



WATERPROOFING

UN-BONDED

FOUNDATIONS

M I D D L E E A S T

COLPHENE CSW BG 500

SBS MODIFIED BITUMEN MEMBRANES

MAIN COMPONENT OF THE COLPHENE CSW BG SYSTEM

TECHNICAL DATA CCSW500_190507SME1E001

DESCRIPTION

COLPHENE CSW BG 500 is a product line of reinforced membranes specially designed for below grade waterproofing and tanking applications. COLPHENE CSW BG 500 membranes are manufactured with high performance SBS modified bitumen combined with a high strength double reinforcement. This combination thermal stability of the bitumen compound coupled with high puncture resistance, tear and tensile strength. This combination reflects on the long service-life of the membrane. COLPHENE CSW BG 500 membranes are system membranes constituting a main component of the COLPHENE CSW system engineered to comprise an un-bonded, pre-applied Compartment System for Waterproofing in below grade applications. The sturdiness of the COLPHENE CSW BG system allows for tight and secure waterproofing in critical site conditions.

USER APPLICATIONS

COLPHENE CSW BG 500 membranes constitute the main elements in SOPREMA's COLPHENE CSW BG 500 un-bonded sub-structure compartment waterproofing system. Please refer to the System Sheet for more information.

- General tanking waterproofing
- Foundation waterproofing
- External waterproofing of water tanks and other waterproofing of water retaining structures
- Footings and slab-on-grade waterproofing
- All below grade application where a Compartment System is specified.

INSTALLATION GUIDELINES

- System Assembly Considerations: COLPHENE CSW BG 500 Membrane shall be loosely laid over the concrete surface installed in a single ply or two-ply application subject to the water table level and projected hydrostatic pressure.
- **Preparation:** Surfaces must be dry and free from loose particles, form-work curing products, irregularities and any protruding elements that might be damaging to the membrane.
- A minimum curing time of concrete of 10 to 14 days is generally required. Curing time also depends on the density and thickness of the concrete.
- **Vertical Installation:** COLPHENE CSW BG 500 is mechanically fastened onto the shotcrete at a maximum height of 5 meters from the wall/floor joint tying-in with horizontal substrate with a minimum of 150 mm lap resting on the floor substrate. Observe a minimum, 100 mm side overlap between each ply of the COLPHENE CSW BG 500 membrane and the adjacent ply.
- The top edge of each ply must be mechanically fastened to the substrate at a 50 mm distance from the top edge using galvanized fasteners with 50 mm round plates, installed at every 300 mm on center with anchors properly installed into substrate.
- Heat-weld all side lap edges with a propane torch and use a round nose trowel to create a perfect seal with the bead of bitumen.
- Consecutive vertical plies of COLPHENE CSW BG 500 shall be aligned allowing for a 200 mm overlap covering all fasteners.
- An extra 330 mm reinforcement cover strip of COLPHENE CSW BG LAP shall be fully heat-welded with a torch centered on all mechanically fastened joints.
- All inside corners should be covered with a 150 mm wide strip of COLPHENE CSW BG LAP centered over the corner (heat-welded).
- **Horizontal Installation:** In horizontal application apply the COLPHENE CSW BG 500 loose laid over the prepared substrate starting at wall/floor joint aligning the membrane properly with the wall and un-roll to full extent.
- Stagger laps in order to avoid excessive layering.
- Heat-weld all side lap edges with a propane torch and use a round nose trowel to create a perfect seal with the bead of bitumen.
- For more information on installation and detailing please refer to the product's System Sheet and Method Statement.
- Ancillary Products Installation (compartment): Please refer to COLPHENE CSW BG 500 system sheet for more information on the installation of the full system assembly.

High Physical & Mechanical Properties

High Resistance to Tear & Puncture

High Resistance to Hydraulic Pressure

Wide Temperature Tolerance

Chlorine Free

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PACKAGING & SUPPLY

PROPERTY		COLPHENE CSW BG 500	
Reinforcement		200 + 70 g/m ² (Polyester reinforced)	
Thickness		5.0 mm	
Roll dimensions		1 x 10 m	
Roll weight		66 kg	
Rolls per pallet		15 Rolls / Pallet	
Surface		Polyethylene film	
Underface		Thermofusible plastic film	

SUSTAINABILITY, HEALTH & ENVIRONMENT

All our activities & growth we target sustainable development to minimize the impact on the environment. COLPHENE CSW BG 500 does not contain any substances that might be detrimental to health or to the environment and complies with generally accepted health standards. Please refer to the product's Safety Data Sheet for more information.

STORAGE & HANDLING

Rolls must be stored upright with the selvedge side upwards. For outdoor storage, protect the membrane with an opaque protection cover after removal of the delivery packaging.

QUALITY CONTROL

COLPHENE CSW BG 500 membranes are manufactured in ISO-9001 certified SOPREMA factories which are audited by Third-Party organizations. Our products are manufactured to meet SOPREMA's Quality Management Manual.

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TECHNICAL PROPERTIES

PROPERTIES	STANDARDS	COLPHENE CSW BG 500
Softening point	ASTM D36	> 130 °C
Tensile strength, MD / CMD	EN 12311-1	1250 / 950 N / 5 cm
Elongation, MD / CMD	EN 12311-1	45 / 55 %
Cold bend test	ASTM D5147 / 14	- 20 °C
Cold temperature flexibility	EN 1109	- 20 °C
Tensile strength, MD / CMD	ASTM D7275	25 / 18 kN
Elongation, MD / CMD	ASTM D7275	70 / 75 %
Flow resistance at elevated temperature	EN 1110	100 °C
Dimensional stability	EN 1107-1	50 %
Resistance to static puncture	EN 12730	L ₄ (25 kg) ± 5 kg
Resistance to dynamic puncture	UEAtc	I ₄
Puncture resistance / Deflection	ASTM E 154	1250 N / 34 mm
Puncture resistance / Deflection	EN 12236	2.85 kN / 44 mm
Static puncture resistance	ASTM D4833	495 N
Nail tear resistance, MD / CMD	EN 12310-1	260 / 490 N
Tearing strength, MD / CMD	ASTM D5884	70 / 125 N
Water vapor transmission	ASTM E 96	0.10 g / 24 hr / m ²
Water absorption @ 24 Hours	ASTM D570	< 0.5 %
Resistance to hydrostatic pressure	ASTM D5385	> 7 bar

- (All values are nominal)
- All values are subject to UEAtc tolerance.
- This product does not contain asbestos or tar constituents.
- (*) MD = Machine Direction CMD = Cross Machine Direction

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