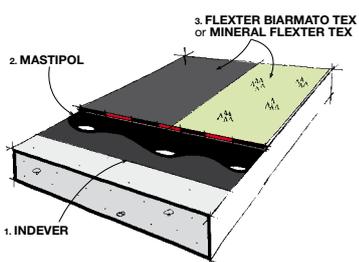


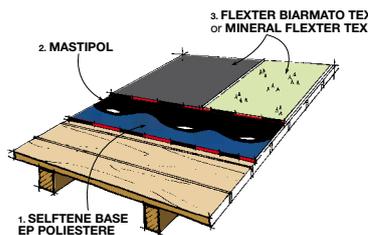
# GUIDE TO LAYING FLEXTER TEX MEMBRANES WITH COLD MASTIPOL ADHESIVE



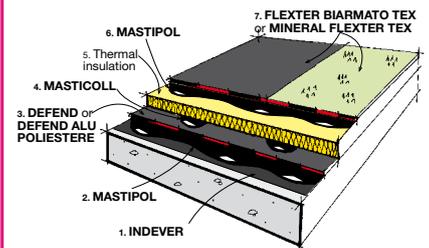
**COLD LAYING ON CONCRETE**



**COLD LAYING ON WOOD**



**COLD LAYING ON THERMAL INSULATION**



# LAYING SYSTEM WITH COLD MASTIPOL ADHESIVE

Polymer-bitumen waterproofing membranes for the building trade in Italy are traditionally flame-glued to the laying surface and on the overlaps using a propane gas torch.

On cement surfaces (fulfilled by trained professionals) the flame laying system does not involve any particular risks of injury or fire, and even if it does, they are certainly less than the old hot bitumen laying system; precautions must on the other hand be greater when laying on thermal insulation panels and on combustible surfaces such as wood boards, especially when these are laid over a ventilated air space.

If you then also consider that by laying in total adherence with adhesive spread right over the whole surface to be lined, if the waterproof covering is accidentally lacerated, only a minimum amount of water leaks around the damaged area and therefore the leak is much easier to find compared to a covering laid without adhesive or only glued partially; it is consequently easy to understand why such type of laying system is very popular in north Europe, where insulating panels have been used for much longer and where wood roofs are much more common.

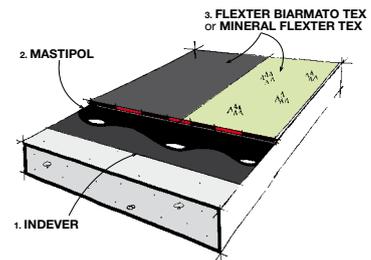
The advantages offered by the cold laying system using MASTIPOL adhesive can consequently be summarised as follows:

- With the adhesives available in building sites restricted by special safety measures, as well as gluing the membranes on the parts along the roof, it is possible to cold glue on the vertical parts and overlaps, even if the seal of the joints is inferior to that obtained by torch sealing or hot air sealing. The hot air sealing of overlaps and gluing on projecting parts of modest surfaces, when admitted, eliminates problems related to the use of naked flames and gas cylinders. In most cases, where particular restrictions are not imposed, also in the case of flame-sealing just the overlaps and gluing the vertical parts with the same method, the risk of fire and explosion is in any event reduced considerably, due both to the circumscribed use of the naked flame and to the considerable reduction in the quantity of propane gas cylinders used on site.
- Membranes glued with a coating of adhesive remarkably reduces water leakage if the covering is lacerated and makes it easier to find the point of leakage.
- Gluing in total adherence considerably reduces tension caused by thermal changes on exposed waterproof coverings, which prevents the formation of folds.

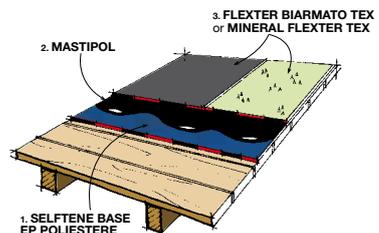
To obtain an optimum adherence to the laying surface, the membrane must have been designed specifically for the purpose in order to guarantee strong and durable adhesion of the adhesive.

Membranes for heat bonded laying are normally produced with the bottom face lined with a thermoplastic film that is melted with a propane gas torch during application; this surface finish does not offer sufficient guarantees of lasting adhesion to cold glues and this is why the FLEXTER TEX membranes indicated for laying with cold adhesive have the bottom face lined with a textile polypropylene fibre finish, coupled at high temperature, with high specific surface that guarantees a durable bond over time.

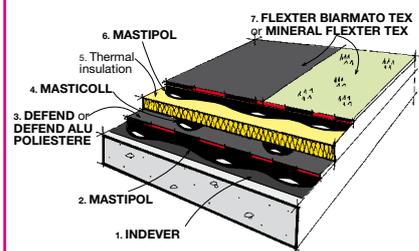
## COLD LAYING ON CONCRETE



## COLD LAYING ON WOOD



## COLD LAYING ON THERMAL INSULATION

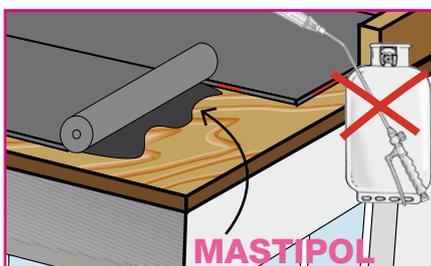
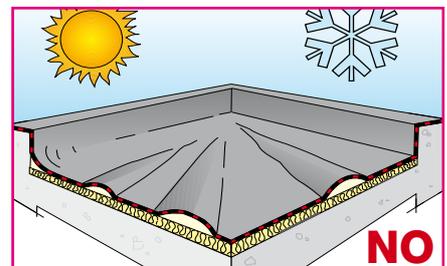
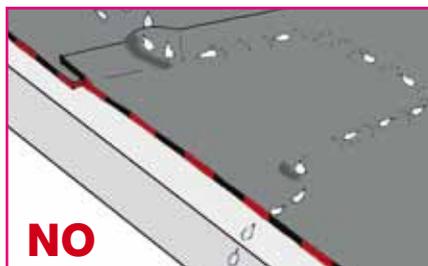


## ADVANTAGES

• Elimination/reduction of the risk of fire and explosion

• Adhesive coating considerably reduces water leakage if the covering is lacerated and makes it easier to find the leakage point

• Gluing in total adherence considerably reduces tension caused by thermal changes of exposed waterproof coverings, which prevents the formation of folds



# FLEXTER TEX WATERPROOFING MEMBRANES

The membranes of the FLEXTER TEX series consist of an elastoplastomeric phase inversion mix with base of selected distilled bitumen, elastomeric polyolefin and plastomeric polymers, in which the continuous phase is the polymer component; for this reason the polymer-bitumen mix is resistant at high and low temperatures and it keeps these features lastingly over time.

The membranes of the FLEXTER TEX series feature a textile finish of the bottom face consisting of non-woven polypropylene fibre fabric TEXFLAMINA coupled at high temperature to the polymer-bitumen membrane.

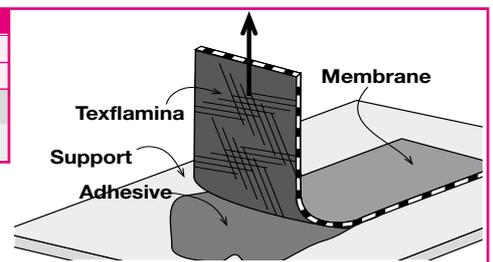
This ensures strong adhesion of the fabric to the membrane in view of its fibrous nature, considerably increases the specific gripping surface to the adhesives and represents a very efficient adhesion intermediary, thus incrementing the glued membrane's resistance to peeling.

