

BITULINE®

Bituminous waterproofing membranes

- High quality
- Complete waterproofing system
- Durable



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& COLLECTIVE
HOUSING



LEISURE
HOUSING



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BITULINE® *Waterproofing Membranes Range for roofing and foundations.*



BITULINE® is a waterproofing membrane made of modified bitumen reinforced with non-woven polyester mat or glass fiber and resistant to temperatures from 0°C, -5°C, -10°C, - to -20°C.

BITULINE® is torch apply membrane designed for new roofing and reroofing applications, can be bonded by heat welding over damp or concrete below-grade vertical and horizontal foundation structures and below concrete slabs, on floor surfaces or sloped or flat roofs prepared with BITULINE® primer prior to the application of the waterproofing membrane. 2 mm, 3 mm, 4 mm and 5 mm thick, the BITULINE® membranes are produced in rolls of 10 m x 1 m.

Top-of-the-range waterproofing materials.

BITULINE® base sheets are produced with upper and bottom surfaces with thermofusible PE film and used for BURs; flat roof terraces under ballasts gravel, paving slabs, roof gardens or ground level tanking and waterproofings of internal or external underground walls and public works and civil engineering projects. BITULINE® cap sheets are produced bottom surface with PE film and the upper surface protected by granules or aluminium sheet to protect the roof from damaging UV rays. The BITULINE® felts are elastomeric or plastomeric modified or containing anti-root adjuvants for green roofs.

Onduline offers reliable products for multi-layer waterproofing BUR or tanking solutions.

Waterproofing range

Depending on the nature of the local, ground, wall, concrete slab or concrete footing and possible water leakage risk, complementary products and accessories are necessary for the execution of the works.

Onduline is offering products adapted for BUR of civil works, for waterproofing of industrial floors, rooftop terraces, green roofs and inverted roofs, parking decks, bridges, parapet, zinc roofing projects sealings, gutters, water runs and fireplace hosting, ridge, fascia band edging, box gutters, eaves apron strips flashings, vertical surfaces of rooftop terraces/ planters, culverts, drainage, load-bearing elements and masonry work, foundation slab tanking for new, renovation and repair works.



Reliable and resistant

Higher tensile and tear strength, shows good dimensional stability, excellent cold-bending behaviour from 0°C to -20°C.

For effective waterproofing water-tightness alone is not enough. The waterproofing felt must possess a number of additional qualities; adhesion and mechanical resistance in order to resist to the effects of thermal expansion/ retraction, heavy traffic or other loading imposed damaging effects of all likely contaminants, etc. and resistance to the damaging effects of biological, chemical and physical agents. The waterproofing felt should also resist to aging degradation of the structure in order to maintain the water-tightness of the entire building. BITULINE® membranes have optimal mechanical and physical properties and their quality is ultimate in performance, versatility, and ease-of-use.



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Characteristics and performances

BITULINE® membranes line have a wide range of characteristics and performances in order to provide turnkey solutions to meet all reliable waterproofing needs. Manufactured with the standards complying with Directive 89/106/EEC of European Council, BITULINE® waterproofing felts are marked CE.

BITULINE® Prima



Torch-applied bituminous felt reinforced with non-woven polyester or glass fiber mat and modified with plastomeric bitumen. BITULINE® Prima has cold flexibility properties of -5°C. Produced in thicknesses from 2 mm to 5 mm BITULINE® Prima range is commercialized bottom and upper surfaces protected by thermo-fusible PE film or upper surface protected by slate granules. BITULINE® Prima cap sheets available colours: Gray, red, café flammé, terra-cotta, white.

BITULINE® Extra



Torch-applied bituminous felt with plastomer bitumen. BITULINE® Extra has cold flexibility properties of -10°C. Produced in thicknesses from 2 mm to 5 mm. BITULINE® Extra range is commercialized bottom and upper surfaces protected by thermo-fusible PE film or upper surface protected by slate granules or embossed aluminium foil.

- The BITULINE® Extra EP410 is a heavy duty felt reinforced with 250 gr/m² non-woven polyester mat and used in civil engineering works; viaducts, bridges and tunnels on highways and railways.
 - The BITULINE® Extra EP400 anti-root is a waterproofing membrane with polyester reinforcement containing anti-root adjuvants for green roofs. BITULINE® Extra EP400 anti-root membrane is certified by the German Institut für Gartenbau, Hochschule Weihenstephan-Triesdorf (FLL), ensuring its quality.
 - BITULINE® EP30 A or EG 30A aluminium is produced with bottom surface PE film and the upper surface protected by embossed aluminium sheet in order to use in two-ply waterproofing systems as top-coat and for flashings.
- Colours : Natural aluminium ,terra-cotta, green.

