



General Catalogue

Waterproofing and acoustic insulation



ISOVER
SAINT-GOBAIN



All the experience of a large Group.

Saint-Gobain, the world leader in habitat, conceives, manufactures and distributes new generations of materials for modern building, offering innovative solutions for energy efficiency and thermal and sound comfort. The Group has evolved over its 350 years of history, putting man and the environment at the centre of its activities.

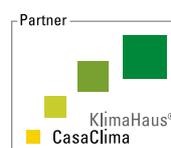
- Presence in 64 countries
- Euro 42 billion turnover in 2011
- 195 thousand employees
- 6 transversal research centres
- 12 research centres and a hundred development units
- 396 patents registered in 2011

Founded in France in 1665, Saint-Gobain is today one of the 100 leading industrial groups in the world. It pursues its path of technical development through several partnerships with the most prestigious universities and laboratories in the world.

Putting this commitment to innovation into figures, 25% of the products offered by Saint-Gobain did not exist 5 years ago. Thanks to this indefatigable research effort, 32% of Saint-Gobain's turnover derives from systems and solutions for energy saving and environmental protection.

Saint-Gobain puts itself on the Italian market as a reference technology centre via a modern approach to the building market: flat glass, dry construction systems, alloy ducts, insulating materials, technical mortars, adhesives and plasters, acoustic false ceilings and wall panels, tools for cutting and removing materials and photovoltaic systems that are perfectly integrated into the buildings.

A complete range of solutions offered by the Group for: roofs, cladding and photovoltaic, flooring and false ceilings, shells and walls, infrastructures and ducting.



Isover Saint-Gobain
is an ordinary member
of GBC Italy

Complete innovative solutions
for the habitat of the future

“Get our technical documentation
on your Smartphone and Tablet”



Saint-Gobain PPC Italia, the Italian company of Saint-Gobain group, manufactures and markets insulation products for roofs, walls, floors, ducts and other industrial applications in the thermal and sound insulation field with its Isover business.

The Isover bituminous membranes and impact noise insulation are marketed under the BITUVER brand.

The polymer-bitumen membranes are produced in the Chieti production facility, where careful tests are carried out on the quality of the raw materials used for the mixes, their mutual compatibility, the mechanical performances of the reinforcements and the quality of the surface finishes.

Thanks to the continuous improvement research, the Chieti facility has been EN ISO 9001, ISO 14001 and OHSAS 18001 certified.



BITUVER facility, Chieti



The product range

Every product is labelled with coloured adhesive tapes that show the commercial name of the membrane and clearly identify, through the colour, the cold flexibility temperature.



This feature is one of the fundamental parameters for the choice of a bituminous waterproofing membrane. A second adhesive tape in the middle, only present in the slate versions, indicates the surface finish (self-protection) with mineral granules.



The third band indicates the product's thickness or weight per m² and shows the type of Reinforcement used.



The colour is a distinguishing feature in this case as well: the polyester reinforced products have the writing in red letters, whilst those in glass tissue are written in blue letters.



The name

The names also better express the product's basic characteristics, for example:

MONOFLEX MINERAL 4 MM P

- MONOFLEX identifies the item's "Family" on the basis of its application.
- MINERAL when present, indicates that it is a slated product.
- 4 MM identifies the product's thickness or weight per m².
- P finally, identifies the reinforcement (P=polyester – V=glass tissue).

DECOTEX Treatment

DECOTEX treatment consists of applying a polypropylene tissue on the upper face of a BITUVER membrane.

This treatment is an alternative to the traditional non-stick finish with talc and offers several advantages:

- ECOLOGICAL
no release of dusts into the environment
- CAN BE IMMEDIATELY PAINTED
Saving time
- NON-SLIP
more safety on site
- AESTHETIC
better visual effect

You can request the Decotex treatment on all products available in the "TEX" version marked with the symbol ★

The CE Marking Polymer-bitumen Membranes

From 1st September 2005, bituminous membranes producers have the obligation to apply the CE marking on their products.

Membranes have been compulsorily CE marked since 1st September 2006.

Affixing the CE mark on products means reaching a goal in terms of quality standardization. In fact, the general guidelines for these principles had already been affirmed on building materials in 1989 with European Directive 89/106/EEC.

Today, with the issue of specific European technical standards for bituminous waterproofing membranes (EN 13707; EN 13970; EN 13969; EN 13859 -1; EN 14695) these principles have been translated into concrete facts.

CE marking is the condition for selling a product legally in all member countries of the European Community: it is a de facto technical data sheet.

In fact, all European producers are obliged to declare a certain number of performances and must necessarily express them all in the same manner, in order to supply users with easily mutually comparable data.

The technical standards define the performances modalities of laboratory test according to the application destinations of products, the expression modalities of laboratory tests, and offer indications about the obligatory documentation which will be supplied by producers.

Roll label

It has to be applied on each roll and it will contain:

- Product name
- CE marking
- Year of marking application
- Production batch and date (or code)
- Certification Body Number
- Product dimensions

Declaration of conformity

It has to be released under request and certifies that the product satisfies the prerequisites of the reference technical standards according to the CE certification released by the Certification Body.

Product Technical Data Sheet

It accompanies membranes together with the other documents and contains, in addition to the information about the CE marking, the technical data concerning the significant performances of the product.





Impact noise: floors

Impact noise on floors can be caused by:

- percussion (falling objects, footsteps, etc.)
- vibrations (machines)
- friction (dragging furniture).

Because of the structures' rigid continuity, the transmission of impact noise, unlike airborne noise, reaches parts of the building that are distant from the sound source itself.

For insulation from impact noise, the most effective solution in terms of results and efficient in economic terms consists in the use of the so-called "floating floor", the purpose of which is to obtain flooring free of rigid connections with the other structures.

This total desolidarization is obtained by placing a suitable elastic material between the flooring, the side walls and the load bearing floor. The quality of the floating floor's construction is very important, since even small rigid connections considerably reduce the system's sound absorption performance.

The Italian regulations and Prime Ministerial Decree 5/12/97:

Scope of application (Art. 1): In enforcement of article 3 of Law 447/95, the decree determines the acoustic requirements of sound sources and the passive requirements of buildings in order to reduce human exposure to noise.