The TEXFLAMINA finish is studied for gluing with cold MASTIPOL adhesive but is also effective when gluing with molten oxidized bitumen laid hot. The TEXFLAMINA finish ensures durable and higher adhesion than that obtained on the surface of talcum-treated or sand-treated membranes and unlike these, the adhesion force increases over time. When TEXFLAMINA is not glued in place, it acts as a sliding layer with low friction coefficient, better than the talcum and sand finish and even the plastic films normally coupled with the bottom face of bituminous membranes.



PEEL TEST (ADHESION STRENGTH N/50 MM)				
Membrane surface finish	Gluing on concrete with molten oxidized bitumen		Gluing on concrete with MASTIPOL	
	New	After ageing (*)	New	After ageing (*)
Sabbia/talco	33	24	38	30
Texflamina	40	85	45	76

(\*) Ageing: 25 d at 70°C.



Among the membranes of the FLEXTER TEX series of particular interest is FLEXTER BIARMATO TEX, which has double reinforcement with non-woven polyester fabric coupled with fibreglass mat positioned in the top part of the body of the membrane but still covered with a fine film of polymer bitumen that enables the easy and durable sealing of the overlaps. The double reinforcement is the most antique system used but still the most effective to guarantee the best dimensional stability to heat of the membrane, especially in the initial drying phase of the adhesive when it is glued exposed on a strong thermal insulation product. Stabilisation with fibreglass mat also positively affects the thermal-mechanical reaction of the membrane at low temperatures; by reducing its thermal contraction towards the geometric centre of the roofing, in combination with gluing in total adherence, the formation of tension and perimeter folds of the waterproof covering by the corners and ends of the roof reliefs is reduced.

A dimensional stability similar to the double reinforcement is offered by the triple reinforcement of the MINERAL FLEXTER FR TRIATEX membrane made up of fibreglass mat applied between the two layers of non-woven polyester fabric that contributes in the membrane's resistance to fire, such as in the case of the FR version (Fire Resistance) of BIARMATO, in combined action with the special additive added to the polymer-bitumen mix of these versions.

The flame retardant additive of the FR versions is harmless, is of mineral nature, does not contain chlorine and does not release toxic gas during combustion.

The MINERAL FLEXTER TEX and FLEXTER 25/5 TEX membranes have a composite reinforcement in non-woven polyester fabric stabilised with fibreglass in the longitudinal direction, which is the one most subject to the problem of hot shrinkages of the membranes when exposed to the sun, in order to avoid the problem of the end joints slipping. The reinforcement and the thickness of type 25/5 are more consistent so that it can be used also on coverings subject to foot-traffic and in more committing projects.

Finally, versions FLEXTER BIARMATO TEX and FLEXTER 25/5 TEX used as waterproof coverings of "green" roofs can be mixed with Preventol B2 additive, the root-inhibitor additive of waterproofing membranes for roof gardens.

## CERTIFICATIONS



The membranes of the FLEXTER TEX series are certified by the Agreement of the Belgian Institute UBAtc with number ATG/1616 and therefore meet both the requirements of European standards EN for CE marking and also the stricter performance requirements of the UEAtc.



The FR versions pass the fire resistance test according to ENV 1187/1 and are classified as compliant with EN13501-5: B roof-t1.



The wind resistance of FLEXTER BIARMATO glued with MASTIPOL adhesive has also been certified.



For the FLEXTER BIARMATO FR and MINERAL FLEXTER FR membranes, (distributed in Holland under the name of WEDEFLEX CRT, MINERAL WEDEFLEX CRT and WEDEFLEX D4 respectively), the Dutch Research Institute BDA, after assessing work carried out over the years, has certified their durability in at least 30 years.



FLEXTER BIARMATO TEX and FLEXTER 25/5 TEX mixed with Preventol B2 additive are certified by the German Institute FORSCHUNGSANSTALT GEISENHHEIM with the FLL method, compliant with standard EN-13948.

# THE ADHESIVES

## MASTIPOL

MASTIPOL is a bituminous adhesive with base of special bitumen, elastomers, solvents and mineral additives.

It is formulated to ensure the adherence effectiveness of the polymer-bitumen membrane on concrete and wood, old bituminous coverings, extruded polyurethane, rock wool and extruded perlite, the latter with the top face pre-lined with bitumen. When laying on extruded polystyrene, the panel must already be protected with a bituminous sheet with talcum or sand finish and strips that protect the joining lines of the panels against drips of adhesive.

It is an easily trowellable paste and is spread evenly on the laying surface using the special spreading tool.

It seals hairline cracks in the laying surface providing an intermediate waterproof layer between the support and the waterproofing membrane.

MASTIPOL is used to glue the polymer-bitumen membranes on flat roofs of civil and industrial buildings with maximum pitch of 5%. For pitches greater than 5%, gluing must be integrated with mechanical fixing.

The consumption of MASTIPOL is approximately 1 kg/m<sup>2</sup> and depends on the roughness of the support.

Porous supports such as concrete and old bituminous coverings are to be prepared in advance with a coat of INDEVER bituminous primer.

The laying surfaces must be smooth and regular, perfectly clean without any loose and brittle parts, dry and free from oil and grease.

MASTIPOL must not be used to glue the overlaps of the membrane and the recommended application temperature of the support is higher than +5°C.



## TECHNICAL CHARACTERISTICS

	MASTIPOL
Appearance	pasty
Colour	black
Specific weight (volume mass) at 23°C (UNI EN ISO 2811-1)	1.30±0.10 kg/litre
Solid content (m/m) (UNI-EN-ISO 3251)	80%±4%
Ford viscosity cup no. 6 at 23° C. (UNI-EN-ISO 2431)	20'±3'
Flash point (closed cup) (ASTM D 3828-87)	>23°C
Shelf life in original packaging	12 months

## HEADCOLL

Bituminous solvent adhesive with base of selected bitumen and resins, solvents and mineral additives, formulated specifically for the overlaps of polymer-bitumen membranes; it can be used also to glue the membrane on the vertical parts of the roof.

The adhesive can also be used as a filler to repair bubbles of old bituminous coverings before laying the membrane with Mastipol adhesive.

It contains both special resins, which compared to normal bituminous adhesives increase the bonding power, and also rapid evaporation solvents that speed-up product drying. The indicative consumption of the product is roughly 0.8-1 kg/m<sup>2</sup>.



### SEALING THE OVERLAPS



## TECHNICAL CHARACTERISTICS

HEADCOLL	
Appearance	pasty
Colour	black
Specific weight (volume mass) at 23°C (UNI EN ISO 2811-1)	1.40±0.10 kg/litre
Solid content (m/m) (UNI-EN-ISO 3251)	90%±3%
Viscosity at 20° C.	100,000±1,000 cps
Drying time (dry dust free)	3 hours
Shelf life in original packaging	12 months

## MASTICOLL

It is an adhesive used for the cold gluing of thermal insulation panels that completes the range of adhesives necessary for a complete cold gluing cycle of all the stratified elements of the roof.