BITULINE® Maxima



Torch applied BITULINE® Maxima felts have excellent flexibility in extreme weather conditions due to the high tensile strength thanks to elastomeric SBS modification. BITULINE® Maxima membranes have high cold flexibility properties of -20° C and are produced in thicknesses from 3 mm to 5 mm. BITULINE® Maxima range is commercialized bottom and upper surfaces protected by thermo-fusible PE film or upper surface protected by slate granules. BITULINE® Maxima cap sheets colours : Gray, red, café flammé, terra-cotta, white and blue.

Storage

Protect material from heat and direct sunlight. Keep rolls in a vertical position and do not stack them.

Application guide

Climatic conditions

Rain, frost, snow and high humidity can interfere with the adhesion of the membrane. With temperatures below +2°C it is better to avoid the application.

Equipment

Roofing torch, propane cylinder, connecting hoses with regulator, trowel, knife and gloves.

Substrate

Before application the substrate must be clean and dry.

BITULINE® primer

Prime all the substrate with BITULINE® Primer diluted with ¼ of water, by brush or roller. (Make sure the primer is completely dry before application)

Heat welding and waterproofing

The movement of the torch should be a continuous to and from motion allowing the flame to cover the entire width of the membrane without burning the side of the adjacent sheet already installed.

Heat concrete substrate when it's cold.

Verify that all roof openings, curbs, pipes, sleeves, ducts, vents, valley, ridges, box gutters, dormers, hips, eaves, rain water outlets, chimney, expansion joints or other penetrations through the roof are solidly set, and that all flashings are properly sealed.



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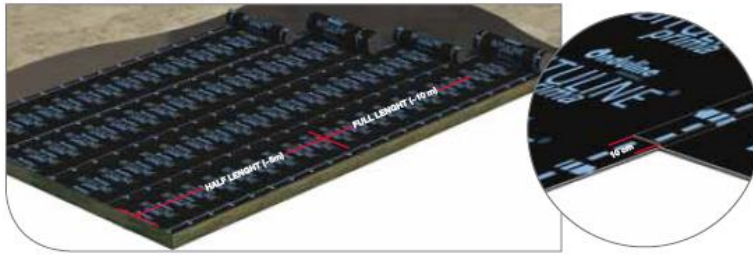
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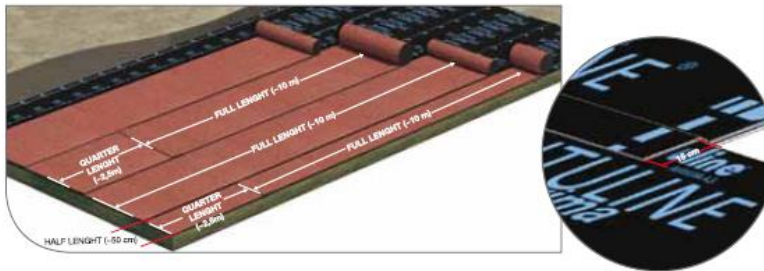
Side laps must be 10 cm and end lap joints must be at least 15 cm. The overlapping lines of BITULINE® base sheets at side lap joints serve as a guide for proper side overlapping.

End laps are areas of possible infiltration of water due to an excessive thickness of membrane causing a void. After aligning end lap, perform a 45° angle cut at on all the end laps of the underlying sheet. Once the 45° angle cut is performed it will provide a smooth tapered transition.



An asphaltic bleed out must be achieved at this transition location and at all the "T" joints formed by the succeeding courses. Prior to installing succeeding courses ensure there are no blisters or open laps. To prevent overly thick membranes, stagger the end laps a minimum of 30 cm relative to those of the base sheet. Cap sheet end laps must be staggered a minimum of 30 cm.

Granule end laps should be prepared well before the following roll approaches for bonding to the end lap. To embed the granules, soften the bitumen by heating the mineral surface with the torch. When the granules start to sink into the bitumen, stop torching and with a hot trowel, embed the granules in the bitumen.



Up stands: Heat weld BITULINE® cap sheet to cover the main surface of the flashing with a heel of at least 15 cm, welded over the base sheet. The flashing must be fully adhered over its entire height and shall be mechanically attached at the top with a metal batten strip in order to secure the flashing.

Accessories

BITULINE® Primer:

Non-ionic bitumen emulsion. Packaged in tins of 17 kg BITULINE® primer is cold applied diluted with 1/4 of water, by brush or roller. 40 m² of surface can be coated with one tin.



FONDALINE®:

FONDALINE® is high density polyethylene membrane HDPE for the protection of the waterproofing of buried or stand on retaining walls and improved site drainage and removal of ground water.



Geotextiles:

Non-woven polyester mat, the geotextile is mainly used for outdoor applications; in order to prevent subsidence of the driveways, the regrowth of weeds, clogged drains and for matting between the cement screed and tiling of rooftop terraces, green roofs (polypropylene cut fibers mat) and for inverted roofs with walking access.