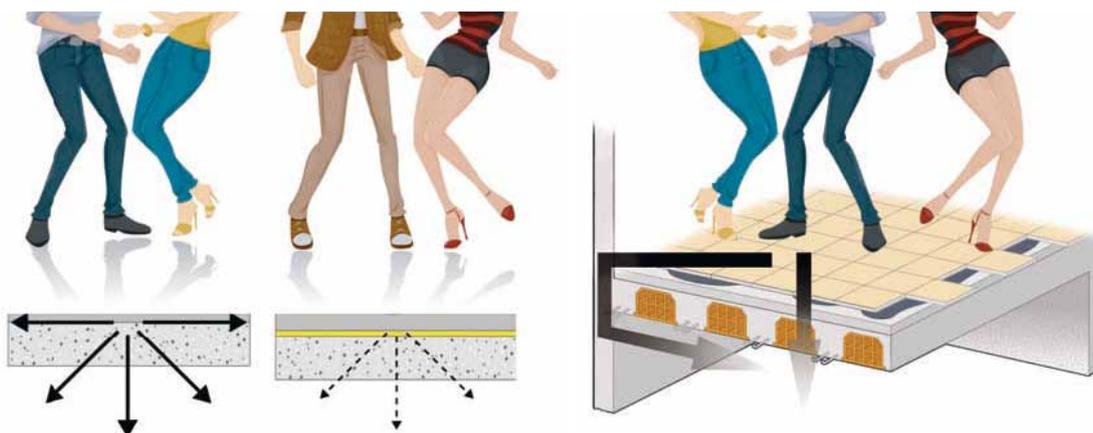
Classification of habitation environments (Art. 2)

- A - Buildings for residential use or similar
- B - Buildings for office use and similar
- C - Buildings used as hotels, boarding houses and similar activities
- D - Buildings used as hospitals, clinics, nursing homes and similar
- E - Buildings used for scholastic activities at all levels and similar
- F - Buildings used for recreation or worship or similar
- G - Buildings used for commercial activities or similar

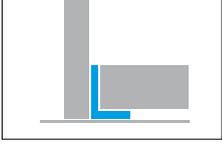
Limit values (art. 3)

| cat. from table A | | $L'_{n,w}$ |
|-------------------|---------|------------|
| 1. | D | 58 |
| 2. | A, C | 63 |
| 3. | E | 58 |
| 4. | B, F, G | 55 |

The lower the $L'_{n,w}$, the better the performance.



BITUVER Solutions

| | OBJECTIVE | SOLUTION | RECOMMENDED PRODUCTS |
|---|---|---|--|
|  | Thermal and sound insulation of interfloor gap | Floating floor consisting of a layer of system masking in lightened material, a glass wool insulating panel and load-spreading screed. | EKOSOL N |
|  | Sound insulation of interfloor gap | Floating floor consisting of a layer of system masking in lightened material, insulating felt and load-spreading screed. | EKOSOL N FONAS 31 FONASOFT FONAS 2.8 FONAS PE |
|  | Sound insulation for thin interfloor gap | Floating floor consisting of an insulating felt and load-spreading screed. | FONAS 31 FONASOFT |
|  | Sound insulation for interfloor gap with underfloor heating | Floating floor consisting of an insulating felt laid underneath the heating system's insulating panel. | FONAS 31 FONASOFT FONAS 2.8 FONAS PE |
|  | Sound insulation for interfloor gap with self-levelling screed | Floating floor consisting of a layer of system masking in lightened material, insulating felt and load-spreading screed. | FONAS 31 FONASOFT FONAS 2.8 FONAS PE |
|  | Thermal and sound insulation of wooden interfloor gap | Floating floor consisting of a possible structure reinforcing layer, a layer of systems masking in lightened material, a glass wool insulating panel and load-spreading screed. | EKOSOL N |
|  | Desolidarization of the perimeter, corners, edges and door jams | Securing elastic material accessories | PERISOL PERISOL L PERISOL AI PERISOL AE PERISOL MP |
|  | Vertical desolidarization between wall and floor, horizontal desolidarization, overlap band for floating floors | Insulating felt strips under wall. | AKUSTRIP 12 AKUSTRIP 20 AKUSTRIP 33 |

Sound insulation underfloor

UNDERFLOOR



■ FONAS 31

Polyester fibre felt laminated with a bitumen membrane with selvedge and self-adhesive band for sealing the joints, in order to prevent the formation of sound bridges when the screed is laid and protect the floor from any excess water contained in the screed.

| Product | Dimensions | Thickness weight/m ² | m ² /pallet |
|----------|------------|---------------------------------|------------------------|
| FONAS 31 | 1X8 m | 4,2 kg | 184 |

| Impact noise level | |
|---|-----------------------------|
| Under bare floor | 74 dB |
| Under floor insulated with FONAS 31 | 43 dB |
| Improvement of impact noise insulation | 31 dB ⁽¹⁾ |

| Dynamic rigidity | |
|------------------|----------------------|
| S' _t | 15 MN/m ³ |
| S' | 32 MN/m ³ |

⁽¹⁾ Test report carried out by CSL

UNDERFLOOR



■ FONASOFT

Polyester fibre felt laminated with a bitumen membrane, particularly suitable for all surfaces, with selvedge and self-adhesive band for sealing the joints, in order to prevent the formation of sound bridges when the screed is laid and protect the floor from any excess water contained in the screed.

| Product | Dimensions | Thickness weight/m ² | m ² /pallet |
|----------|------------|---------------------------------|------------------------|
| FONASOFT | 1X10 m | 2,2 kg | 230 |

| Impact noise level | |
|---|-----------------------------|
| Under bare floor | 74 dB |
| Under floor insulated with FONASOFT | 48 dB |
| Improvement of impact noise insulation | 26 dB ⁽²⁾ |

| Dynamic rigidity | |
|------------------|----------------------|
| S' _t | 15 MN/m ³ |
| S' | 34 MN/m ³ |

⁽²⁾ Estimate carried out according to the UNI TR 11175 standard

■ EKOSOL N

Panel in G3 touch mineral insulation, treated with thermo-setting resin based bonding agent, bare.

| Product | Dimensions | Thickness weight/m ² | m ² /pallet |
|----------|------------|---------------------------------|------------------------|
| EKOSOL N | 1X1,20 m | 15 mm | 86,40 |
| | 1X1,20 m | 20 mm | 72 |

| Impact noise level | |
|--|----------------------|
| Improvement of impact noise insulation | 31 dB ⁽³⁾ |

| Dynamic rigidity (20 mm) | |
|--------------------------|---------------------|
| S' | 8 MN/m ³ |

| Thermal conductivity at 10°C | |
|------------------------------|-------|
| λ_D W/(m·K) | 0,031 |

| Reaction to fire | |
|------------------|----------------------|
| Euroclasse | A2 _{FL} -s1 |

⁽³⁾ Test report carried out by Isituto Galileo Ferraris.



UNDERFLOOR

■ FONAS 2.8

Product made up of high density glass wool with one side impregnated with a special bituminous mix coated with a plastic film; it has an adhesive band on the opposite edge for sealing the joints.

| Product | Dimensions | Thickness weight/m ² | m ² /pallet |
|-----------|------------|---------------------------------|------------------------|
| FONAS TEX | 1X20 m | 0,950 kg | 400 |
| FONAS M | 1X20 m | 0,950 kg | 400 |

| Impact noise level | |
|--|----------------------|
| Under bare floor | 74 dB |
| Under floor insulated with FONAS TEX | 50 dB |
| Improvement of impact noise insulation | 24 dB ⁽⁴⁾ |

| Dynamic rigidity | |
|------------------|----------------------|
| S' _t | 12 MN/m ³ |
| S' | 50 MN/m ³ |

⁽⁴⁾ Test report carried out by Isituto Galileo Ferraris.



UNDERFLOOR

For further information, ask for the specific floor thermal and sound insulation manual.