MASTICOLL can be used to glue panels of foam and extruded polystyrene, extruded polyurethane, perlite and cellulose fibres on building roofs up to a maximum pitch of 5%. For greater pitches, gluing will be integrated with mechanical fixing. To fix the panels, dot knobs of adhesive on the bottom side of each panel by the corners and in the centre, for a consumption of 0.8 kg/m<sup>2</sup> approximately.

The panel is subsequently laid on a bituminous vapour barrier with the top face treated with talcum, sand or lined with Texflamina, pressing it down with the feet.



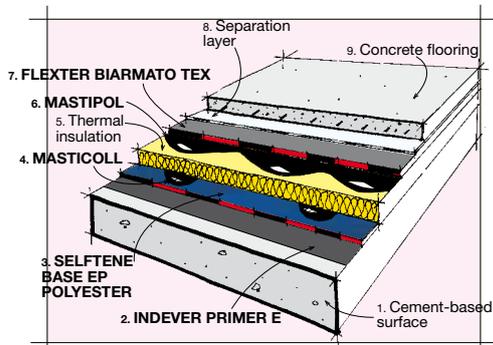
### LAYING THE THERMAL INSULATION



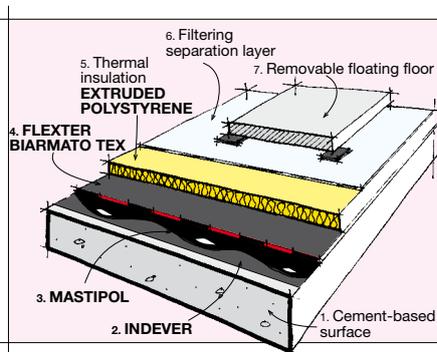
## TECHNICAL CHARACTERISTICS

MASTICOLL	
Appearance	viscous liquid
Colour	black
Specific weight (volume mass) at 23°C (UNI EN ISO 2811-1)	1.40±0.10 kg/litre
Solid content (m/m) (UNI-EN-ISO 3251)	85%±5%
Viscosity at 20°C	40,000±1,000 cps
Setting time (Hardened)	48 hours
Flash point (closed cup) (ASTM D 3828-87)	>+23°C
Shelf life in original packaging	12 months

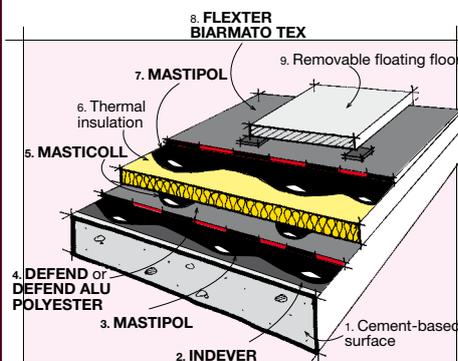
## FLAT ROOF THAT CAN BE WALKED OVER



- STRATIGRAPHY**
1. Cement-based surface
  2. INDEVER PRIMER E
  3. SELFTENE BASE EP POLYESTER
  4. MASTICOLL
  5. Thermal insulation
  6. MASTIPOL
  7. FLEXTER BIARMATO TEX
  8. Separation layer
  9. Concrete flooring



- STRATIGRAPHY**
1. Cement-based surface
  2. INDEVER
  3. MASTIPOL
  4. FLEXTER BIARMATO TEX
  5. Thermal insulation EXTRUDED POLYSTYRENE
  6. Filtering separation layer
  7. Removable floating floor

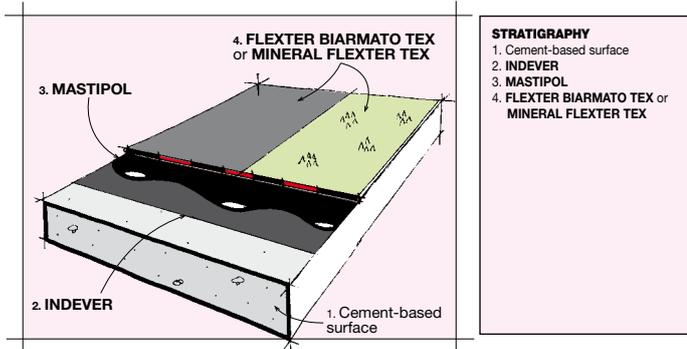


- STRATIGRAPHY**
1. Cement-based surface
  2. INDEVER
  3. MASTIPOL
  4. DEFEND or DEFEND ALU POLYESTER
  5. MASTICOLL
  6. Thermal insulation
  7. MASTIPOL
  8. FLEXTER BIARMATO TEX
  9. Removable floating floor

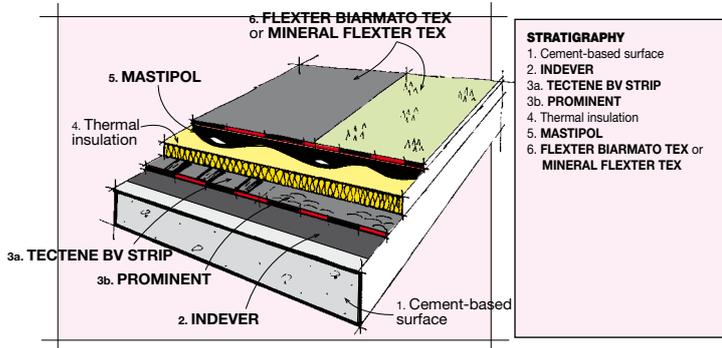
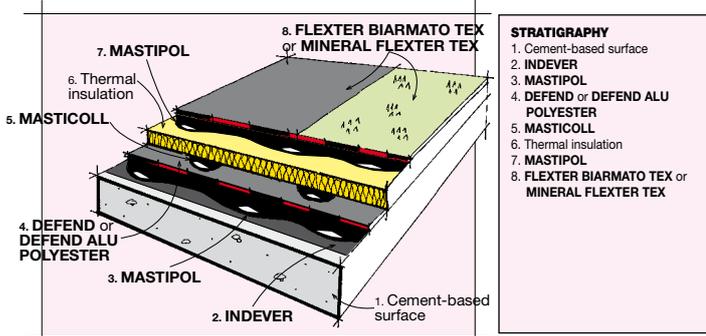
## FLAT ROOF THAT CANNOT BE WALKED OVER

