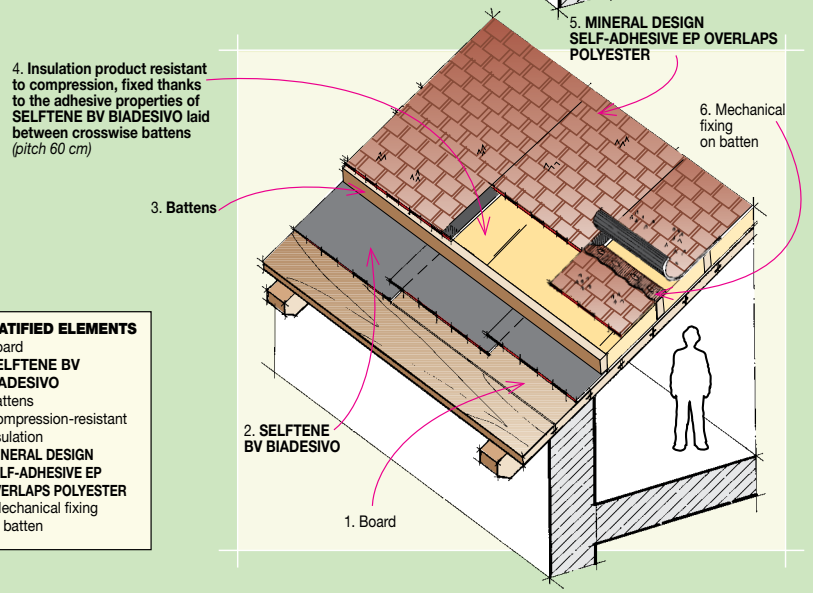
- **Exposed single-layer**
  - MINERAL DESIGN SELF-ADHESIVE
- **Upper layer in multi-layer systems without permanent heavy surface protection**
  - MINERAL DESIGN SELF-ADHESIVE

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 Flamina 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.



STRATIFIED ELEMENTS
1. Board
2. **SELFTENE BV BIADESIVO**
3. Compression-resistant insulation
4. Battens nailed through the insulation
5. Second board
6. **MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER**



STRATIFIED ELEMENTS
1. Board
2. **SELFTENE BV BIADESIVO**
3. Battens
4. Compression-resistant insulation
5. **MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER**
6. Mechanical fixing on batten

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

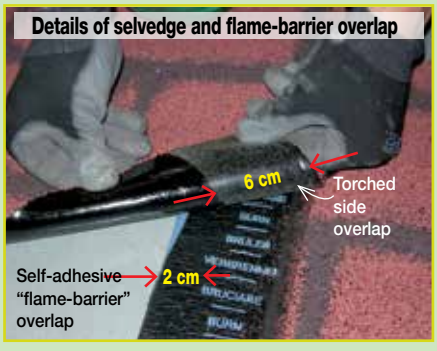
With **MINERAL DESIGN** the pitched roof of a school, church or apartment block can be covered with colour, actually with colours. **MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER** represents the evolution of the **MINERAL DESIGN** membrane. Now designers not only have a new tool for decorating 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, polystyrene 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, on old wooden boarding etc., 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.**
- **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.**

Display on your smartphone the application instruction video

Details of selvedge and flame-barrier overlap

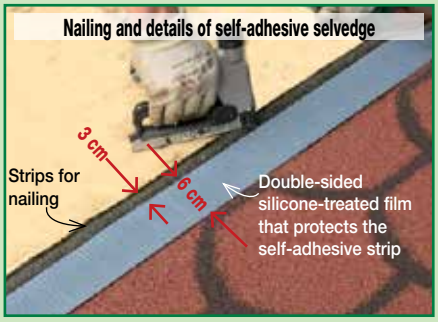


MINERAL *Design* SELF-ADHESIVE EP SELFLAPS POLYESTER

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.