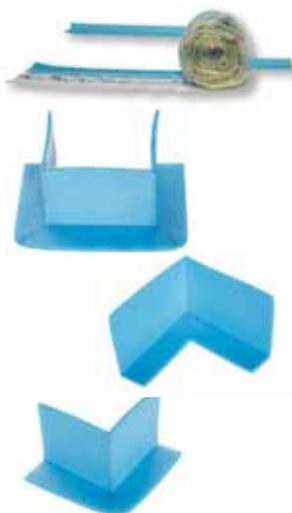
■ FONAS PE

High density closed cell expanded polyethylene netting felt.

| Product | Dimensions | Thickness weight/m ² | m ² /pallet |
|----------|--------------|---------------------------------|------------------------|
| FONAS PE | 1,50 X 160 m | 3 | 240 |
| | 1,50 X 100 m | 5 | 150 |
| | 1,50 X 50 m | 10 | 75 |

| Impact noise level | |
|---|-------|
| Improvement of impact noise insulation (5 mm) | 20 dB |

| Dynamic rigidity (5 mm) | |
|-------------------------|----------------------|
| S' | 89 MN/m ³ |



■ PERISOL

Desolidarization accessories, self-adhesive in closed cell expanded polyethylene.

- PERISOL: strips in rolls with self-adhesive tape and protective tab.
- PERISOL L: self-adhesive orthogonal bands.
- PERISOL AE: accessories for external corners.
- PERISOL AI: accessories for internal corners.
- PERISOL MP: accessories for door jambs.

| Product | Length | Height | No./package |
|------------------|--------|------------|----------------------|
| PERISOL | 25 m | 120 mm | 250 |
| PERISOL L | 2 m | 160/200 mm | 120/90 |
| PERISOL AE-AI-MP | - | 100/160 mm | 64/72/30 50/48/20 |



■ AKUSTRIP 12 - AKUSTRIP 20 - AKUSTRIP 33

AKUSTRIP 12 and AKUSTRIP 20: accessories for vertical desolidarization between wall and floor.

AKUSTRIP 33: accessory for horizontal desolidarization, as overlap band for floating floors

| Product | Thickness | Dimensions | spools/pallet |
|-------------|-----------|------------|---------------|
| AKUSTRIP 12 | 2,8 | 0,12 x 20 | 160 |
| AKUSTRIP 20 | 2,8 | 0,20 x 20 | 100 |
| AKUSTRIP 33 | 2,8 | 0,33 x 20 | 60 |

Metal foil self-protected membranes

■ MEGAVER AL / CU

Elastomeric waterproofing membranes realized with a compound based on distilled bitumen, modified with elastomeric polymers (SBS), faced with a metal foil in goffered pure copper (CU) or goffered aluminium (AL).

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|---------------|------------|-----------|--------------|----------------|------------|-------------|
| MEGAVER AL/CU | | X | | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|----------------------|----------------------------|---------------------------------|------------------------|
| MEGAVER AL 4,5 KG TV | Glass fibre + Glass tissue | 4,5 kg | 230 |
| MEGAVER CU 4,5 KG TV | Glass fibre + Glass tissue | 4,5 kg | 230 |



-25 °C METAL FOIL

Main benefits

- High architectural value, even on surfaces with difficult shapes
- Minimum maintenance requirements
- Reflective power (Aluminium)

Check the precautions and limitations of use in the product's technical data sheet.

-25°C

SBS elastomeric membranes

■ FLEXIMAT

FLEXIMAT membranes have excellent mechanical features, so they can also be used in applications of maximum stress. The «MINERAL» version has the visible surface protected with slate granules and can be applied as a single layer.

| Product | Base/Middle layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|------------------|-------------------|-----------|--------------|----------------|------------|-------------|
| FLEXIMAT | X | | | | | X |
| FLEXIMAT MINERAL | | X | X | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|-------------------------|---------------|---------------------------------|------------------------|
| FLEXIMAT 4 mm P ★ | Polyester | 4 mm | 230 |
| FLEXIMAT MINERAL 4 mm P | Polyester | 4 mm | 160 |

■ MEGAVER

MEGAVER membranes have good resistance to ageing as well as excellent mechanical and stability performances. The «MINERAL» version has the visible surface protected with slate granules.

| Product | Base/Middle layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|-----------------|-------------------|-----------|--------------|----------------|------------|-------------|
| MEGAVER | X | | | | | X |
| Megaver MINERAL | | X | | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|--------------------------|---------------|---------------------------------|------------------------|
| MEGAVER 4 mm P ★ | Polyester | 4 mm | 230 |
| MEGAVER MINERAL 4 kg P | Polyester | 4 kg | 250 |
| MEGAVER MINERAL 4,5 kg P | Polyester | 4,5 kg | 230 |

-25 °C ELASTOMERIC

-25 °C ELASTOMERIC



Elastomeric SBS and elastoplastomeric APP

-20°C

MONOVER

MONOVER membranes have excellent mechanical features, so they can also be used in applications of maximum stress. The "MINERAL" version has the visible surface protected with slate granules and can be applied as a single layer.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|-----------------|------------|-----------|--------------|----------------|------------|-------------|
| MONOVER | X | | | | | X |
| MONOVER MINERAL | | X | X | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|------------------------|---------------|---------------------------------|------------------------|
| MONOVER 4 mm P ★ | Polyester | 4 mm | 230 |
| MONOVER MINERAL 4 mm P | Polyester | 4 mm | 160 |



-20 °C ELASTOPLASTOMERIC

ELASTOMAT

ELASTOMAT membranes have good resistance to ageing as well as excellent mechanical and stability performances. The "MINERAL" version has the visible surface protected with slate granules.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|-------------------|------------|-----------|--------------|----------------|------------|-------------|
| ELASTOMAT | X | | | | | X |
| ELASTOMAT MINERAL | | X | | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|----------------------------|---------------|---------------------------------|------------------------|
| ELASTOMAT 4 mm P ★ | Polyester | 4 mm | 230 |
| ELASTOMAT MINERAL 4 kg P | Polyester | 4 kg | 250 |
| ELASTOMAT MINERAL 4,5 kg P | Polyester | 4,5 kg | 230 |



-20 °C ELASTOPLASTOMERIC

MONOPLUS

Elastoplastomeric membranes obtained from bitumen compound modified with various kinds of polyolefins. MONOPLUS membranes have stability, durability and brilliant mechanical performances. They also have excellent resistance to high temperatures. The "MINERAL" version has the visible surface protected with slate granules. MONOPLUS 4 mm P can be applied as a single layer.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|------------------|------------|-----------|--------------|----------------|------------|-------------|
| MONOPLUS | X | X | X | | | X |
| MONOPLUS MINERAL | | X | | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|---------------------------|---------------|---------------------------------|------------------------|
| MONOPLUS 4 mm P ★ | Polyester | 4 mm | 230 |
| MONOPLUS MINERAL 4 kg P | Polyester | 4 kg | 250 |
| MONOPLUS MINERAL 4,5 kg P | Polyester | 4,5 kg | 230 |