### ON CONCRETE SURFACE

#### • without thermal insulation

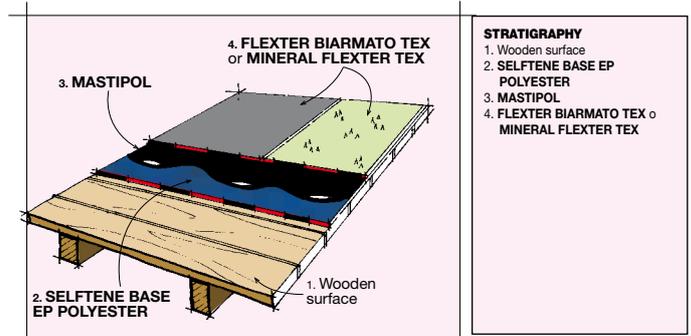


#### • with thermal insulation

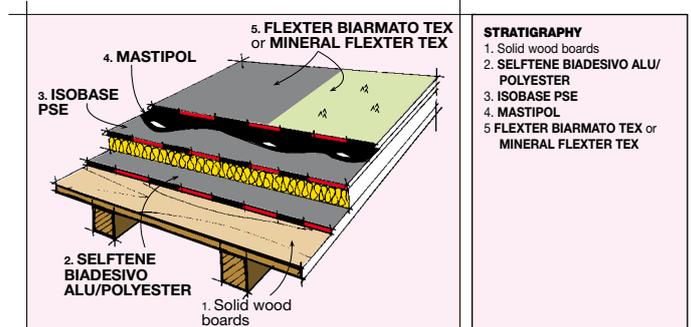
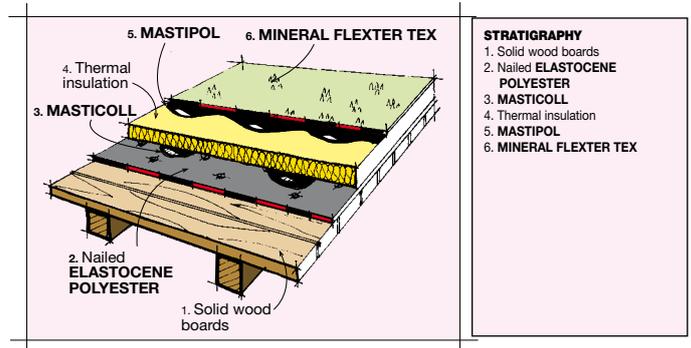
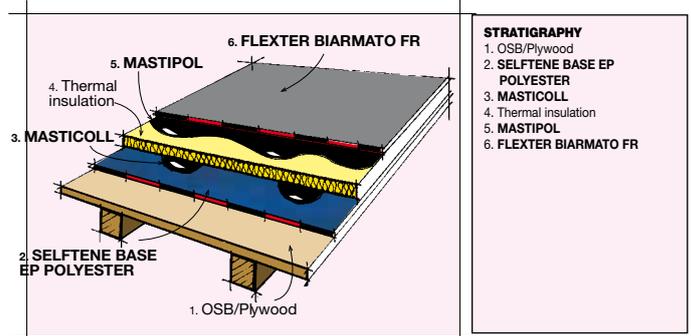


### ON WOOD SURFACE

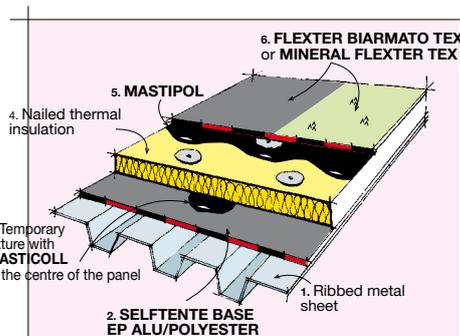
#### • without thermal insulation



#### • with thermal insulation

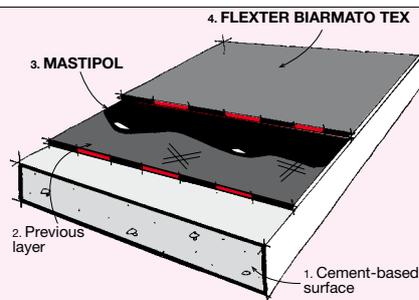


## RIBBED METAL SHEET



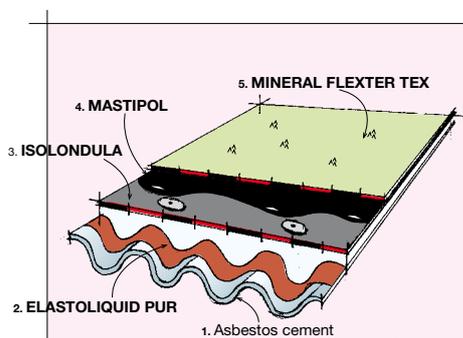
- STRATIGRAPHY**
1. Ribbed metal sheet
  2. SELFTENE BASE EP POLYESTER
  3. Temporary fixture with MASTICOLL in the centre of the panel
  4. Nailed thermal insulation
  5. MASTIPOL
  6. FLEXTER BIARMATO TEX or MINERAL FLEXTER TEX

## REFURBISHMENT



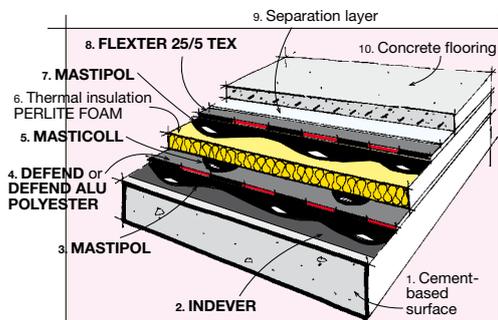
- STRATIGRAPHY**
1. Cement-based surface
  2. Previous layer
  3. MASTIPOL
  4. FLEXTER BIARMATO TEX

## REFURBISHMENT OF ASBESTOS CEMENT SHEET

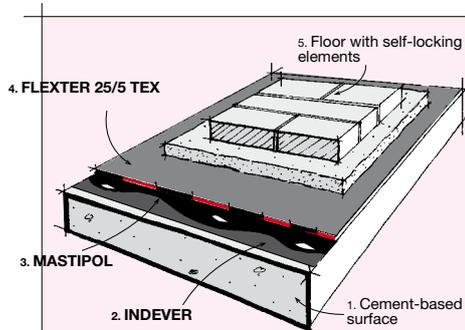


- STRATIGRAPHY**
1. Asbestos cement
  2. ELASTOLIQUID PUR
  3. ISOLONDULA
  4. MASTIPOL
  5. MINERAL FLEXTER TEX

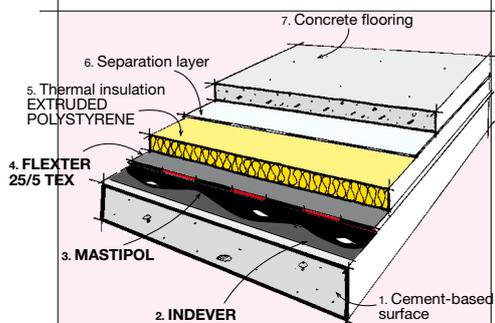
## PARKING



- STRATIGRAPHY**
1. Cement-based surface
  2. INDEVER
  3. MASTIPOL
  4. DEFEND or DEFEND ALU POLYESTER
  5. MASTICOLL
  6. Thermal insulation PERLITE FOAM
  7. MASTIPOL
  8. FLEXTER 25/5 TEX
  9. Separation layer
  10. Concrete flooring

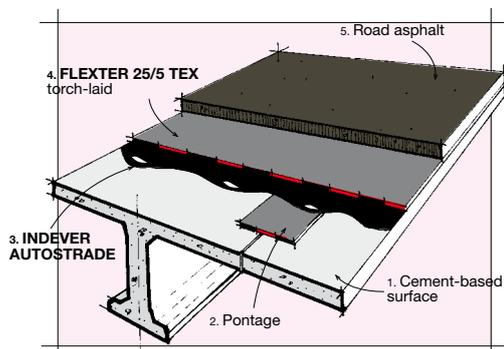


- STRATIGRAPHY**
1. Cement-based surface
  2. INDEVER
  3. MASTIPOL
  4. FLEXTER 25/5 TEX
  5. Floor with self-locking elements



- STRATIGRAPHY**
1. Cement-based surface
  2. INDEVER
  3. MASTIPOL
  4. FLEXTER 25/5 TEX
  5. Thermal insulation EXTRUDED POLYSTYRENE
  6. Separation layer
  7. Concrete flooring

