

Technical Data Sheet

BİTULINE®TROPICA

Bituminous waterproofing membrane



ONDULINE®

TROPICA TP300
TROPICA TP400
TROPICA TP40M
TROPICA TP50M

Product Definition

BİTULINE® TROPICA TP40M cap sheet is a Torch-applied bituminous Felt reinforced with non-woven polyester mat and petroleum bitumen modified by the addition of polyolefin or polyolefin copolymer compound.. BİTULINE® TROPICA TP40M has cold flexibility property of 0°C.
Produced in thickness of 3,5 mm BİTULINE® TROPICA TP40M is commercialized bottom protected by thermo-fusible PE film and upper surface protected by granules to protect the roof from damaging UV rays.
BİTULINE® TROPICA cap sheets available colours: Gray, red, green.

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	3,5
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
External Fire Performance	TS ENV 1187-2	-	-	B ^{roof}
Joint strength	TS EN 12317-1	N/50 mm	±30%	600
Water vapor transmission	TS EN 1931	-	min	20000
Tensile strenght (longitudinal)	TS EN 12311-1	N/50 mm	-0%; +30%	300
Elongation at break (longitudinal)	TS EN 12311-1	%	(-0;+10)	20
Tensile strenght (transversal)	TS EN 12311-1	N/50 mm	-0%; +30%	400
Elongation at break (transversal)	TS EN 12311-1	%	(-0;+10)	20
Resistance to impact	TS EN 12691 (meth. A)	mm	min	250
Resistance to static loading	TS EN 12739 (meth. A)	kg	min	5
	TS EN 12739 (meth. B)	kg	min	5
Resistance to tearing	TS EN 12310-1	N	±30%	50
Dimensional stability	TS EN 1107-1	%	max	1
Flexibility at low temperature	TS EN 1109	°C	min	0
Flow resistance at elevated temperature	TS EN 1110	°C	min	110
Artificial ageing behaviour	TS EN 1296/TS EN 1109 TS EN 1296/TS EN 1110 TS EN 1296/TS EN 1928 (meth. B 60 kPa)	-	-	15 15 PASS
Durability against chemical	TS EN 1847/TS EN 1928 (meth. B 60 kPa)	-	-	PASS
Adhesion of granules	TS EN 12039	%	0-30	20
Dangerous Substances	-	-	-	NO

Where to use and Properties

- BİTULINE® is torch apply membrane designed for new roofing and reroofing applications, can be bonded by heat welding on floor surfaces or sloped or flat roofs prepared with BİTULINE® base sheets, 3,5 mm, 4,5 mm thick, the BİTULINE® cap sheet membranes are produced in rolls of 10 m x 1 m.
- BİTULINE® cap sheets are produced with bottom surfaces with thermo fusible PE film and upper surface protected by slate granules used for BURs; flat roof terraces, public works and civil engineering projects.
- For effective waterproofing watertightness 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. BİTULINE® membranes have optimal mechanical and physical properties and their quality is ultimate in performance, versatility, and ease-of-use.

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Onduline®
AVRASYA A.Ş.

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BITULINE® TROPICA

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General Application Steps

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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. Verify that all roof openings, curbs, pipes, sleeves, ducts, vents, valley, ridges, box gutters, dormers, hips, eaves, rainwater outlets, chimney, expansion joints or other penetrations through the roof are solidly set, and that all flashings are properly sealed.
3. Side laps must be 10 cm and end lap joints must be at least 15 cm. Side lap joints serve as a guide for proper side overlapping.
4. 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.
5. Prior to installing succeeding courses ensure there are no blisters or open laps.
6. 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., so that no adjacent end laps coincide.
7. 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.
8. 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.

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. Damp surfaces can be overlaid with Bituline® cap sheets but standing water should be removed from the deck surface and from the build-up before recommencing laying operations.
4. 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.
5. 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.
6. Think safety first. Wear PPE

Tools:

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

Packaging:

Rolls/pallet	: 25 rolls
Qty/pallet	: 250 m ²
Weight/pallet	: ±1080 kg

Storage

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