-20 °C ELASTOPLASTOMERIC

-15°C

Elastoplastomeric Membranes

MONOFLEX

Elastoplastomeric membranes obtained from bitumen based compound and various kinds of polyolefins. MONOFLEX membranes have durability and excellent mechanical performances and are characterized by their flow resistance. The "MINERAL" version has the visible surface protected with slate granules. MONOFLEX can be applied as a single layer.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|------------------|------------|-----------|--------------|----------------|------------|-------------|
| MONOFLEX | X | X | X | | | X |
| MONOFLEX MINERAL | | X | X | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|-------------------------|---------------|---------------------------------|------------------------|
| MONOFLEX 4 mm P ★ | Polyester | 4 mm | 230 |
| MONOFLEX MINERAL 4 mm P | Polyester | 4 mm | 160 |

POLIMAT MS

Elastoplastomeric membranes obtained from bitumen based compound and various kinds of polyolefins. POLIMAT MS membranes have excellent mechanical stability and durability. The "MINERAL" version has the visible surface protected with slate granules.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|--------------------|------------|-----------|--------------|----------------|------------|-------------|
| POLIMAT | X | X | | | | X |
| POLIMAT MS MINERAL | | X | | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|-----------------------------|---------------|---------------------------------|------------------------|
| POLIMAT MS 4 mm P ★ | Polyester | 4 mm | 230 |
| POLIMAT MS MINERAL 4 kg P | Polyester | 4 kg | 250 |
| POLIMAT MS MINERAL 4,5 kg P | Polyester | 4,5 kg | 230 |

STRADA

Elastoplastomeric membranes obtained from bitumen based compound and various kinds of special polyolefins. STRADA membranes have excellent performances and resistance to high temperatures. Thanks to this characteristic, they are particularly suitable for waterproofing carriagable surfaces and complex works and have been certified for use in bridges and viaducts since 2011 according to EN 14695 standard.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|-----------------|------------|-----------|--------------|----------------|------------|-------------|
| STRADA 3mm P | X | X | | | | X |
| STRADA 4/5 mm P | X | X | | | | X |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|-----------------|---------------|---------------------------------|------------------------|
| STRADA 3 mm P | Polyester | 3 mm | 250 |
| STRADA 4 mm P ★ | Polyester | 4 mm | 230 |
| STRADA 5 mm P | Polyester | 5 mm | 160 |

-15°C ELASTOPLASTOMERIC

-15°C ELASTOPLASTOMERIC

-15°C ELASTOPLASTOMERIC

-10°C

POLIMAT

Elastoplastomeric membranes obtained from bitumen based compound and various kinds of polyolefins. The POLIMAT membranes have excellent mechanical stability and durability. The «MINERAL» version has the visible surface protected with slate granules.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|----------------------------|------------|-----------|--------------|----------------|------------|-------------|
| POLIMAT V / Polimat 3 mm P | X | | | | | X |
| POLIMAT 4 mm P ★ | X | X | | | | X |
| POLIMAT MINERAL | | X | | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet | Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|---------|---------------|---------------------------------|------------------------|------------|---------------|---------------------------------|------------------------|
| 3 mm V | Glass tissue | 3 mm | 250 | 4 mm P | Polyester | 4 mm | 230 |
| 4 mm V | Glass tissue | 4 mm | 230 | MIN 4 kg P | Polyester | 4 kg | 250 |
| 3 mm P | Polyester | 3 mm | 250 | MIN 4,5 kg | Polyester | 4,5 kg | 230 |



-10°C ELASTOPLASTOMERIC

POLIMAT ANTIRADICE

Elastoplastomeric membrane particularly suitable for usage in all green roofs (hanging gardens, flower beds, etc.) and where the contact with ground is foreseen (foundations, earth retaining walls), thanks to the additives present in the bituminous compound.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|--------------------|------------|-----------|--------------|----------------|------------|-------------|
| POLIMAT ANTIRADICE | X | X | | | X | X |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|---------------------------|---------------|---------------------------------|------------------------|
| POLIMAT ANTIRADICE 4 mm P | Polyester | 4 mm | 230 |



-10°C ELASTOPLASTOMERIC

TENDER PLUS

Elastoplastomeric waterproofing membranes obtained from bitumen based compound and various kinds of polyolefins. Thanks to the large number of versions available, TENDER PLUS membranes can be effectively used in many of the most common applications. The «MINERAL» version has the visible surface protected with slate granules and it is available in several colours.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|---------------------------|------------|-----------|--------------|----------------|------------|-------------|
| TENDER PLUS 3 mm P | X | | | | | X |
| TENDER PLUS 4 mm P ★ | X | X | | | | X |
| TENDER MINERAL 4/4,5 kg P | | X | | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|------------------------------|---------------|---------------------------------|------------------------|
| TENDER Plus 3 mm P | Polyester | 3 mm | 250 |
| TENDER PLUS 4 mm P ★ | Polyester | 4 mm | 230 |
| TENDER PLUS MINERAL 4 kg P | Polyester | 4 kg | 250 |
| TENDER PLUS MINERAL 4,5 kg P | Polyester | 4,5 kg | 230 |



-10°C ELASTOPLASTOMERIC



TENDER

Elastoplastic waterproofing membranes obtained from bitumen based compound and various kinds of polyolefins. Thanks to the large number of versions available, TENDER membranes can be effectively used in many of the most common applications. The "MINERAL" version has the visible surface protected with slate granules and is available in several colours.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|--------------------------|------------|-----------|--------------|----------------|------------|-------------|
| TENDER V / Tender 3 mm P | X | | | | | X |
| TENDER 4 mm P ★ | X | X | | | | X |
| TENDER MINERAL 4/4,5 kg | | X | | | | |

| Type | Reinforcement | Thickness weight/m ² | m ² per pallet | Type | Reinforcement | Thickness weight/m ² | m ² per pallet |
|--------|---------------|---------------------------------|---------------------------|--------------|---------------|---------------------------------|---------------------------|
| 3 mm V | Glass tissue | 3 mm | 250 | MIN 4 kg V | Glass tissue | 4 kg | 250 |
| 4 mm V | Glass tissue | 4 mm | 230 | MIN 3,5 kg P | Polyester | 3,5 kg | 280 |
| 3 mm P | Polyester | 3 mm | 250 | MIN 4 kg P | Polyester | 4 kg | 250 |
| 4 mm P | Polyester | 4 mm | 230 | MIN 4,5 kg P | Polyester | 4,5 kg | 230 |



TECTUM

Waterproof membranes obtained from bitumen based compound and various kinds of polyolefins. TECTUM membranes meet all the most frequent requirements thanks to the large number of colours available ("MINERAL").