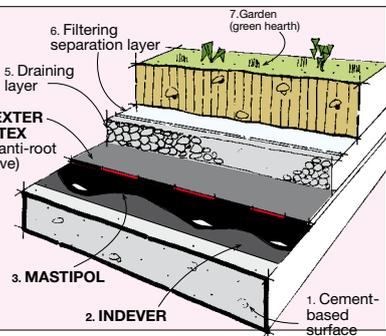
## BRIDGE



- STRATIGRAPHY**
1. Cement-based surface
  2. Pontage
  3. INDEVER AUTOSTRADE
  4. FLEXTER 25/5 TEX torch-laid
  5. Road asphalt

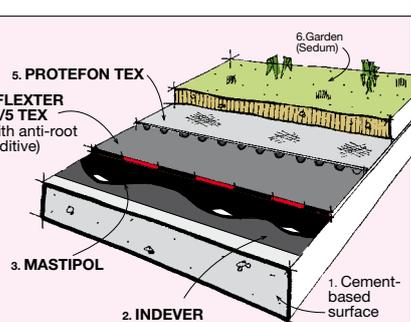
## ROOF GARDEN

### • Intensive green roof



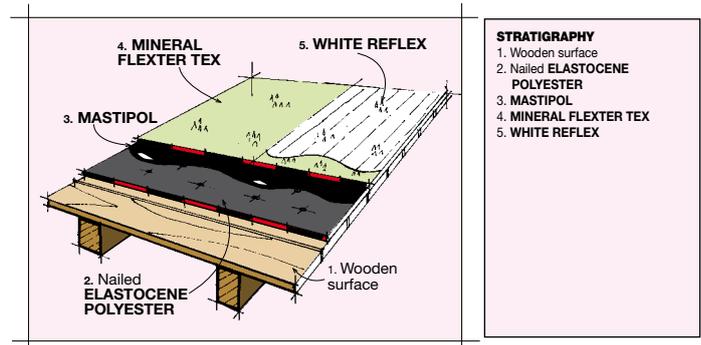
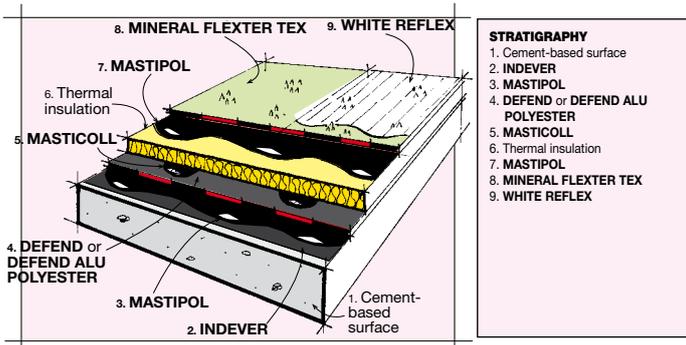
- STRATIGRAPHY**
1. Cement-based surface
  2. INDEVER
  3. MASTIPOL
  4. FLEXTER 25/5 TEX (with anti-root additive)
  5. Draining layer
  6. Filtering separation layer
  7. Garden (green earth)

### • Extensive green roof

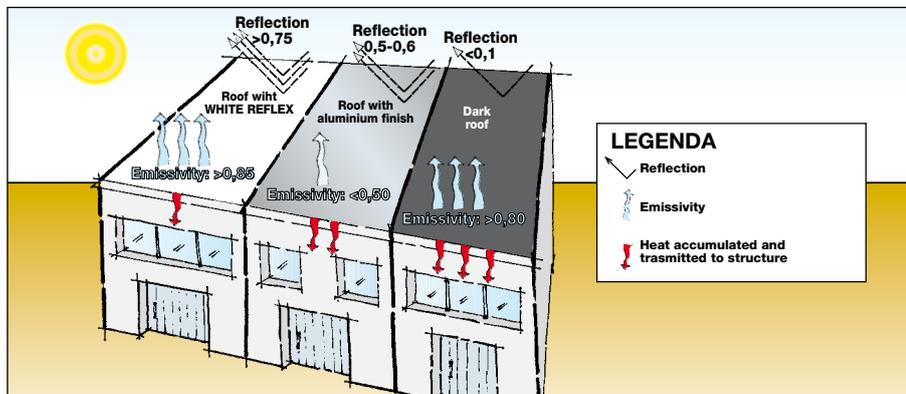


- STRATIGRAPHY**
1. Cement-based surface
  2. INDEVER
  3. MASTIPOL
  4. FLEXTER 25/5 TEX (with anti-root additive)
  5. PROTEFON TEX
  6. Garden (Sedum)

# COOL ROOF WATERPROOFING WITH HIGH REFLECTIVITY AND EMISSIVITY



By painting the top slated face with MINERAL FLEXTER on roofs with exposed covering you can obtain a "Cool Roof", whose face exposed to sun rays reaches temperatures of just 40-42°C instead of the 75-80°C of waterproofing products with dark finish. The WHITE REFLEX paint obtains a superior performance compared to coverings protected with metal foil and unlike these it enables quicker cooling overnight.



MAX TEMPERATURE	
Black bituminous membrane	78°C
Grey slate membrane	74°C
White slate membrane	70°C
Painted aluminium membrane	67°C
Self-protected membrane with copper foil	60°C
Self-protected membrane with aluminium foil	55°C
<b>Membrane with WHITE REFLEX paint</b>	<b>42°C</b>

REFLECTION	
Black bituminous membrane	<0,10
Painted aluminium membrane	0,5-0,6
<b>Membrane with WHITE REFLEX paint</b>	<b>&gt;0,75</b>

EMISSIONITY	
Black bituminous membrane	>0,80
Painted aluminium membrane	<0,50
<b>Membrane with WHITE REFLEX paint</b>	<b>&gt;0,85</b>



**Solar Reflectance Index SRI>90**

## WHITE REFLEX

**WHITE REFLEX** is a one-component white paint with polymer base in water emulsion and special additives. Once dry it forms a flexible film, resistant to atmospheric agents, with high solar reflectance and infrared emissivity.

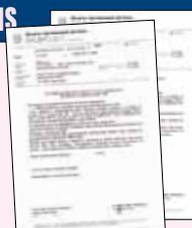
**WHITE REFLEX** is used to protect polymer-bitumen membranes: the white finish and the special additives not only extend the life of the roof coverings but also reduce the temperature, both outside and inside the building. The high level of reflectance of **WHITE REFLEX** (0,75) does indeed considerably reduce the heat absorbed from the rays of the sun compared to a dark surface; this consequently leads to a considerable reduction in the temperature and to consistent savings in energy to condition the buildings. The high level of infrared emissivity (>0,85) also favours the dissipation of heat accumulated overnight. It can also be applied on plaster and concrete surfaces. The reduction in temperature and the distributed light also increase the efficiency of photovoltaic panels.

The performance of the panels does indeed decrease by approximately 5% for every 0.5°C deviation from the temperature of 25°C (temperature at which best performance is obtained). By painting roofs with **WHITE REFLEX** you will obtain a SRI value (Solar Reflectance Index) of 92, and therefore obtain **LEED** credits for the reduction in the Heat Island Effect.



