

ShaliHDPE® HWS

HDPE Waterproofing Membrane with Heat Weldable Selvage



Description

ShaliHDPE® HWS is a multi-layer compound waterproofing membrane, composed of a layer of high-density polyethylene (HDPE) film with pre-applied pressure sensitive adhesive, a reactive inorganic fine granule layer and heat weldable selvage, manufactured and supplied in thickness of 1.2 mm and 1.5 mm, designed for waterproofing basements and podiums of new buildings. The membrane is designed for adhesion to RCC for easy application below rafts and reinforcements.

Product Information

Colour	White
Handling & Storage	ShaliHDPE® HWS must be stored in a shaded area on wooden pallets, neatly covered by thick fabric and tied securely in a manner that will ensure there is no excessive exposure to sunlight. Do not stack pallets one above the other.
Packaging	Available in 1.2 & 1.5 mm thickness in 1.2 m x 20 m, 1.5 m x 20 m and 2 m x 20 m (Tolerance: ± 1%).
Shelf Life	12 months when stored as per recommendations.
Handling Precautions	The membrane is non-hazardous, non-flammable and therefore can be disposed of in any regular disposal areas. The membranes can be unloaded by hand or any other convenient means but ensure that there are no sharp or protruding edges within close proximity to avoid puncturing the membrane.

Technical Characteristics at 27°C, 55% RH

Property	Standard	1.2 mm	1.5 mm
Nominal Thickness, mm HDPE Sheet Thickness, mm	In-house	1.2 0.9	1.5 1.2
Weight, kg / m ²	In-house	1.65 ± 10%	1.97 ± 10%
Tensile Strength, MPa	ASTM D 412	26 - 29	26 - 30
Elongation, %	ASTM D 412	>500	>500
Brittleness point, °C	ASTM D 2137	-30	-30
Tear Strength, kg / cm	ASTM D 412	100 - 110	100 - 125
Resistance to Hydrostatic Head, m	ASTM D 5385	70 - 75	70 - 75
Peel adhesion to post cure concrete, N / m	ASTM D 903	>1400	>1500
Lap joint strength, N / m	ASTM D 6392	>15000	>15000
Puncture Resistance, N	ASTM E 154	>1000	>1200
Weather Resistance, kJ / (m ² .mm)	ASTM G 155	>21500	>21700
Linear dimensional stability, 6 hours @70°C, %, max.	ASTM D 1204	1	1
Water Vapor Permeance, perms, max.	ASTM E 96	0.10	0.10

Field of Application

- Used to sub-structure, basements, retaining walls, tunnels & underpass.
- Car parks, roads & bridges.
- Cut & cover tunneling.

Advantages

- Heat weldable selvage area.
- Resistance to root penetration, suitable for green roofs.
- Uniform thickness - eliminates any likelihood of thin application commonly found with liquid applied membranes.
- Continuous serviceability from -30°C to 100°C without cracking, tearing or brittleness failure.
- Chemically resistant, not affected by aggressive ground contaminations, salts and it protects the structure from chloride and sulfate attacks.
- Not affected by differential movements and ground settlement beneath slabs as it maintains a watertight seal to the structure.

Application Methodology

➤ Surface Preparation

- Prior to installation, examine the substrate and ensure a well compacted, sound and continuous substrate to eliminate movement during the concrete pour.
- Selvage / overlap area of sheet to be cleaned with dry cloth and aligned properly. No dust, oil traces and contamination should be present.
- Substrate must be free of loose aggregate and sharp protrusions.
- On Vertical Surfaces, use concrete, Shotcrete or plywood, etc. to achieve a uniform, sound and continuous substrate ready to receive the membrane.

• For Horizontal Substrate

- Place **ShaliHDPE® HWS** and unroll the membrane on the approved substrate with adhesive / coated side facing the concrete pour facing towards the concrete pour.
- End laps should be staggered to avoid a buildup of layers. Accurately position succeeding sheets to overlap the previous sheet for 75 mm.
- All overlaps and joints should be firmly rolled to ensure complete adhesion between layers.
- The weld joint is made with standard heat welding machine with a temperature range 290 to 371°C and speed of 0.8 to 2 m / min.

• For Vertical Substrate

- Mechanically fasten the membrane in any convenient length vertically using nails or fasteners appropriate to the substrate with adhesive coated side facing concrete pour.
- Secure the top of membrane fixing 50 mm below top edge.
- Fixings can be made through the selvedge so that the membrane lays flat and allows firmly rolled overlaps.
- All end laps to be secured by using hot air welding.
- It is recommended to pour concrete within 45 days of application of membrane. Remove printed release film before concrete pour.
- Concrete should be poured and compacted carefully. Never use any sharp object to consolidate the concrete.

Precautions

- Inspect the membrane before placing the formwork, steel reinforcement or pouring of concrete. If any damages are found in the membrane the same shall be repaired with **ShaliTape® Flex**.
- Install the membrane on the entire area to be covered.

Value base of product data

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control and different test methods.

Health and Safety information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent **Material Safety Data Sheet**.

- Avoid contact with skin / eyes and avoid swallowing.
- Ensure adequate ventilation and avoid inhalation of vapour.
- Wear suitable protective clothing, gloves and eye protection.
- In case of skin contact, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent to clean the contacted area.
- In case of eye contact, wash with plenty of clean water and seek medical advice.
- If swallowed, seek medical attention immediately. Do not induce vomiting.



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- Sealants and Additives
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- Epoxy Flooring
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- RestoFix- Repair / Rehabilitation
- Other Construction Chemicals



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