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|-------------------------|------------|-----------|--------------|----------------|------------|-------------|
| TECTUM 3 kg V/3 kg P | X | | | | | X |
| TECTUM 4 kg V/4 kg P | X | | | | | X |
| TECTUM 3 mm P | X | | | | | X |
| TECTUM 4 mm P ★ | X | | | | | X |
| TECTUM MINERAL 4/4,5 kg | | X | | | | |

| Type | Reinforcement | Thickness weight/m ² | m ² per pallet | Type | Reinforcement | Thickness weight/m ² | m ² /pallet |
|----------------|---------------|---------------------------------|---------------------------|-------------------|----------------------------|---------------------------------|------------------------|
| 3 mm P | Polyester | 3 mm | 250 | 3 kg V/ 3 kg P | Glass tissue/ Polyester | 3 kg | 300 |
| 4 mm P | Polyester | 4 mm | 230 | 4 kg V/ 4 kg P | Glass tissue/ Polyester | 4 kg | 250 |
| Mineral 4,5 kg | Polyester | 4,5 kg | 230 | | | | |



TEGO

TEGO is the BITUVER range of elastoplastic waterproofing membranes designed for under-tile usage. They are obtained from modified bitumen based compound and have a self-protected with slate granules surface.

| Product | Under-tile | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|---------------------|------------|-----------|--------------|----------------|------------|-------------|
| TEGO MINERAL 3,5 kg | X | | | | | |
| TEGO MINERAL 4 kg | X | | | | | |
| TEGO MINERAL 4,5 kg | X | | | | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|---------------------|---------------|---------------------------------|------------------------|
| TEGO MINERAL 3,5 kg | Polyester | 3,5 kg | 280 |
| TEGO MINERAL 4 kg | Polyester | 4 kg | 250 |
| TEGO MINERAL 4,5 kg | Polyester | 4,5 mm | 230 |

Innovation



LEGGERA.bit is the BITUVER range of bituminous membranes.

LEGGERA.bit has been developed thanks to an innovative elastoplastic mix strengthened with reinforced polyester, which guarantees the following advantages:

- **Speed of application** - The compound softens up more quickly to the benefit of the installation time.
- **Adhesion** - The sealing of the new membranes is optimal in every situation: on the base deck, one layer over the other and by the joints.
- **Energy saving** - Thanks to the speed of application, with LEGGERA.bit membranes a considerable quantity of gas is spared, making installation cheaper and reducing the number of gas bottles to transport.
- **Lightness** - Rolls weigh up to 30% less compared to traditional rolls with consequent benefits in terms of handling during laying and transport.

Leggera.bit SPRINT

SPRINT membrane is realized with an elastoplastic compound characterized by -5° C cold flexibility and a polyester reinforcement. It can be used in waterproofing roofs, earth retaining walls and foundations.

| Type | Reinforcement | Finish | Thickness | Weight/m ² | m ² /pallet |
|------------------|---------------|----------------|-----------|-----------------------|------------------------|
| SPRINT 4 mm P | Polyester | Talc | 4 mm | 3,7 kg | 230 |
| SPRINT MINERAL P | Polyester | Slate granules | | 3,7 kg | 230 |



Leggera.bit SPEED

SPEED membrane is realized with an elastoplastic compound characterized by -10° C cold flexibility and a polyester reinforcement. It can be used in waterproofing roofs, earth retaining walls and foundations.

| Type | Reinforcement | Finish | Thickness | Weight/m ² | m ² /pallet |
|------------------|---------------|----------------|-----------|-----------------------|------------------------|
| SPRINT 4 mm P | Polyester | Talc | 4 mm | 3,8 kg | 230 |
| SPRINT MINERAL P | Polyester | Slate granules | | 3,8 kg | 230 |



Leggera.bit SPECIAL

SPECIAL membrane is realized with an elastoplastic compound characterized by -15° C cold flexibility and a polyester reinforcement. It can be used in waterproofing roofs, earth retaining walls and foundations.

| Type | Reinforcement | Finish | Thickness | Weight/m ² | m ² /pallet |
|------------------|---------------|----------------|-----------|-----------------------|------------------------|
| SPRINT 4 mm P | Polyester | Talc | 4 mm | 3,9 kg | 230 |
| SPRINT MINERAL P | Polyester | Slate granules | | 3,9 kg | 230 |



Self range

Adhesive membranes

SELF-ADHESIVE



■ THERMOSELF

THERMOSELF products are thermo-adhesive membranes with special bitumen based compound modified with elastoplastomeric polymers reinforced with polyester compound. The underface is covered with silicon film to be removed during the application operations. This side, thanks to its special features, is made adhesive by the heat from solar radiation, by heating or torching the layer above it.

| Product | Cold flexibility | Reinforcement | Protective finish | Thickness weight/m ² | m ² /pallet |
|--------------------------------|------------------|---------------|-------------------|---------------------------------|------------------------|
| THERMOSELF 3 mm P | -25°C | Polyester | Tex | 3 mm | 250 |
| THERMOSELF 4 mm P | -25°C | Polyester | Tex | 4 mm | 200 |
| THERMOSELF FV 3 mm P | -15°C | Polyester | Tex | 3 mm | 250 |
| THERMOSELF FV 4 mm P | -15°C | Polyester | Tex | 4 mm | 200 |
| THERMOSELF FV MINERAL 3,5 kg P | -15°C | Polyester | Slate granules | 3,5 kg | 250 |
| THERMOSELF FV MINERAL 4 kg P | -15°C | Polyester | Slate granules | 4 kg | 250 |

SELF-ADHESIVE



■ MONOSELF

MONOSELF products are self-adhesive membranes. The underface and the side strips for overlapping are covered with silicon film to be removed during laying operations. The upperface of the black versions is coated with polythene film on which a further layer of self-adhesive membrane can be applied or torched on. The MINERAL versions are covered on the top with natural slate granules or, on request, in red or green.

| Product | Cold flexibility | Reinforcement | Protective finish | Thickness weight/m ² | m ² /pallet |
|------------------------------|------------------|---------------|-------------------|---------------------------------|------------------------|
| MONOSELF 3 kg P | -25°C | Polyester | Tex | 3 kg | 300 |
| MONOSELF MINERAL 4 KG P | -25°C | Polyester | Slate granules | 4 kg | 250 |
| MONOSELF FV 2 mm P | -15°C | Polyester | Tex | 2 mm | 420 |
| MONOSELF FV 3 mm P | -15°C | Polyester | Tex | 3 mm | 250 |
| MONOSELF FV MINERAL 3,5 kg P | -15°C | Polyester | Slate granules | 3,5 kg | 250 |
| MONOSELF FV MINERAL 4 kg P | -15°C | Polyester | Slate granules | 4 kg | 250 |

Waterproofing and thermal insulation

■ BITUROLL AE

BITUROLL 20 AE and 25 AE is a system in rolls obtained with the matching by heat of a waterproofing polymer-bitumen membrane, black or self-protected with slate granules, reinforced with glass tissue or non woven polyester with strips of expanded polystyrene.

| Product | BPP membrane | Membrane reinforcement | Stripes thickness | Dimensions m |
|------------------------------------|--------------|------------------------|-------------------|--------------|
| BITUROLL AE G2 V | - 5°C | Glass tissue | 30 | 8 x 1,05 |
| | | | 40 | 5 x 1,05 |
| | | | 50 | 5 x 1,05 |
| BITUROLL AE G3 P2000 | - 5°C | Polyester | 30 | 8 x 1,08 |
| | | | 40 | 5 x 1,08 |
| | | | 50 | 5 x 1,08 |
| BITUROLL AE Ardesiato LB 35 P 2000 | - 5°C | Polyester | 30 | 8 x 1,08 |
| | | | 40 | 5 x 1,08 |
| | | | 50 | 5 x 1,08 |