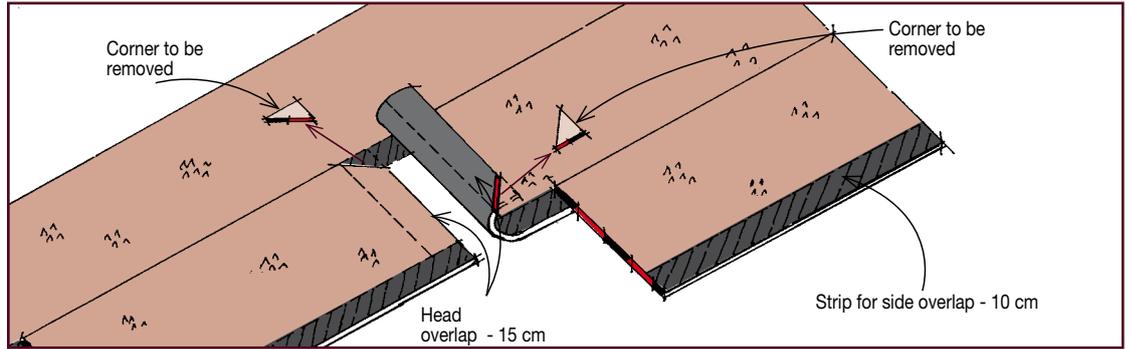
## CERTIFICATIONS

Solar reflectance (EN 410): 74.6%  
Solar reflectance, ageing after one year (EN 410): 71.4%

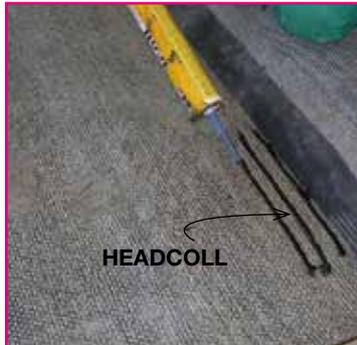


**Certification**  
**Stazione**  
**Sperimentale**  
**del Vetro**

# LAYING METHODS AND DETAILS



## COLD SEALING WITH HEADCOLL



1. Spread HEADCOLL



2. Overlap membranes



3. Roll overlap

## HOT AIR SEALING



Sealing the overlaps

## TORCH SEALING



## SEALING WITH SAFETY BURNER



**Lining the protruding parts with HEADCOLL adhesive**



1. Spread HEADCOLL over the corner between the flat part and vertical part



2. Reinforce the covering on a corner by gluing a 15 cm high strip of membrane



3. Press the reinforcement strip thoroughly



4. The membrane of the flat part, glued with MASTIPOL will be butted at the end of the protruding part, sealing it to the corner strip

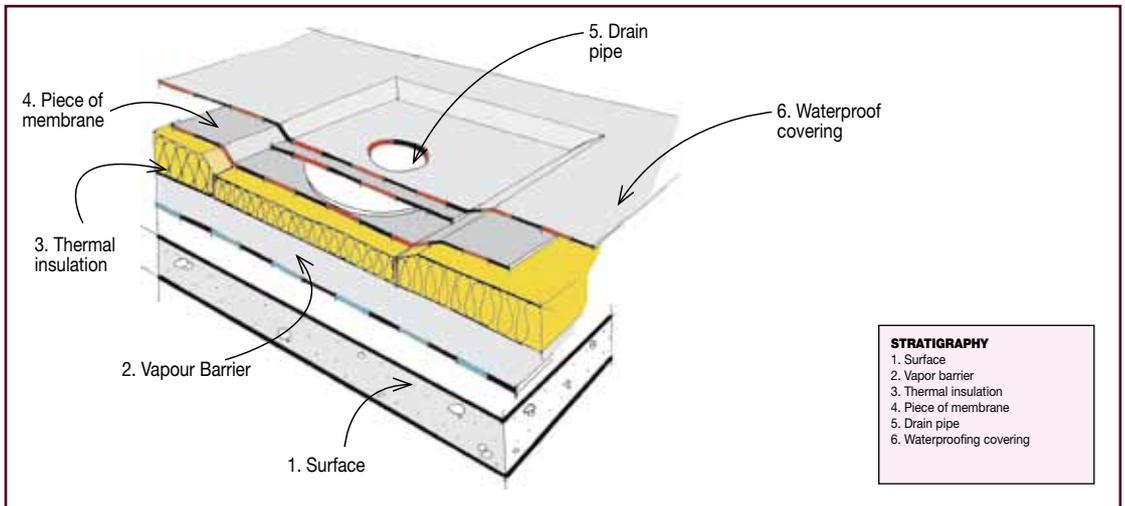


5. Pre-arrange the lining of the protruding part that will be turned over and sealed on the surface for 10 cm beyond the reinforcement strip

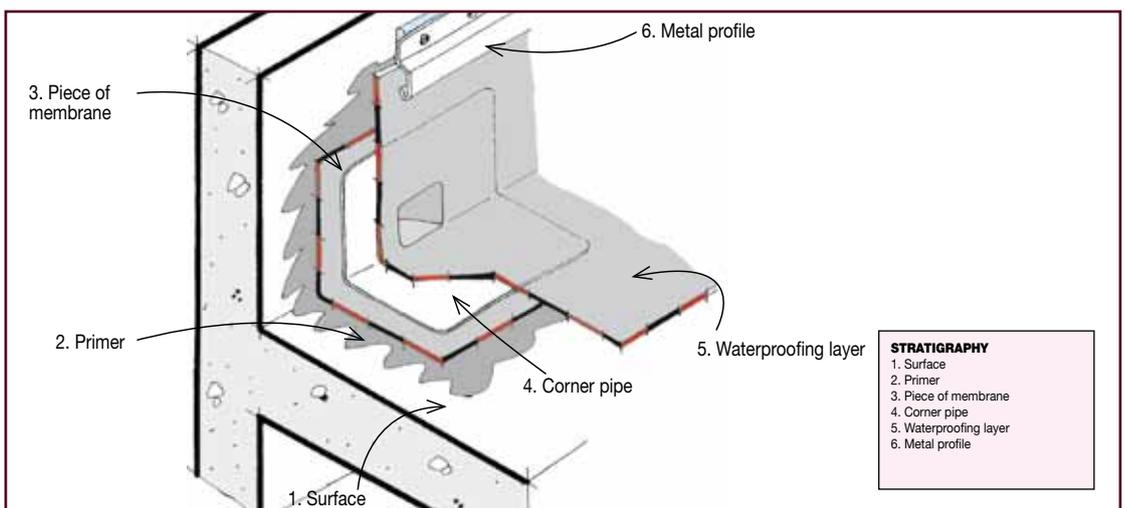


6. The vertical part glued with HEADCOLL will be pressed thoroughly

**Drain pipe**



**Rain water pipe**



# SPECIFICATION ITEMS AND TECHNICAL FEATURES

## FLEXTER BIARMATO TEX

The waterproofing system will be made up of a polymer-bitumen elastoplastomeric membrane, type **FLEXTER BIARMATO TEX** certificated with Agreement UBAtc, with base of selected distilled bitumen, elastomeric polyolefin and plastomeric polymers with double reinforcement consisting of non-woven polyester fabric coupled with fibreglass mat positioned in the top part of the body of the membrane; the bottom face is lined with a film of polypropylene fibres coupled at high temperature and the top face is protected with wet screen-printed talcum finish.