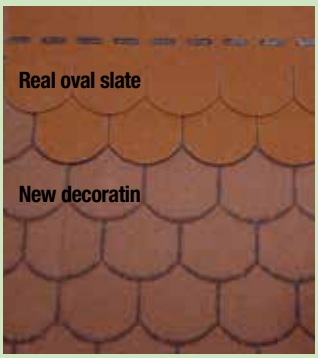
3D EFFECT

NEW DECORATION
Now the decoration:
- Tiles - 3D Effect
- Shingles
- Oval slate
give a more realistic effect

Decoration:
TILES

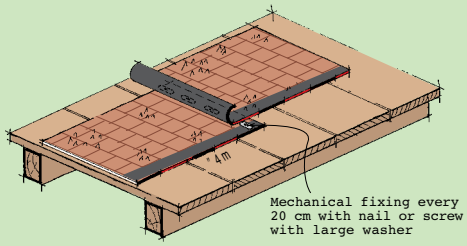
Decoration:
SHINGLES

Decoration:
OVAL SLATE

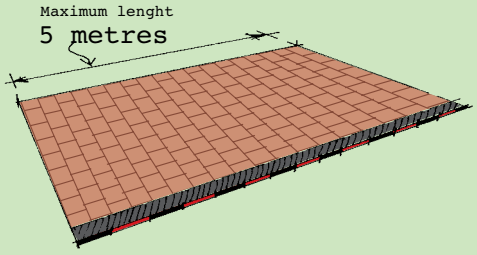


DETAILS

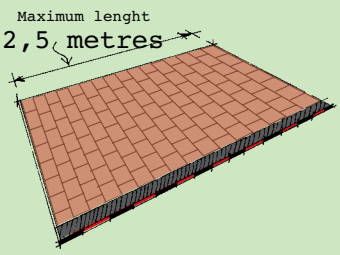
Slopes greater than 15%



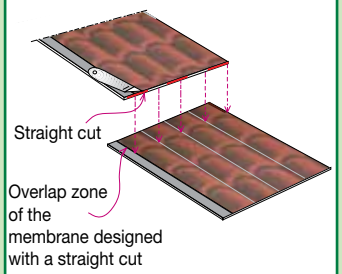
Slopes between 15% and 100%

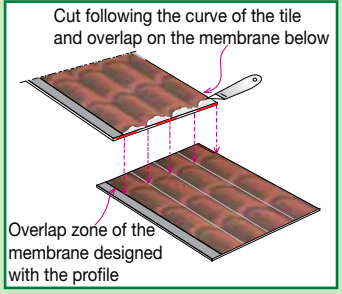


Slopes over 100%

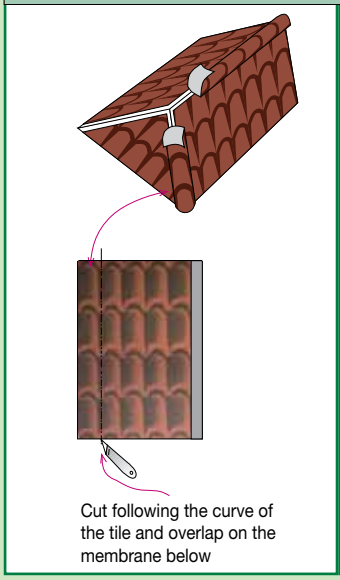


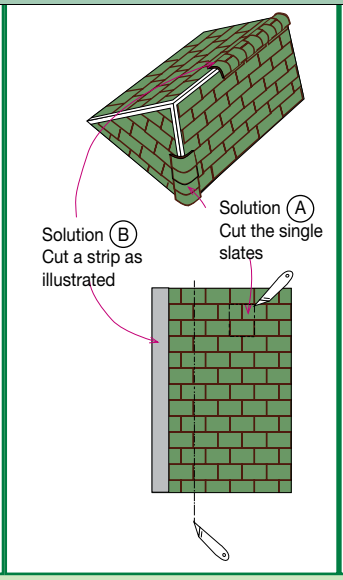
Head laps

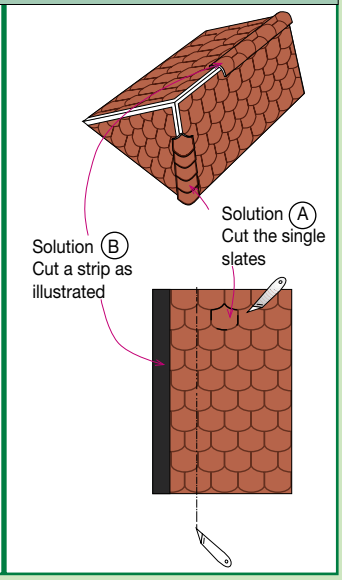




Ridges and Hips







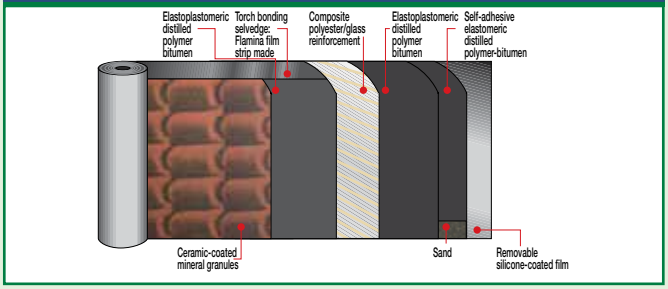
TECHNICAL CHARACTERISTICS

			MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER	MINERAL DESIGN SELF-ADHESIVE EP SELFLAPS POLYESTER
Reinforcement			"Non-woven" composite polyester stabilized with fibreglass	"Non-woven" composite polyester stabilized with fibreglass
Mass per unit area	EN 1849-1	±15%	4.5 kg/m²	4.5 kg/m²
Roll size	EN 1848-1	≥	1×10 m	1×10 m
Watertightness	EN 1928 – B	≥	60 kPa	60 kPa
Maximum tensile force L/T	EN 12311-1	-20%	700/500 N/50 mm	700/500 N/50 mm
Elongation L/T	EN 12311-1	-15% V.A.	40/45%	40/45%
Resistance to impact	EN 12691 – A		1 250 mm	1 250 mm
Resistance to static loading	EN 12730 - A		15 kg	15 kg