EPS LAMINATES

■ BITUROLL EXT

BITUROLL ESTRUSO D 33 is a system in rolls obtained with the matching by heat of a waterproofing polymer-bitumen membrane, black or self-protected with slate granules, reinforced with glass tissue or non woven polyester with strips in extruded polystyrene.

| Product | BPP membrane | Membrane reinforcement | Stripes thickness | Dimensions m |
|---|--------------|------------------------|-------------------|--------------|
| BITUROLL EXT D33 - G2V | - 5°C | Glass tissue | 30 | 8 x 1,05 |
| | | | 40 | 5 x 1,05 |
| | | | 50 | 5 x 1,05 |
| BITUROLL EXT D33 - G3P2000 | - 5°C | Polyester | 30 | 8 x 1,08 |
| | | | 40 | 5 x 1,08 |
| | | | 50 | 5 x 1,08 |
| BITUROLL EXT D33 Ardesiato LB 35 P 2000 | - 5°C | Polyester | 30 | 8 x 1,08 |
| | | | 40 | 5 x 1,08 |
| | | | 50 | 5 x 1,08 |



XPS LAMINATES

Accessory products and systems

BITUMINOUS TILES



■ ISOTEGOLA

Bituminous tile made up of a glass tissue (VV) or glass tissue + polyester (VP) support impregnated with a special bituminous compound. Used for roof coverings with the most original and refined lines.

| Product | m ² /pack | m ² /pallet |
|--------------|----------------------|------------------------|
| ISOTEGOLA VV | 2,52 | 113,4 |
| ISOTEGOLA VP | 2,52 | 113,4 |

DIMPLED MEMBRANE



■ BITUFOND

High density polyethylene (HDPE) membrane. Used as water drainage layer in waterproofing earth retaining walls.

| | | |
|----------|-------------------------|-------------------------|
| BITUFOND | Length | 20 m |
| | Width | 1,5 - 2 - 2,5 m |
| | Product thickness | 8,00 mm |
| | Weight | 500 gr/m ² |
| | m ² per roll | 30 - 40 - 50 |
| | Compression strength | > 230 KN/m ² |

DAMP PROOFING



■ TAGLIAMURO

Damp courses of various heights taken from plastomeric membranes reinforced with glass tissue or polyester (PES version). Used for waterproofing and desolidarizing partition walls.

| Product ★ | Reinforcement | Dimensions m | m/pallet |
|-----------|---------------|--------------|----------|
| H 14 | Glass tissue | 0,14 x 10 | 2100 |
| H 25 | Glass tissue | 0,25 x 10 | 1200 |
| H 28 | Glass tissue | 0,28 x 10 | 900 |
| H 33 | Glass tissue | 0,33 x 10 | 900 |
| H 50 | Glass tissue | 0,50 x 10 | 600 |
| H 14 PES | Polyester | 0,14 x 10 | 1750 |
| H 25 PES | Polyester | 0,25 x 10 | 1000 |
| H 28 PES | Polyester | 0,28 x 10 | 750 |
| H 33 PES | Polyester | 0,33 x 10 | 750 |
| H 50 PES | Polyester | 0,50 x 10 | 500 |

Vapour management

ALUVAPOR TENDER

ALUVAPOR TENDER elastoplastomeric membrane, thanks to its special reinforcement in gofered aluminium foil, is particularly efficient when employed as a vapour barrier ($\mu=670.000$) beneath thermoinsulating elements in general. ALUVAPOR TENDER permits easy laying and excellent adhesion to the support and insulation either by torching or securing.

| Product | Base layer | Top layer | Single layer | Vapour control | Root-proof | Foundations |
|-----------------|------------|-----------|--------------|----------------|------------|-------------|
| ALUVAPOR TENDER | X | | | X | | |

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|----------------------|--------------------------|---------------------------------|------------------------|
| ALUVAPOR TENDER 2 kg | glass tissue + aluminium | 2 kg | 460 |



-5 °C ELASTOPLASTOMERIC

VAPOLIGHT

Bituminous under-tile consisting of polyester non-woven fabric impregnated with an elastomeric compound and covered on both sides with a special polypropylene fabric. Excellent as vapour retardant ($\mu=60.000$) and as base layer for discontinuous layers, it permits quick easy laying.

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|---------------|---------------|---------------------------------|------------------------|
| VAPOLIGHT | Polyester | 550 g | 900 |
| VAPOLIGHT 800 | Polyester | 800 g | 750 |



ROOF UNDERLAYS

SYNTOLIGHT

Three-layered foil consisting of a transpirant element surfaced on both sides with polypropylenic tissue. SyntoLight is transpirant to vapour ($\mu=36$) and is at the same time waterproofing, easy to handle and has excellent rip resistance. This makes it ideal for use in ventilated roofs.

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|------------|---------------|---------------------------------|------------------------|
| SYNTOLIGHT | PPE | 150 g | 2250 |
| | Sheet | | |
| | PPE | | |



ROOF UNDERLAYS



■ BITUMAT V12

Bituminous membrane reinforced with perforated glass tissue (holes diameter 40 mm) and coated with talc on both sides. Used as a flow layer or preliminary to the subsequent application of semi-independent membranes.

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|---------------------------------|-------------------------|---------------------------------|------------------------|
| BITUMAT V12 Forato | Perforated Glass tissue | 1,2 kg | 720 |
| Roll dimensions 1 x 20 m | | | |



■ BITULAN

BITULAN C - Calendered bituminised paper-felt consisting of a paper-felt impregnated to full saturation with distilled bitumen.

BITULAN R - Covered bituminised paper-felt consisting of a paper-felt impregnated to full saturation with distilled bitumen and consequently covered on both faces with oxidised bitumen. Used as separating layers or roof underlay.

| Product | Reinforcement | Thickness weight/m ² | m ² /pallet |
|---------------------------------|---------------|---------------------------------|------------------------|
| BITULAN C 3 | Paper-felt | 0,3 kg | 2000 |
| BITULAN C 5 | Paper-felt | 0,5 kg | 1620 |
| BITULAN C 10 | Paper-felt | 1,0 kg | 840 |
| BITULAN R 12 | Paper-felt | 1,2 kg | 600 |
| BITULAN R 15 | Paper-felt | 1,5 kg | 500 |
| Roll dimensions 1 x 20 m | | | |

