

SELFSEAL HDPE 150 HW



PRE-APPLIED, FULLY BONDED SAND COATED HDPE WATERPROOFING MEMBRANE WITH WELDABLE SELVAGE

hahne SelfSeal HDPE 150 HW is a high-performance, flexible High-Density Polyethylene (HDPE) waterproofing membrane comprising an HDPE film, pre-applied pressure-sensitive adhesive, reactive inorganic fine granule layer and heat-weldable selvage. It is manufactured with a nominal composite thickness of 1.5 mm and is designed for waterproofing basements, podiums and other below-ground concrete structures.

The membrane is designed to bond to poured concrete, providing a continuous waterproofing layer and protection against water ingress and lateral water migration. The heat-weldable selvage enables secure fusion of membrane joints, while the high mechanical properties provide excellent puncture resistance, tensile strength and elongation.



PRODUCT INFORMATION

Area of Applications

- Basement and below-ground waterproofing.
- Waterproofing below raft foundations.
- Retaining walls and blind-side waterproofing.
- RCC podiums and car parks.
- Underground concrete structures.
- Cut-and-cover tunnels, subways, underpasses, roads and bridges.
- Underground metro structures.
- Structures exposed to hydrostatic pressure

Features and Benefits

- Pre-manufactured to a controlled thickness, reducing site-related thickness variation.
- High puncture resistance with high tensile strength and elongation.
- High peel adhesion to concrete and excellent adhesion at membrane joints.
- Heat-weldable selvage for reliable fusion of membrane overlaps.
- Pre-applied pressure-sensitive adhesive enables bonding to poured concrete.
- Helps prevent lateral water migration and provides resistance to high hydrostatic pressure.
- Suitable for demanding below-ground waterproofing applications.
- Retention of 90% tensile and elongation properties after 45 days UV exposure.

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TECHNICAL SPECIFICATIONS

Property	Test Method	Result
Composite Thickness	ASTM D3767:2003	1.5 mm
Pure HDPE Thickness	ASTM D3767:2003	1.2 mm
Tensile Strength – Longitudinal	ASTM D412:2016	25 N/mm ²
Tensile Strength – Transverse	ASTM D412:2016	25 N/mm ²
Elongation at Break – Longitudinal	ASTM D412:2016	500 %
Elongation at Break – Transverse	ASTM D412:2016	500 %
Puncture Resistance	ASTM E154:2008	1200 N
Low Temperature Flexibility at -25°C	ASTM D1970:2021	No Crack
Resistance to Hydrostatic Head up to 7 bar (71.4 m)	ASTM D5385:2025	No Leakage
Dimensional Stability – Longitudinal, 80°C / 24 h	ASTM D1204:2014	< 1 %
Dimensional Stability – Transverse, 80°C / 24 h	ASTM D1204:2014	< 1 %
Peel Adhesion to Concrete	ASTM D903:1998	1500 N/m
Lap Peel Adhesion	ASTM D1876:2008	1500 N/m
Joint Shear Strength	ASTM D6392:2025	15000 N/m
Lateral Water Migration up to 7 bar (71.4 m)	ASTM D5385:2025	No Leakage

APPLICATION PROCEDURE

Surface Preparation

- The substrate must be sound, stable, smooth and free from sharp projections, loose particles, oil, grease and other contaminants. Standing water should be removed before application.
- Remove sharp edges, protrusions and irregularities that may damage the membrane.
- Gaps, voids and major surface imperfections should be repaired before membrane installation.
- The substrate should be sufficiently stable to prevent movement of the membrane during subsequent reinforcement and concrete placement.

Laying of Membrane

- Roll out **hahne SelfSeal HDPE 150 HW** over the prepared substrate in accordance with the approved waterproofing detail and method statement.
- Ensure the membrane is laid flat without wrinkles, folds or trapped air.
- Adjacent sheets shall be overlapped using the designated heat-weldable selvage area.
- Where pressure-sensitive adhesive bonding is required, gradually remove the protective release liner and press the membrane firmly into position.
- Use a suitable roller to achieve uniform contact and remove entrapped air.
- Ensure the selvage/overlap area is clean, dry and free from dust, oil and other contamination before heat welding. Align membrane overlaps correctly before welding.
- Protect the installed membrane from mechanical damage during reinforcement placement and subsequent construction activities.

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Heat Welding of Selvage / Overlap

- The selvage/overlap area must be clean and properly aligned before welding. No dust, oil traces or other contamination should be present.
- Use a standard hot-air heat-welding machine suitable for HDPE membrane welding.
- Heat welding shall be carried out at a temperature range of approximately 560–700°F and a welding speed of 0.8–2.0 m/min.
- Temperature and welding speed shall be optimized according to site conditions and environmental factors.
- Ensure the membrane beneath the weld area is properly supported and free from undulations, as unevenness can affect weld quality.
- Carry out suitable visual and project-specific quality checks on welded joints before subsequent work.

Detailing and Repairs

- All corners, penetrations, construction joints, terminations and changes in level must be treated in accordance with the approved waterproofing detail.
- Inspect the membrane after installation and again after reinforcement placement.
- Any puncture, cut or damaged area must be repaired using an appropriately sized membrane patch and approved compatible adhesive/tape system.
- Do not leave damaged or inadequately bonded areas untreated before concrete placement.

Concrete Placement

- Reinforcement shall be placed carefully to avoid damage to the membrane.
- The membrane should be inspected immediately before concrete placement.
- Concrete should be placed in accordance with good construction practice to avoid displacement or damage to the membrane.
- The membrane shall form a continuous bond with the poured concrete to provide protection against water ingress and lateral water migration.
- Concreting over the membrane is ideally recommended to be completed within 21 days of membrane installation. To retain at least 90% of the membrane's original mechanical properties, concreting shall be completed within a maximum period of 45 days from the date of membrane installation.

PACKAGING, STORAGE AND SAFETY

Packaging

- **hahne SelfSeal HDPE 150 HW** is supplied in rolls of 1.2 m / 1.5 m width and 20 m length, subject to standard packing configuration.

Storage and Shelf Life

- Store rolls in a clean and dry area in their original packaging.
- Protect from direct sunlight, moisture, chemicals, ignition sources and physical damage.
- Exercise care during lifting, transportation and handling to prevent puncturing, tearing or deformation.
- Do not place sharp or heavy objects directly on the rolls.

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Safety Instructions

- Wear suitable protective clothing, gloves and eye protection during handling and installation.
- Avoid unnecessary contact with the adhesive layer.
- Ensure adequate precautions are taken during cutting, handling and installation.
- Refer to the relevant Safety Data Sheet before use.

DISCLAIMER: The information and application guidelines provided by the company and its representatives are intended solely as a general reference. Users are strongly encouraged to conduct their own tests and trials to verify the product's suitability for their specific requirements before proceeding with full-scale use. As the identification of underlying issues, the quality of other materials and the workmanship on-site are beyond our control, we cannot offer any express or implied guarantees regarding the results. The company disclaims any liability for damages or unsatisfactory outcomes that may arise from the use of our products.