



WATERPROOFING

PRE-APPLIED / BONDED

MIDDLE EAST

**DUO SELVEDGE**  
 TECHNOLOGY

# COLPHENE® BSW UNILAY HP

DOUBLE REINFORCED, PRE-APPLIED, BONDED SYSTEM MEMBRANE  
 DESIGNED FOR BLIND-SIDE WATERPROOFING

TECHNICAL DATA SHEET 170809ME1E

## DESCRIPTION

COLPHENE BSW UNILAY HP is a pre-applied, fully bonded, system membrane designed for horizontal blind-side waterproofing applications. The membrane could also be used in vertical applications in some projects. COLPHENE BSW UNILAY HP is composed of formulated select blend of high performance elastomeric Styrene-Butadiene-Styrene (SBS) modified bitumen combined with Ultra-High Strength (UHS) double reinforcement system (heavy duty non-woven polyester associated with an additional specific fleece) and coated with specially engineered Silicone Dioxide. The topside is covered with specially engineered carbon dioxide crystals and the underside is covered by a thermofusible plastic film. COLPHENE BSW UNILAY HP has excellent, continuous and homogenous bond to poured structural concrete, increased resistance to hydrostatic pressure and superior resistance to tears and punctures. Its unique design, including the DUO SELVEDGE technology, allows welding of side laps using a torch or a hot air gun.

## USER APPLICATIONS

- As a Value Engineering Solution in deep basement waterproofing.
- Blind-Side waterproofing (where excavation and access are limited).
- Below-Grade structures waterproofing.
- Under concrete Slabs.
- Tunnels & underpasses

## INSTALLATION GUIDELINES

- As part of an integrated Value-Engineering system, COLPHENE BSW UNILAY HP is installed layered and overlapped with other COLPHENE BSW system membranes.
- In horizontal application, apply the COLPHENE BSW UNILAY HP loose-laid onto blinding or the prepared substrate.
- Stagger laps in order to avoid excessive layering. Follow the DUO SELVEDGE guidelines to install side-laps. Side-laps with the adjacent ply should be, minimum, 120 mm while end-laps should be, minimum, 150 mm. Heat-weld all side-lap edges with a propane torch. Use a round nose trowel to create a perfect seal with the bead of bitumen. End-laps shall be staggered by at least 300 mm. For more information on the system installation follow the project's Method Statement or consult your local SOPREMA representative.

## SUO SELVEDGE TECHNOLOGY

COLPHENE BSW UNILAY HP is distinguished by SOPREMA's unique, patented technology; DUO SELVEDGE which is designed to ensure a safe and high performance installation at the critical locations of side-laps. A percentage of the surface of DUO SELVEDGE is sealed with self-adhesive, (approx. 40 mm), while the rest of the selvedge surface, (approx. 80 mm), is then safely sealed with propane torch or hot air. For best application, use SOPREMA's **SOPRAMATIC CART** which is equipped with a hot air blower designed to weld the DUO SELVEDGE of SOPREMA membranes.

## COLPHENE BSW SYSTEM COMPONENTS

- COLPHENE BSW V 3.0 (Vertical Application)
- COLPHENE BSW UNILAY HP (Horizontal Application)
- COLPHENE BSW PROTECT'R 3.0 (Horizontal Protection)
- PROTECTDRAIN or SOPRADRAIN 10 G (Vertical Support)
- SOPRAJOINT RIH / SOPRAJOINT WS (CJ Treatment)

## SUSTAINABILITY, HEALTH & ENVIRONMENT

All our activities & growth target sustainable development to minimize the impact on the environment. COLPHENE BSW system membranes do not contain any substances that might be detrimental to health or to the environment and comply with generally accepted health standards. Please refer to the product's Safety Data Sheet for more information.

Double Reinforced  
 Enhanced Mechanical Properties

Remarkable Bond-Strength to Structural Concrete

Part of a Value Engineering System in  
 Sub-Structure Waterproofing

Eliminates the Need for Protective Screed on  
 Horizontal Substrates

Resistant to Aggressive Chemicals  
 (Chloride, Sulphate and pH level between 2 & 10)

Homogeneous, Fully Sealed DUO-SLEVEDGE  
 Overlaps.

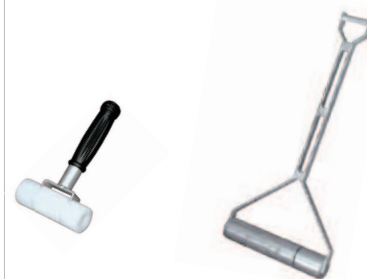
### USE WITH COLPHENE BSW PRODUCTS

5" ROLLER

20" ROLLER

CODE: 25075

CODE: 25073



For ideal application results, use SOPREMA's rollers & tools to install COLPHENE BSW membranes and seal overlaps.

## DETAILING & PILE HEAD

- COLPHENE SP LAP (Construction Joint & Corner detailing)
- ALSAN CAP-C (Pile Head Re-Profiling)
- ALSAN FLASHING (Detailing & Pile Head Treatment)
- ALSAN CAP-E (Pile Head Encapsulation)
- FLASHING REINFORCEMENT (Detailing & Pile Head Treatment)



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## PACKAGING

SPECIFICATIONS	STANDARDS	COLPHENE BSW UNILAY HP
Colour	-	Black
Thickness (Gross)	ASTM D5147	4.5 mm (-5% ; +5%)
Roll dimensions	-	8 x 1 m
Roll weight	-	40 Kg
Rolls per pallet	-	25
Underface	-	Thermofusible Film
Surface	-	Specially Engineered Silicone Dioxide Crystals
Side-Lap Width	-	12 cm

(All Values are Nominal)

**TECHNICAL PROPERTIES** Conforms to Norms: EN 13969 / EN 13707:2004 + A2:2009 / EN 13969:2004 + A1:2006

PROPERTIES	STANDARDS	COLPHENE BSW UNILAY HP
Tensile strength @ peak load, MD/CMD	ASTM D5147	26.5 / 21.5 kN/m
Elongation @ break, MD/CMD	ASTM D5147	70 % / 80 %
Tear strength, MD/CMD	ASTM D5147	875 N / 700 N
Resistance to puncture, MD/CMD	ASTM E154	1650 N
Water vapour transmission	ASTM E96	< 2.1 ng / (Pa.S.m <sup>2</sup> )
Water absorption	ASTM D570	< 0.5 %
Peel strength Adhesion to poured structural concrete	ASTM D903	4500 N/m
Resistance to hydrostatic head	ASTM D5385	> 110 m
Lateral water migration resistance	ASTM D5385 modified	> 110 m
Gas permeability, 10 <sup>-6</sup> m <sup>3</sup> /(m <sup>2</sup> · D)	ASTM D1434	60
Low temperature flexibility	ASTM D5147	Unaffected @ -20 °C

(All Values are Nominal), All published properties are nominal and considered by SOPREMA to be true and accurate. These nominal values are subject to variation not exceeding 15% based on statistical data obtained internally and verified by internationally accredited independent laboratories.

## STORAGE & HANDLING

Rolls must be stored in a shaded area in an upright position with the selvedge side on top.

## QUALITY CONTROL

COLPHENE BSW system membranes are manufactured in ISO-9001 certified SOPREMA factories which are audited by third-party organizations such as Underwriters Laboratories (UL) and FM Global. The system membranes are manufactured to meet SOPREMA's Quality Management Manual.

SOPREMA may modify the composition and/or utilization of its products without prior notice.



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