

Technical Data Sheet

BITULINE® RESISTA RP45S-H (-20°C Cold bending)

BITULINE®



Product definition

BITULINE® RP45S-H is Elastomeric, petroleum bitumen waterproofing membrane modified by SBS.

Flexibility at low temperature: -20°C.

Upper surface is protected by sand particles with special additives, bottom surface is protected by PE film.

Compound: Elastomeric bitumen; petroleum bitumen modified with SBS and specific thermoplastic polymers.

RP31S-H●
RP35S-H●
RP41S-H●
RP45S-H●
RP51S-H●

Where to use and Properties

Pre-applied: Fixed before placing reinforcement and casting concrete, BITULINE® RP45S-H is installed below slab-on-grade of reinforced concrete structures; foundation elements like footers, structural slabs, and grade beams.

BITULINE® RP45S-H, is suitable to use horizontal.

- Sand particles with special additives integrated into the upper surface of the Resista membranes perfectly adhere to the concrete thanks to the heat of hydration released during the formation of the concrete, providing a permanent integrity and continuous adhesion.

- **No need to protective felt and screed layer.**

- **The reinforcement can be installed directly over the membrane.**

- Immediate protection & less time for repair work, including around nails and fasteners

- Bituline is resistant to harmful underground conditions.

- High flexibility capabilities at low temperature (-20 °C)

- No lateral water migration between the concrete structure and the membrane

- High watertightness.

Technical data

Length	10 m (TS EN 1848-1; min. -0,03)
Width	1 m (TS EN 1848-1; min. -0,02)
Straightness	PASS (TS EN 1848-1)
Thickness	4,5 mm (TS EN 1849-1; ± 0,2 mm)
Joint strength	800 N/50mm (TS EN 12317-1; ±%30)
Tensile strength (longitudinal)	1000 N/50mm (TS EN 12311-1; min.%0, max. +%50)
Elongation at break (longitudinal)	%35 (TS EN 12311-1; min.0, max. +20)
Tensile strength (transversal)	800 N/50mm (TS EN 12311-1; min.%0, max. +%50)
Elongation at break (transversal)	%35 (TS EN 12311-1; min.0, max. +20)
Resistance to tearing	200 N (TS EN 12310-1; ± %30)
Resistance to impact	1250 mm (TS EN 12691 method A; min.)
Resistance to static loading	20 kg (TS EN 12730 method B; min.)
Flexibility at low temperature	-20 °C (TS EN 1109; max.)
Watertightness	PASS (EN 1928 method B 60 kPa)
Flow resistance at elevated temperature	≥100 °C (TS EN 1110; min.)
Adhesion of granules	%30 (TS EN 1296 / TS EN 1109; max.)
Reaction to fire	E (TS EN 13501-1)
Water vapor transmission	20.000 (TS EN 1931; min.)
Artificial ageing behaviour	PASS (TS EN 1847/TS EN 1928 method B 60 kPa)
Artificial ageing behaviour	≥100 °C (TS EN 1296/TS EN 1928 method B 60 kPa)
Hydrostatic Pressure resistance	Psi (70 m ASTM D 5385)
Lateral water migration resistance	≥100 psi (70 m ASTM D 5385 modified)
Peel adhesion to concrete	Average 3700 N/m (ASTM D 903)
Adhesion to a given substrate under peel forces	Average 3,89 N/mm (EN ISO 22631)

Tools:

Roofing torch, trowel, knife and gloves.

Packaging:

Rolls/pallet : 25 rolls
Qty/pallet : 250 m²
Weight/pallet : ±1050 kg

Storage

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

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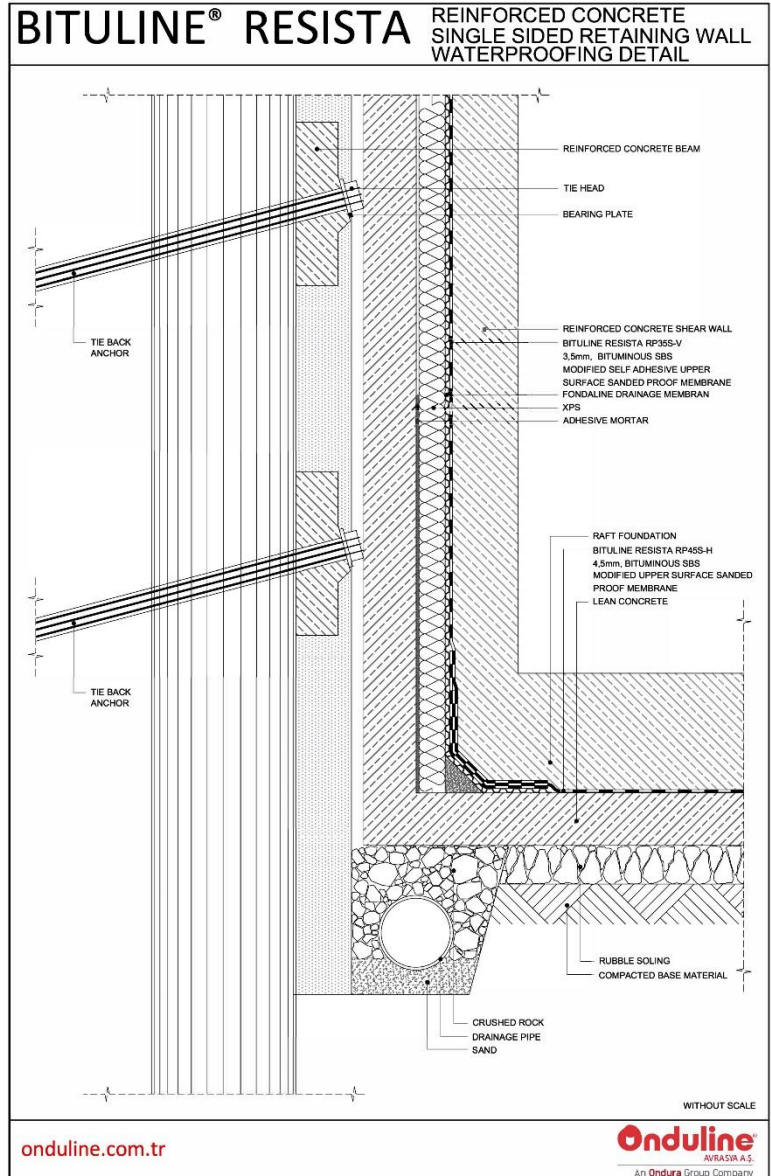
BITULINE® RP45S-H

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BITULINE® RP45S-H Application steps on foundations (Tanking)

1. Foundation pit should be excavated in battered wall style in order to hold earth sliding in compliance with the engineer's project.
If the **battered excavation** is not possible the **braced excavation** method should be used.
2. BITULINE® RP45S-H, is placed loose laid over 10 cm thick lead concrete or directly on compacted original earth only being bonded to the support at the overlappings.
3. Use ancillary Onduline waterproofing products for sealing all penetration details like expansion joints , fittings, etc. prior to installation of BITULINE® RP45S-H.
4. Chamfer the up-stand corners with right angle joints by repair mortar, mastic sealant or angle fillet.
5. BITULINE® RP45S-H adjacent rolls should be loose laid with a minimum side overlap of 10 cm and end overlap of 15 cm; all overlaps and transverse joints should be thermally bonded with roofing torch.. The top and bottom sides of the overlapping are heated up and they are pressed until the bitumen comes out. The excess bitumen should be smoothed by pressing with a trowel.
6. **With BITULINE® RP45S-H, there is no need to use protection felt thanks to sand particles with special additives integrated into the upper surface.**
7. **Concrete can be poured directly on the membrane surface after steel reinforcement is tied in place.**

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BITULINE® RP45S-H Consumption

Product	Consumption
BITULINE® RP45S-H	~1,13 m ² BITULINE® RP45S-H membrane is used in 1 m ² . The lengthwise laps are overlapped by 15±1 cm. The crosswise laps are overlapped by 10 cm.

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RP35S-H●

RP41S-H●

RP45S-H●

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BITULINE® RP45S-H General warnings

1. With temperatures below +5°C and higher than +35°C it is better to avoid the application.
2. On cold weather keep BITULINE® RP45S-H for 24 hours stored in a covered storage area with +5 °C before application.
3. Special care is required when unrolling BITULINE® RP45S-H sheets to not damage the membrane.
4. Special care is required during installation to avoid damage to waterproofing membranes. If it is impossible to restrict access to the waterproofing professionals alone, temporary protection must be employed to protect the membrane from the level of traffic

BITULINE® RP45S-H Safety rules

1. Think safety first. Wear PPE.
2. Always have one (minimum 6 kg) multi-purpose dry powder fire extinguisher in the application area.

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