Employment summary sheet

| Product | Base/ Middle layer | Under-tile | Top layer | Single layer | Under heavy protection | Earth retaining Foundations | Root-proof | Vapour control | Bridges and viaducts | No torching |
|--------------------------------|-----------------------|------------|-----------|--------------|---------------------------|--------------------------------|------------|----------------|----------------------|-------------|
| Fleximat 4 mm P | ■ | | | | ■ | ■ | | | | |
| Fleximat Mineral 4 mm P | | | ■ | ■ | | | | | | |
| Megaver 4 mm P | ■ | | | | | ■ | | | | |
| Megaver Mineral 4/4.5 kg P | | | ■ | | | | | | | |
| Megaver AL / CU | | | ■ | | | | | | | |
| Monover 4 mm P | ■ | | | | ■ | ■ | | | | |
| Monover Mineral 4 mm P | | | ■ | ■ | | | | | | |
| Elastomat 4 mm P | ■ | | | | | ■ | | | | |
| Elastomat Mineral 4/4.5 kg P | | | ■ | | | | | | | |
| Monoplus 4 mm P | ■ | | ■ | ■ | | ■ | | | | |
| Monoplus Mineral 4/4.5 kg P | | | ■ | | | | | | | |
| Monoflex 4 mm P | ■ | | ■ | ■ | ■ | ■ | | | | |
| Monoflex Mineral 4 mm P | | | ■ | ■ | | | | | | |
| Polimat MS 4 mm P | ■ | | ■ | | | ■ | | | | |
| Polimat MS Mineral 4/4.5 kg P | | | ■ | | | | | | | |
| Strada 3 mm P | ■ | | | | ■ | ■ | | | ■ | |
| Strada 4/5 mm P | ■ | | ■ | | ■ | ■ | | | ■ | |
| Polimat 3/4 mm V | ■ | | | | | ■ | | | | |
| Polimat 3 mm P | ■ | | | | | ■ | | | | |
| Polimat 4 mm P | ■ | | ■ | | | ■ | | | | |
| Polimat Mineral 4/4.5 kg P | | | ■ | | | | | | | |
| Polimat Antiradice | ■ | | ■ | | ■ | ■ | ■ | | | |
| Tender Plus 3 mm P | ■ | | | | | ■ | | | | |
| Tender Plus 4 mm P | ■ | | ■ | | | ■ | | | | |
| Tender Plus Mineral 4/4.5 kg P | | | ■ | | | | | | | |
| Tender 3/4 mm P/V | ■ | | | | | ■ | | | | |
| Tender Mineral 4/4.5 kg PN | | ■ | ■ | | | | | | | |
| Tender Aluvapor | ■ | | | | | | | ■ | | |
| Tectum 3/4 kg P/V | ■ | | | | | ■ | | | | |
| Tectum 3 mm P | ■ | | | | | ■ | | | | |
| Tectum 4 mm P | ■ | | ■ | | | ■ | | | | |
| Tectum Mineral 4.5 kg P | | ■ | ■ | | | | | | | |
| Tego Mineral 3.5 kg | | ■ | | | | | | | | |
| Tego Mineral 4 kg | | ■ | | | | | | | | |
| Tego Mineral 4.5 kg | | ■ | | | | | | | | |
| Monoself | ■ | | | | | ■ | | ■ | | ■ |
| Monoself Mineral | | ■ | ■ | ■ | | | | | | ■ |
| Monoself FV | | ■ | | | | | | ■ | | ■ |
| Monoself FV Mineral | | ■ | ■ | | | | | | | ■ |
| Thermoself | ■ | | | | ■ | ■ | | | | ■ |
| Thermoself FV | ■ | | | | ■ | ■ | | | | ■ |
| Thermoself FV Mineral | | ■ | ■ | | | | | | | ■ |

CALIFORNIA



Download the video to your Smartphone and Tablet!

Cool Roof Solutions

waterproofing • reduction of heat island effect • energy saving



California is one of the first places in the world to discover the importance of high emissivity reflecting surfaces. This concept, in construction industry, gave life to the so-called "COOL ROOF, considered an important environmental tool, both as an answer to the "HEAT ISLAND" effect and as a vehicle for saving energy. Contrary to clear roofs, in fact, dark roofs reflect only a very small part of the heat received from the sun and, therefore, transmit it to the internal environment underneath, with high air conditioning costs and poor dwelling comfort. The greater the incidence of roof cover compared to the total surface cover, the greater the impact of this phenomenon. The importance of this problem is obvious for the roofing of shopping malls, supermarkets, hypermarkets and also residential buildings.

The key concepts

THE HEAT ISLAND

Phenomenon of the temperature increase in urban areas compared to rural areas measured between 1° and 6° C. This creates a vicious circle of air conditioning and heating of the surrounding environment which increases the risk of a black-out, raises consumption and atmospheric pollution.

ENERGY SAVING

Thanks to the reduction of the temperature on the roof, the net inward heat flow decreases. This allows a sensible reduction of air conditioning costs.

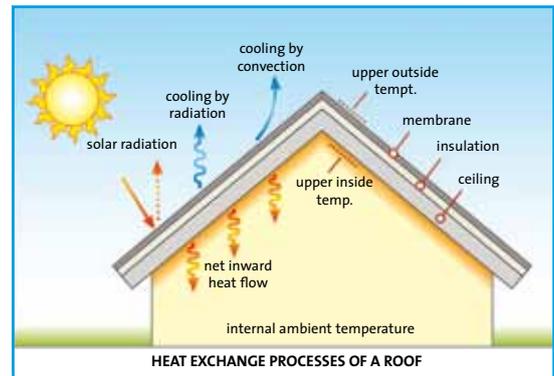
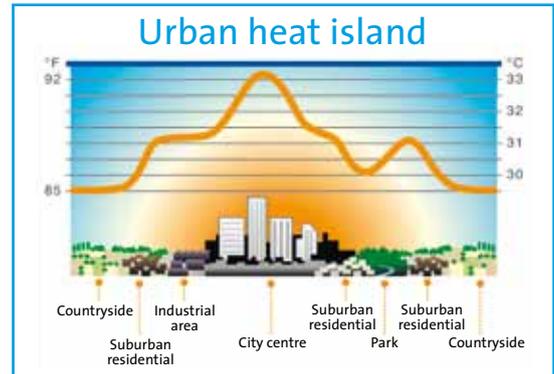
SOLAR REFLECTANCE

Reflectance (usually indicated with ρ) indicates the proportion of incident light that a given surface is capable of reflecting. It can have a value of between 0 and 1. The higher the value, the higher the reflectance of the roof.

EMISSIVITY IN THE INFRA-RED

The emissivity of materials (usually indicated with ϵ) is the fraction of energy radiated by that material compared to a black body at the same temperature.

It is the measurement of a material's capacity to radiate energy. A true black body would have $\epsilon = 1$, whilst any real object has $0 < \epsilon < 1$ (grey body). The higher the value, the higher the roof's emissivity.