The 4-mm membrane (UNI EN 1849-1) will have a tensile strength (UNI EN 12311-1) L/T of 650/550 N/50mm, ultimate elongation (UNI EN 12311-1) L/T of 50/50%, resistance to tearing (UNI EN 12310-1) L/T of 150/150 N, cold flexibility (UNI EN 1109) of -15°C, resistance to impact (UNI EN 12691) of 1000 mm, a dimensional stability (UNI EN 1107-1) L/T  $\pm 0.2\%$  and resistance to static load (UNI EN 12730) of 15 kg.

*Note.* when waterproofing roof gardens, foundations etc. where the aggression of roots is feared, the membrane will be mixed with Preventol B2 additive, being the root inhibitor additive of the polymer-bitumen waterproofing membranes, whose effectiveness must be validated by the certificate of the German institute FORSCHUNGSANSTALT GEISENHEIM with the FLL method compliant with standard EN-13948.

## FLEXTER BIARMATO FR TEX

The waterproofing system will be made up of a fire resistant polymer-bitumen elastoplastomeric membrane, type **FLEXTER BIARMATO TEX** certificated with Agreement UBAtc, with base of selected distilled bitumen, elastomeric polyolefin and plastomeric polymers, with self-extinguishing mineral additives, double reinforcement consisting of non-woven polyester fabric coupled with fibreglass mat positioned in the top part of the body of the membrane; the bottom face is lined with a film of polypropylene fibres coupled at high temperature and the top face is protected with wet screen-printed talcum finish.

The 4-mm membrane (UNI EN 1849-1), during the fire resistance test (ENV 1187/1) will be certified B roof-t1 compliant with EN 13501-5 and will have a tensile strength (UNI EN 12311-1) L/T of 650/550 N/50mm, ultimate elongation (UNI EN 12311-1) L/T of 50/50%, resistance to tearing (UNI EN 12310-1) L/T of 150/150 N, cold flexibility (UNI EN 1109) of -15°C, resistance to impact (UNI EN 12691) of 1000 mm, a dimensional stability (UNI EN 1107-1) L/T  $\pm 0.2\%$  and resistance to static load (UNI EN 12730) of 15 kg.

## MINERAL FLEXTER TEX

The waterproofing system will be made up of a polymer-bitumen elastoplastomeric membrane, self protected with slate granules, with base of selected distilled bitumen, elastomeric polyolefin and plastomeric polymers, with composite reinforcement consisting of non-woven polyester fabric stabilised with fibreglass, type **MINERAL FLEXTER TEX** certificated with Agreement UBAtc; the membrane bottom face is lined with a film of polypropylene fibres coupled at high temperature,

The 4-mm membrane (UNI EN 1849-1) will have a tensile strength (UNI EN 12311-1) L/T of 850/700 N/50mm, ultimate elongation (UNI EN 12311-1) L/T of 50/50%, resistance to tearing (UNI EN 12310-1) L/T of 150/150 N, cold flexibility (UNI EN 1109) of -15°C, resistance to impact (UNI EN 12691) of 1250 mm, a dimensional stability (UNI EN 1107-1) L/T  $\pm 0.3\%$  and resistance to static load (UNI EN 12730) of 15 kg.

## MINERAL FLEXTER FR TRIATEX

The waterproofing system will be made up of a polymer-bitumen elastoplastomeric membrane, type **MINERAL FLEXTER FR TRIATEX** certificated with Agreement UBAtc, resistant to fire, self protected with slate granules, with base of selected distilled bitumen, elastomeric polyolefin and plastomeric polymers, with triple reinforcement consisting of fibreglass mat between two layers of non-woven polyester fabric; the bottom face is lined with a film of polypropylene fibres coupled at high temperature

The 4-mm membrane (UNI EN 1849-1), during the fire resistance test (ENV 1187/1/3/4) will be certified B roof-t1-t3-t4 compliant with EN 13501-5 and will have a tensile strength (UNI EN 12311-1) L/T of 750/650 N/50mm, ultimate elongation (UNI EN 12311-1) L/T of 50/50%, resistance to tearing (UNI EN 12310-1) L/T of 250/250 N, cold flexibility (UNI EN 1109) of -15°C, resistance to impact (UNI EN 12691) of 1000 mm, a dimensional stability (UNI EN 1107-1) L/T  $\pm 0.3/0.1\%$  and resistance to static load (UNI EN 12730) of 15 kg.

## FLEXTER 25/5 TEX

The waterproofing system will be made up of a polymer-bitumen elastoplastomeric membrane, type **FLEXTER 25/5 TEX** certificated with Agreement UBAtc, with base of selected distilled bitumen, elastomeric polyolefin and plastomeric polymers, with composite reinforcement in non-woven polyester fabric stabilised with fibreglass; the bottom face is lined with a film of polypropylene fibres coupled at high temperature and the top face is protected with wet screened-printed talcum finish.

The 5-mm membrane (UNI EN 1849-1) will have a tensile strength (UNI EN 12311-1) L/T of 1100/900 N/50mm, ultimate elongation (UNI EN 12311-1) L/T of 50/50%, resistance to tearing (UNI EN 12310-1) L/T of 200/200 N, cold flexibility (UNI EN 1109) of -15°C, resistance to impact (UNI EN 12691) of 1500 mm, a dimensional stability (UNI EN 1107-1) L/T  $\pm 0.5\%$  and resistance to static load (UNI EN 12730) of 20 kg.

*Note.* when waterproofing roof gardens, foundations etc. where the aggression of roots is feared, the membrane will be mixed with Preventol B2 additive, being the root inhibitor additive of the polymer bitumen waterproofing membranes whose effectiveness must be validated by the certificate of the German institute FORSCHUNGSANSTALT GEISENHEIM with the FLL method compliant with standard EN-13948.



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

### EN 13707 - REINFORCED BITUMEN SHEETS FOR ROOF WATERPROOFING

• **Under layer or intermediate layer in multi-layer systems without permanent heavy surface protection**

- FLEXTER 25/5 TEX
- FLEXTER BIARMATO FR TEX
- FLEXTER BIARMATO TEX

• **Upper layer in multi-layer systems without permanent heavy surface protection**