Resistance to tearing (nail shank) L/T	EN 12310-1	-30%	160/200 N	160/200 N
Dimensional stability L/T	EN 1107-1	≤	–0.30/+0.10%	–0.30/+0.10%
Flexibility to low temperature	EN 1109	≤	–15°C	–15°C
Flow resist. at high temp. • after ageing	EN 1110 EN 1296-1110	≥ -10°C	100°C 90°C	100°C 90°C
UV ageing	EN 1297		NPD	NPD
Reaction to fire Euroclass	EN 13501-1		E	E
External fire performance	EN 13501-5		F roof	F roof
Thermal specifications				
Thermal conductivity			0.2 W/mK	0.2 W/mK
Heat capacity			5.40 KJ/K	5.40 KJ/K

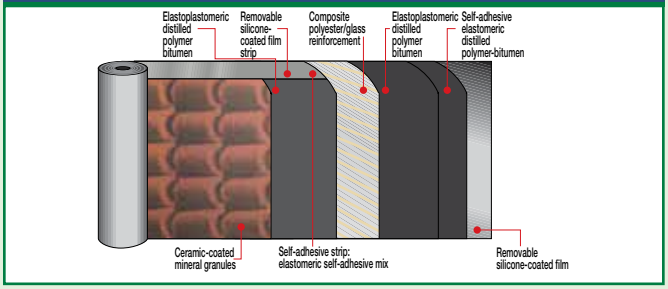
Compliant with EN 13707 in terms of the resistance factor to steam penetration for reinforced polymer-bitumen membranes, the value of μ = 20 000 may be considered, unless declared otherwise.

COMPOSITION OF THE MEMBRANE

MINERAL DESIGN SELF-ADHESIVE EP OVERLAPS POLYESTER

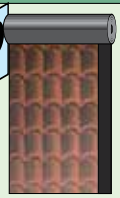


MINERAL DESIGN SELF-ADHESIVE EP SELFLAPS POLYESTER

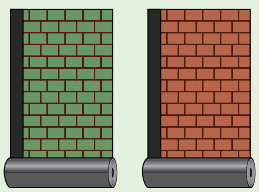


PRODUCT FINISHING

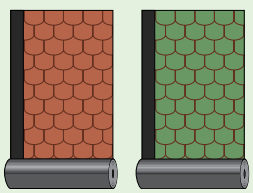
3D EFFECT



Tiles



Shingles



Oval slate

CERAMIC-COATED MINERAL GRANULES. On the visible face of the mem-

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.

• FOR ANY FURTHER INFORMATION OR ADVICE ON PARTICULAR APPLICATIONS, CONTACT OUR TECHNICAL OFFICE • IN ORDER TO CORRECTLY USE OUR PRODUCTS, REFER TO INDEX TECHNICAL SPECIFICATIONS •

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