cemseal®

Technical Data Sheet

CEMSEAL DUALBIT 2-IN-1 WP

DUAL DEFENSE LASTING WATERPROOFING SYSTEM

DESCRIPTION

CEMSEAL DUALBIT 2-IN-1 WP is a composite flat roof solution that combines the seamless elasticity of a polyurethane bitumen hybrid liquid-applied coating with the uniform thickness and substrate stress isolation of a preformed polymer-modified bitumen membrane. The base layer, CEMSEAL PUW, forms a flexible and chemical-resistant layer that bonds perfectly to the substrate. The top membrane provides a consistent waterproof barrier and long-term protection against water ingress and mechanical stress. Together, they create a durable, flexible, and high-performance dual-layer waterproofing system ideal for modern flat roof applications.

FEATURES AND BENEFITS

Characteristics

- Polyurethane Bitumen Base Layer
- High Elasticity and Strength
- Excellent adhesion to substrate
- Preformed SBS/APP membrane finish
- Composite 'two-line' defense system
- Cold applied and flame free installation
- Bridges substrate imperfections
- Ease of detailing
- Durable and low maintenance

Benefits

- Single-component, liquid-applied coating that provides a seamless, concealed waterproofing application
- Features excellent tensile strength (≥ 1.2 MPa) and an elongation at break of ≥ 500% to accommodate structural movement
- Eliminates air gaps and enhances bond with preformed membrane
- Provides uniform thickness, puncture resistance, and long-term UV/weather protection
- Dual waterproofing layers ensure redundancy-if one layer is damaged, the other maintains protection
- Safe for use in confined spaces and over heat-sensitive substrates
- Ideal for rough or uneven concrete surfaces
- Liquid base conforms to complex shapes and penetrations before applying the sheet membrane
- Extended service life and reduced need for future repairs

RECOMMENDED USE

- Flat and sloped reinforced concrete roofs
- Podium decks and terraces
- Gutters, planters, and roof upstands
- Retrofitting over aged bituminous or concrete surfaces
- Wet areas or concealed waterproofing applications beneath screed

APPLICATION METHOD

Surface Preparation:

- Substrate must be clean, sound, and free from loose particles, oil, grease, or laitance.
- Repair any structural cracks and honeycombs using suitable cementitious repair mortar.
- Ensure substrate is dry or slightly damp; no standing water is allowed.

Step 1: Application of Base Coating

1. Apply CEMSEAL PUW using a brush, roller, or airless spray.
2. Apply the coating evenly at a rate of 1.50 kg/m^2.

Step 2: Installation of Preformed Membrane

1. Unroll CEMSEAL SBS/APP Modified Bitumen Membrane over the base coat.
2. Align rolls carefully; ensure overlaps of 75-100mm (side lap) and 100-150mm (end lap).
3. Seal laps by torching or pressure rolling for self-adhesive types.
4. Ensure continuous adhesion without air pockets or wrinkles.

Step 3: Detailing & Terminations

1. Upturn membrane at parapets, edges, and penetrations.
2. Use liquid base coating or compatible sealant for complex junctions.
3. Protect exposed membrane with UV-resistant mineral finish or protective screed if required.

Step 4: Quality Control

1. Conduct a visual inspection for continuity and proper lap sealing.
2. Perform a water ponding test (24-48 hours, 25-50mm depth) before installing any protection layers.

BASIS OF TECHNICAL DATA

All technical data provided in this Technical Data Sheet are based on laboratory tests. Actual performance may vary due to factors beyond our control.

SYSTEM BUILD UP

Layer	Description	Product		Consumption/Thickness
1	Substrate	Reinforced concrete slab		As per architect's design
2	PU Bitumen Hybrid	CEMSEAL PUW		1.5kg/m2
3	Polymer modified bitumen membrane	**Optional Membrane System**		
		CEMSEAL DUALBIT 2-IN-1 WP-S	CEMSEAL SBS-SA-S	1.5mm
		CEMSEAL DUALBIT 2-IN-1 WP-D	CEMSEAL SBS-SA-D	1.5mm
		CEMSEAL DUALBIT 2-IN-1 WP-AR	CEMSEAL SBS-SA-S-AR	1.5mm (Root Resistant Membrane)
		CEMSEAL DUALBIT 2-IN-1 WP-APP	CEMSEAL APP TOM-Sand	3.0mm
4	Insulation layer (Optional)	CEMSEAL XPS		As per architect's design
5	Separation layer (used only with insulation build up)	CEMSEAL DPM 250		0.25mm
6	Finishing	Reinforced protective screed / finishing layer		As per architect's design

STANDARD AND COMPLIANCE

CEMSEAL DUALBIT 2-IN-1 WP system complies with the following relevant international standards:

Product	Reference Standard	Description
Modified bitumen membrane (SBS/APP)	SS 374	Specification for preformed waterproofing membranes for concealed roofing system
Overall system performance	ASTM D5385 / D4068 / D1970	Hydrostatic pressure resistance / adhesive integrity / low temperature flexibility
Water penetration resistance	BS EN 1928	Determination of watertightness
Crack bridging	ASTM C836 / EN 1062-7	Elongation and crack bridging properties for coatings

Disclaimer:
The information and any recommendations relating to the application and end-use of all CEMSEAL products are provided in good faith based on CEMSEAL's knowledge and experience of the products. In applications, the differences in materials, and variances of substrates and actual site conditions can vary such that no warranty in respect of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be taken as inferred either from this information, or from any written recommendations, or from any other advice offered by CEMSEAL. The proprietary rights of third parties must be observed. All orders are accepted subject to our sale terms and conditions. All users should always refer to the most recent and up to date issue of the Technical Data Sheet for the product concerned, which is available on request. It is recommended that products should always be properly stored, handled and applied under tested and recommended conditions.

For More Information:

CEMSEAL SINGAPORE PTE. LTD. (202405420H)
Singapore Office: 1 One-north Crescent, Level 7, Singapore 138538

CEMSEAL INDUSTRIES SDN. BHD. (884153-T)
Corporate Office: No. 10, Jalan Emas 29, Taman Sri Putri, 81300 Skudai, Johor, Malaysia.
Factory: Lot 7068, Jalan Kampung Maju Jaya, Kampung Maju Jaya, 81300 Skudai, Johor, Malaysia.

Website: www.cemseal.com
Email: info@cemseal.com

TUVNORD TUV NORD (MALAYSIA) SDN BHD ISO 9001 ISO 14001
QMS - 005 100 19013
EMS - 005 104 19005

TUVNORD TÜV NORD CERT GmbH ISO 9001 ISO 14001
QMS - 44 100 19 92 0012
EMS - 44 104 19 92 0012