- MINERAL FLEXTER FR TRIATEX
- MINERAL FLEXTER TEX
- FLEXTER 25/5 TEX
- FLEXTER BIARMATO FR TEX
- FLEXTER BIARMATO TEX

• **Single-layer without permanent heavy surface protection**

- MINERAL FLEXTER FR TRIATEX
- MINERAL FLEXTER TEX
- FLEXTER 25/5 TEX
- FLEXTER BIARMATO FR TEX
- FLEXTER BIARMATO TEX

• **Single-layer under heavy protection**

- FLEXTER 25/5 TEX
- FLEXTER BIARMATO FR TEX
- FLEXTER BIARMATO TEX

• **Under heavy protection in multi-layer systems**

- FLEXTER 25/5 TEX
- FLEXTER BIARMATO FR TEX
- FLEXTER BIARMATO TEX

### EN 13969 - BITUMEN DAMP PROOF SHEET INCLUDING BITUMEN BASEMENT TANKING SHEETS

• **Membranes for foundations**

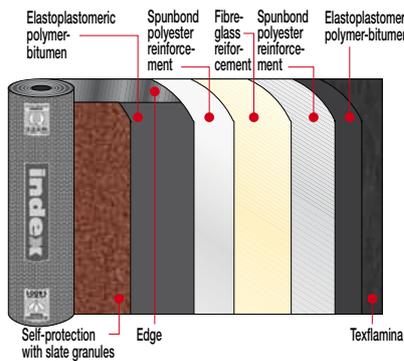
- FLEXTER 25/5 TEX
- FLEXTER BIARMATO FR TEX
- FLEXTER BIARMATO TEX

## TECHNICAL CHARACTERISTICS

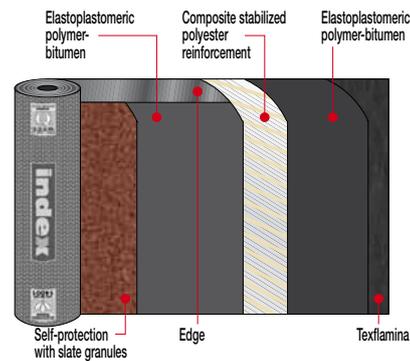
	τ	MINERAL FLEXTER FR TRIATEX	MINERAL FLEXTER TEX	FLEXTER 25/5 TEX	FLEXTER BIARMATO FR TEX	FLEXTER BIARMATO TEX
Thickness (EN 1849-1)	±0,2	4 mm	4 mm	5 mm	4 mm	3 mm
Roll size (EN 1848-1)	≥	1×10 m	1×10 m	1×10 m	1×10 m	1×10 m
Reinforcement		Composite with 3 layers in fibreglass between 2 layers of non-woven polyester Sp. fabric	Composite non-woven polyester fabric stabilised with fibreglass	Composite non-woven polyester fabric stabilised with fibreglass	Spunbond non-woven polyester fabric and fibreglass mat	Spunbond non-woven polyester fabric and fibreglass mat
Watertightness (EN 1928 method B)	≥	60 kPa	60 kPa	60 kPa	60 kPa	60 kPa
Peel resistance (EN 12316-1)	-20 N	-	50 N/50 mm	-	100 N/50 mm	100 N/50 mm
Shear resistance (EN12317-1)	-20%	650/550 N/50 mm	750/600 N/50 mm	900/800 N/50 mm	500/500 N/50 mm	500/500 N/50 mm
Maximum tensile force Long./Trasv. (EN 12311-1)	-20%	750/650 N/50 mm	850/700 N/50 mm	1.100/900 N/50 mm	650/550 N/50 mm	650/550 N/50 mm
Elongation (EN 12311-1)	-15 v.A.	50/50%	50/50%	50/50%	50/50%	50/50%
Resistance to impact (EN 12691 method A)		1.000 mm	1.250 mm	1.500 mm	1.000 mm	1.000 mm
Resistance to static loading (EN 12730)		15 kg	15 kg	20 kg	15 kg	15 kg
Resistance to tearing (nail shank) (EN 12310-1)	-20%	250/250 N	150/150 N	200/200 N	150/150 N	150/150 N
Dimension stability (EN 1107-1)	≤	-0,3/+0,1%	-0,3/+0,3%	-0,3/+0,3%	-0,2/+0,2%	-0,2/+0,2%
Flexibility to low temp. (EN 1109)	≤	-15°C	-15°C	-15°C	-15°C	-15°C
• after ageing at high temperature (1296-1109)	+15°C	-10°C	-10°C	-5°C	-15°C	-10°C
Flow resistance at high temperature (EN 1110)	≥	120°C	120°C	120°C	120°C	120°C
• after ageing at high temperature (1296-1110)	-10°C	110°C	110°C	120°C	110°C	120°C
UV ageing (EN 1297)		Passed the test	Passed the test	Passed the test	Passed the test	Passed the test
Fire class (EN 13501-1)		Euroclass E	Euroclass F	Euroclass F	Euroclass E	Euroclass F
External fire performance (EN 13501-5)		B <sub>roof</sub> -t1 / B <sub>roof</sub> -t3 / B <sub>roof</sub> -t4	F <sub>roof</sub>	F <sub>roof</sub>	B <sub>roof</sub> -t1	F <sub>roof</sub>

## COMPOSITION OF THE MEMBRANE

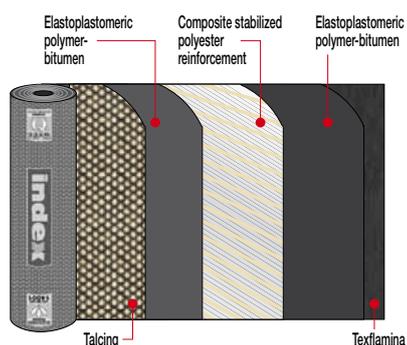
### MINERAL FLEXTER FR TRIATEX



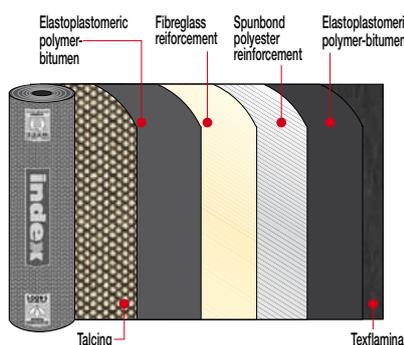
### MINERAL FLEXTER TEX



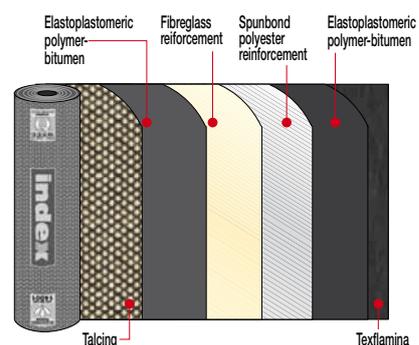
### FLEXTER 25/5 TEX



### FLEXTER BIARMATO FR TEX



### FLEXTER BIARMATO TEX



# ACCESSORY MEMBRANES

## MEMBRANES FOR VAPOUR BARRIER ON CONCRETE

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**DEFEND (\*)** - flame laying or with MASTIPOL adhesive

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**DEFEND ALU POLYESTER (\*)** - Flame laying or with MASTIPOL adhesive

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**TECTENE BV STRIP EP/V** - Flame laying

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**TECTENE BV STRIP ALU EP POLYESTER** - Flame laying

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**PROMINENT/V - PROMINENT POLYESTER - PROMINENT ALU POLYESTER** - Flame laying

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**SELFTENE BASE EP POLYESTER - SELFTENE BASE EP ALU POLYESTER** - Self-adhesive under heavy protection

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## MEMBRANES FOR VAPOUR BARRIER ON WOOD

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**ELASTOCENE POLYESTER** - Dry nailed laying

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**SELFTENE BASE EP POLYESTER - SELFTENE BASE EP ALU POLYESTER** - Self-adhesive

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**SELFTENE BV BIADESIVO ALU POLYESTER** - Self-adhesive

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## MEMBRANES FOR VAPOUR BARRIER ON RIBBED METAL SHEET

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**SELFTENE BASE EP ALU POLYESTER** - Self-adhesive

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**SELFTENE BV BIADESIVO ALU POLYESTER** - Self-adhesive

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## UNDER LAYER MEMBRANES

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**ELASTOCENE POLYESTER** - Flame laying on concrete. Dry nailed laying on wood.

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**SELFTENE BASE EP POLYESTER** - Self-adhesive on concrete, on wood and on thermal insulation.

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(\*) For cold gluing with **MASTIPOL**, the membranes must have the bottom face treated with Texflamina.

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**index**  
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