

COLPHENE BSW UNILAY HP

COLPHENE BSW UNILAY HP is a high-performance waterproofing membrane composed of a select blend SBS modified elastomeric bitumen combined with an ultra-high strength double reinforcement system (heavy duty non-woven polyester associated with an additional specific fleece). The topside is covered with specially engineered silicon dioxide crystals and the underside is covered by a thermofusible film.

Thanks to its special formulation and composition **COLPHENE BSW UNILAY HP** has excellent, continuous and homogenous bond to poured structural concrete to increased resistance to hydrostatic pressure with superior mechanical properties.

Its unique design, including the **DUO SELVEDGE** technology, allows welding of side laps using a torch or a hot-air welder.

User application

COLPHENE BSW UNILAY HP is a pre-applied membrane designed for horizontal blind side waterproofing applications (below grade and tanking works).

All the applications are described in **SOPREMA's** Technical Guidelines in force.

Composition

	COLPHENE BSW UNILAY HP
Reinforcement	Heavy duty non-woven polyester associated with an additional specific fleece
Binder	Elastomeric bitumen: blend of selected high-performance bitumen and SBS* thermoplastic polymers
Thickness (EN 1849-1)	4.5 mm ($\pm 5\%$)
Weight (EN 1849-1)	5 kg/m ²
Topside	Specially engineered silicon dioxide crystals
Underside	Thermofusible film
Overlap (DUO technology)	120 mm covered with a release film (40 mm sticky bitumen + 80 mm thermofusible film)
*According to UEAtc directives concerning the normalization of waterproof elastomeric SBS bitumen coverings	

Packaging

	COLPHENE BSW UNILAY HP
Dimensions of the roll	8 m x 1 m
Weight of the roll	about 40 kg
Storage	Rolls must be stored upright, with the selvedge side on top If the product is stored outdoors, cover them with an opaque protective cover after removal of the delivery packaging
Roll lengths are given with a tolerance of < 1 %. Width of roll is given with a tolerance of 1% (UEAtc). Rolls must be stored upright on flat ground. During storage, protect the rolls against moisture. In cold weather, we recommend that the rolls be kept at a minimum temperature of + 2°C (+ 36 °F) for at least 5 hours before installation.	

Characteristics (outside CE marking)

Properties	Test method	COLPHENE BSW UNILAY HP
Tensile strength at peak load MD/XD	ASTM D5147	26.5 / 21.5 kN/m
Elongation at break, MD/XD	ASTM D5147	70 % / 80 %
Tear strength, MD/XD	ASTM D5147	875 N / 700 N
Low temperature flexibility	ASTM D5147	Unaffected at -20°C
Resistance to puncture	ASTM E154	1650 N
Water vapour permeance	ASTM E96 method B	< 2.1 ng / (Pa·S·m²) (< 0.04 perm)
Water absorption	ASTM D570 24 hours	< 0.5 %
Peel strength Adhesion to poured structural concrete	ASTM D903	average 6500 N/m
Resistance to hydrostatic head	ASTM D5385	≥ 110 m
Lateral water migration	ASTM D5385 modified	≥ 110 m
Gas permeability ((cm³)/(m².24h.atm) (methane) Gas Transmission Rate, GTR (10 ⁻⁶ m³/(m²·day)) (methane)	ASTM D1434	< 170 < 60
Radon gas diffusion coefficient D on overlap	K124/02/95	2.1 (±0.2) x 10 ⁻¹¹ 3.5 (±0.2) x 10 ⁻¹¹

(all values are subject to variation not exceeding 15%)

Installation

COLPHENE BSW UNILAY HP is installed loose laid on the concrete slab.

To prevent overly thick membranes, stagger the end laps by a minimum of 300 mm.

Side lap joints must be a minimum of 120 mm (see **DUO SELVEDGE** rubric below) and end lap joints must be a minimum of 150 mm. Membrane overlaps are sealed, by heat-welding.

All angle changes (inside and outside corners) and other details must be reinforced by heat-welding an additional 300 mm piece of **COLPHENE BSW UNILAY HP** centered on the angle.

COLPHENE BSW PROTECT'R, as a protection layer, is not necessary over the **COLPHENE BSW UNILAY HP** if placement of the reinforcement steel bars installation and poured in place concrete slab are carried out carefully.

DUO SELVEDGE

Over the entire width of **DUO SELVEDGE**, 40 mm of the surface is covered with exposed sticky bitumen. The remaining surface of the selvedge 80 mm is covered by a thermofusible film to seal overlap by heat-welding with a gas torch.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

Special indications

Hygiene, health and environment:

The product does not contain any substance likely to be detrimental to health or to environment and complies with generally admitted Health and Safety Requirements. For further information, please refer to relevant Safety Data Sheet.

Traceability:


Product traceability is ensured through a manufacturing code present on the packaging.

Quality control:

SOPREMA has always attached the highest importance to the quality of its products, to the respect of environment and people.

For this reason, we apply an integrated management of the Quality and Environment certified **ISO 9001** and **ISO 14001**.

CE marking

 1119 COLPHENE BSW UNILAY HP SOPREMA 14 rue de Saint-Nazaire – CS 60121 67025 STRASBOURG cedex 15 Construction Product Regulation (CPR) Declaration of Performance: DoP n° WPBEX253 Certificate of Factory Production Control: 1119-CPR-13136, 13137, 13138 (EN 13969)		
EN 13969 Membrane composed of a select blend of high-performance flexible SBS elastomeric bitumen combined with an ultra-high strength double reinforcement system (heavy duty non-woven polyester associated with an additional specific fleece). Topside is covered by specially engineered silicon dioxide crystals and the underside is protected by a thermofusible film. Dimensions 8 m x 1 m x 4.5 mm. Must be loose laid. For below grade and tanking works.		

Essential characteristics	Performances	Harmonised Technical Specification
Reaction to fire (EN 13501-1)	E	EN 13969:2004 + A1:2006
Root resistance (EN 13948)	NPD	
Peel resistance of joints (N / 50 mm) (EN 12316-1)	≥ 100	
Watertightness – Method B (EN 1928)	Conform	
Resistance to impact – Method A (mm) (EN 12691) Method A is on rigid substrate (aluminum)	≥ 1500	
Shear resistance of joints (N / 50 mm) (EN 12317-1)	≥ 800	
Flexibility at low temperature (°C) (EN 1109)	≤ -10	
Tensile properties: (EN 12311-1) Tensile strength L x T (N / 50 mm) Elongation L x T (%)	1150 x 900 (±20 %) 55 x 55 (±15 abs.)	
Resistance to static loading (kg) Method B (EN 12730) Method B is on rigid substrate (concrete)	≥ 20	
Resistance to tearing (nail shank) M x C (N) (EN 12310-1)	375 x 375 (±100)	
Durability (EN 1296 / EN 1928) Watertightness after ageing	Conform	
Dangerous substances (Notes 1 and 2)	Complies	

Note 1: This product does not contain asbestos or tar constituents.

Note 2: Since there is no European test method available, no performance declaration for leaching behavior can be made. It must be made according to national rules in force in the place of use.

Additional characteristics	COLPHENE BSW UNILAY HP
Durability Flow resistance at elevated temperature (°C) (EN 1110) after ageing (°C) (EN 1296 / EN 1110)	≥ 100 ≥ 90