"Cool" roofs are surfaces with:

- High reflectance and, thus, low absorption of solar radiation
- High thermal emissivity



High SRI
(Solar Reflectance Index)

| SRI Limits provided for by LEED NC 2009 Italy | | |
|---|--------|------|
| Type of roof | Slope | SRI |
| Slight | ≤ 2:12 | ≥ 78 |
| Steep | > 2:12 | ≥ 29 |

MEGAVER CALIFORNIA

Membrane made with special bitumen modified with new generation elastomeric polymers (BPE), with cold flexibility of -25°C . The reinforcement is made of polyester non-woven fabric strengthened with fibreglass. The membrane, fire resistance " $B_{\text{ROOF}}(t_2)$ ", is coated with a sheet of embossed aluminium, pre-painted with PVDF paint, white reflecting and subjected to treatment with high technology aimed at improving its adhesion and life. MEGAVER CALIFORNIA guarantees a sharp reduction in the surface temperature and indirect light from the roof, thanks to the very high reflectance and thermal emissivity that last over time. This characteristic gives important benefits, both for people living in the structure and for the surrounding environment. MEGAVER CALIFORNIA membranes are particularly recommended as a finishing layer in roofs of high aesthetic value where it is necessary to reduce maintenance operations to a minimum.

| Save money | |
|---|--|
| Benefits for the user: | Reduction in the surface temperature of the roof |
| | Reduction in summer air conditioning costs of up to 30% |
| | Better living comfort, particularly for the top floor |
| | Protection of the load bearing frames from day-night and seasonal temperature variations |
| | Increase in the yield of the photovoltaic modules placed on the roof |
| | Very high durability compared to other reflecting surfaces |
| | Appreciable aesthetic solution, highly improving compared to finishes with traditional membranes |
| Protection from UV rays and considerable lengthening of life of waterproofing | |



COOL ROOF

| Save the planet | |
|-------------------------------|---|
| Benefits for the environment: | Reduction of the heat island effect and, consequently, the surrounding area's temperature |
| | Reduction in electricity consumption for air conditioning |
| | Pleasant visual impact |
| | Fire resistance " $B_{\text{ROOF}}(t_2)$ " according to UNI EN 13501-5 |

CALIFORNIA-P

High performance mono-component paint, designed to cover walkable concrete, cement fibre, wooden, metal surfaces and, in particular, bitumen-polymer membranes, because, by covering and protecting them from UV rays, it prolongs their life.

The main benefit, compared to traditional protective paints, is the high reflectance and high emissivity, obtained thanks to the particular composition of the ceramic paint. This characteristic offers important benefits for summer living comfort and energy saving in buildings.

It is a watery dispersion based on special modified copolymers, inert fillers, colouring pigments, suspensive materials, thickeners and various additives.

| Save money | |
|--|--|
| Benefits for the user: | Reduction in the surface temperature of the roof |
| | Reduction of summer air conditioning costs |
| | Better living comfort, particularly for the top floor |
| | Protection of the load bearing frames from day-night and seasonal temperature variations |
| | Increase in the yield of the photovoltaic modules placed on the roof |
| | Easy-to-apply solution |
| | Economical solution among the "Cool Roofs" |
| Protection from UV rays and considerable lengthening of the waterproofing's life | |



COOL ROOF

| Save the planet | |
|-------------------------------|---|
| Benefits for the environment: | Reduction of the heat island effect and, consequently, the surrounding area's temperature |
| | Reduction in electricity consumption for air conditioning |
| | Pleasant visual impact |



Emulsions and cement waterproofing

■ ELAVER PLUS - liquid and cement-asbestos encapsulation

Liquid membrane based on elastomeric membranes in watery solution, ideal for renovation of deteriorated waterproofing; it is certified for encapsulating asbestos cement in compliance with Ministry of Health Decree of 20/08/99 for type A encapsulates. Available in green, white and red, in 20 kg tubs.

■ ASFALVER - cold asphalt

Cold asphalt made up of bitumen in watery solution. 20 kg tubs

■ ECOALUVER - aluminium paint

Brilliant silver protective coating, innovative formulation as it is completely ecological and not inflammable. 20 kg tubs.

■ BITUMASTIC - panel adhesive

Bituminous mastic in watery solution, replacement for hot bitumen oxide. 20 kg tubs

■ ECOPRIVER - bituminous primer

Non-toxic bituminous water based primer with added evaporating agents that promote rapid drying. ECOPRIVER is very fluid, brown and ready to use. 20 kg tubs.

■ BITUCOLOR - protective paint

Acrylic paint for protecting waterproof roofs from UV radiation and environmental agents in general. Available in red, white, green and grey. All colours are available with a minimum batch on request. 25 kg tubs.

■ BITUMOX - bitumen in bags

Bitumen oxide in cake for hot application. 30 kg bags (approx.)

■ BITUDRY - cement waterproofing

Two component elasto-cement waterproofing mortar. Main applications are waterproofing of balconies, terraces and tanks holding water.



Membrane Application

Preparation of the application deck Recommendations for laying

- Main deck in reinforced concrete, brick concrete or pre-stressed concrete.
- Remove from the application deck sand, gravel and roughness that may compromise adherence or cause the tearing of the waterproofing layer.
- Level the application surface by filling possible holes or hollows by means of cement mortar.
- Make sure that the application deck has such slope that a regular draining of rain water is assured; on flat roofs, carry out a sloped (2-4%) layer in cement mortar.
- Apply a layer of bituminous primer (e.g. Bituver ECOPRIVER) in an amount not below 300 g/m²
- Start the application operations only after the complete drying of the primer.

■ Main deck in wood

- Apply by loose bonding on the wooden deck a separation layer allowing the application of the membrane by torching (e.g. a Bituver TEGOFLEX membrane), fixing it mechanically to the application deck by means of broad-headed nails.
- In the presence of a thermo-insulating element, evaluate the thermo-hygrometric conditions of the environment underlying the roofing and employ - if necessary - a vapour barrier layer (e.g. a Bituver ALUVAPOR TENDER).

- Renovation of resistant waterproofing layers
If the conditions are still good, it is possible to use the old membrane existing on the roofing as a foundation for the new one, provided that bubbles, swelling and possible highly deteriorated parts are removed.

It is generally recommended to apply the sealing element in two layers, by torching the waterproofing membranes by means of a gas propane blow torch. The membranes will be overlapped in the parallel sense, staggered of approx. 50 cm, to minimize the risk of water leakages.

On flat roofs it is recommended to carry out beforehand a sloped deck (3-4%) on the main element, in order to guarantee an efficient draining of water and avoid stagnation.

The application of bituminous membranes is relatively simple and quick. Nonetheless, the use of non-specialized workmanship, the too “tight” times and costs allowed for application operations, the lack of correct application techniques often lead to negative results, wrongly attributed to products.

Warnings

BITUVER polymer-bitumen membranes are asbestos free and do not contain tar. According to the Italian Ministerial Decree 16 July 1998 no. 285, point 9, about “Classification and rules of the packing and labelling of dangerous products according to the directives issued by the European Community Council and Commission”, the product is not subject to the obligation of safety data sheet.

It is anyway advisable to supply an information data sheet to whom may require it, in order to allow a correct use.

Storage recommendations

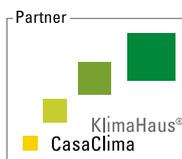
It is generally recommended to store the rolls indoors, with a temperature not below + 5°C; absolutely avoid storing them outdoors for long periods with temperatures below + 5°C.

Stock the rolls vertically, stacking two layers at the most and inserting proper separation layers. The pallets of BITUMAT AL and CU and of the slated membranes are not to be stacked.





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Isover Saint-Gobain
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