

# Technical Data Sheet

## BITUSMART®

Bituminous waterproofing membrane

ONDULINE®



### Product Definition

HIGH HG300  
**HIGH HP300**  
HIGH HP400

BITUSMART HIGH HP300 is a Torch-applied bituminous felt reinforced with non-woven polyester mat and modified with elastomeric bitumen ; Petroleum bitumen modified by the addition of polyolefin or polyolefin copolymer compound.

BITUSMART HIGH HP300 has cold flexibility property of -10 / 0°C. Produced in thickness of 3 mm BITUSMART HIGH HP300 is commercialized bottom and upper surfaces protected by thermo-fusible PE film.

### Where to use and Properties

- Waterproofing membranes for sloped or flat roofs
- Complete waterproofing system
- State-of-the-art technologies
- Durable
- Innovating waterproofing Technologies
- Bitusmart, the professional's choice: high quality and effective range of Waterproofing membranes for reliable applications.
- BITUSMART base sheets have been developed following development of state-of-the-art technologies and are manufactured in Onduline Avrasya Sapanca plant.
- 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 or for waterproofing of industrial floors; in new, renovation and repair works for tourism complexes, hotels, institutional buildings and housing waterproofing works .BITUSMART waterproofing membranes offers reliable products for multi-layer waterproofing.
- BITUSMART membranes line have a wide range of characteristics and performances in order to provide turnkey solutions to meet all reliable waterproofing needs

### 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
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%	400
Water vapor transmission	TS EN 1931	-	min	20000
Tensile strenght (longitudinal)	TS EN 12311-1	N/50 mm	-0%; +30%	600
Elongation at break (longitudinal)	TS EN 12311-1	%	(-0;+10)	35
Tensile strenght (transversal)	TS EN 12311-1	N/50 mm	-0%; +30%	400
Elongation at break (transversal)	TS EN 12311-1	%	(-0;+10)	35
Resistance to impact	TS EN 12691 (meth. A)	mm	min	200
Resistance to static loading	TS EN 12739 (meth. B)	kg	min	5
Resistance to tearing	TS EN 12310-1	N	±30%	150
Flexibility at low temperature	TS EN 1109	°C	min	-10 / 0
Flow resistance at elevated temperature	TS EN 1110	°C	min	110
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

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**Onduline®**  
AVRASYA A.Ş.

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## BİTUSMART®

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### General Application Steps

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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	: 30 rolls
Qty/pallet	: 300 m <sup>2</sup>
Weighth/pallet	: ±1115 kg

### Storage

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