

Technical Data Sheet

BITULINE®

Bituminous waterproofing membrane

ONDULINE®



Product Definition

MAXIMA MP300
MAXIMA MP400
MAXIMA MP40M
MAXIMA MP50M

BITULINE® MAXIMA MP400 is a Torch-applied bituminous felt reinforced with non-woven polyester mat and modified with SBS elastomeric bitumen. BITULINE® MAXIMA MP400 has cold flexibility property of -20°C. Produced in thickness of 4 mm BITULINE® MAXIMA MP400 is commercialized bottom and upper surfaces protected by thermo-fusible PE film.

Technical Data

	Method	Unit	Tolerance	Value
Visible defects	TS EN 1850-1	-	-	PASS
Length	TS EN 1848-1	m	-0,03	10
Width	TS EN 1848-1	m	-0,02	1
Straightness	TS EN 1848-1	-	-	PASS
Thickness	TS EN 18491	mm	±0,02	4
Watertightness	TS EN 1928 (meth. B 10 kPa)	-	-	PASS
	TS EN 1928 (meth. B 60 kPa)	-	-	PASS
Reaction to fire	TS EN 13501-1	CLASS		E
Joint strength	TS EN 12317-1	N/50 mm	±30%	1000
Water vapor transmission	TS EN 1931	-	min	20000
Tensile strenght (longitudinal)	TS EN 12311-1	N/50 mm	-0%; +30%	800
Elongation at break (longitudinal)	TS EN 12311-1	%	(-0;+10)	35
Tensile strenght (transversal)	TS EN 12311-1	N/50 mm	-0%; +30%	600
Elongation at break (transversal)	TS EN 12311-1	%	(-0;+10)	35
Resistance to impact	TS EN 12691 (meth. A)	mm	min	750
Resistance to static loading	TS EN 12739 (meth. B)	kg	min	15
Resistance to tearing	TS EN 12310-1	N	±30%	250
Flexibility at low temperature	TS EN 1109	°C	min	-20
Flow resistance at elevated temperature	TS EN 1110	°C	min	100
Artificial ageing behaviour	TS EN 1296/TS EN 1928 (meth. B 60 kPa)	-	-	PASS
Durability against chemical	TS EN 1847/TS EN 1928 (meth. B 60 kPa)	-	-	PASS
Dangerous Substances	-	-	-	NO

Where to use and Properties

- 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.
- BITULINE® base sheets are produced with upper and bottom surfaces with thermo fusible 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.
- 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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General Application Steps

1. Clean and prime the substrate to properly receive a new, two-ply waterproofing membrane. Make sure the primer is completely dry before application
1. The movement of the torch should be a continuous to and fro motion allowing the flame to cover the entire width of the membrane without burning the side of the adjacent sheet already installed.
2. Heat concrete substrate when it's cold.
3. 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.
4. 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.
5. 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.
6. Prior to installing succeeding courses ensure there are no blisters or open laps.
7. To prevent overly thick membranes, stagger the end laps a minimum of 30 cm relative to those of the base sheet.

General Warnings

1. 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.
2. Before application the substrate must be clean and dry.
3. Before the application of the top layer it should be covered with screed, XPS, drainage plates etc. against UV and mechanical effects.
4. Damp surfaces can be overlaid with Bituline® cap sheets, gravel ballast or concrete pavers but standing water should be removed from the deck surface and from the build-up before recommencing laying operations.
5. Special care is required during installation to avoid damage to waterproofing membranes. If it is impossible to restrict access to the roofing professionals alone, temporary protection must be employed to protect the membrane from the level of traffic.
6. All works after the laying of the waterproofing sheet, should be carried out with care and adequately supervised to avoid damage to the membrane. Where ladders are required, these should be placed on a timber plank to spread the load.
7. Think safety first. Wear PPE

Tools:

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

Packaging:

Rolls/pallet	: 23 rolls
Qty/pallet	: 230 m ²
Weighth/pallet	: ±1080 kg

Storage

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