

TECHNICAL DATA SHEET - HyDra FB membrane 3080

DESCRIPTION

HyDra Fully Bonded membrane 3080 is a strong waterproofing membrane made of several composite layers consisting of high-density polyethylene (HDPE), a pressure-sensitive adhesive and a weather-resistant and robust coating. HyDra Fully Bonded membrane 3080 has a strong adhesive bond to cast concrete. The strong adhesion to the concrete means that water transport between the membrane and the concrete is absent, which in turn significantly reduces the risk of leakage.

The functions of the different layers are as follows:

HDPE: Carrier of gel layers and coating, with high strength, flexibility, puncture resistance, weather resistance, etc.

Elastoplastic gel layer: Asphalt-free synthetic adhesive, which prevents water migration and absorbs parts of damage by external factors, which are not affected by structural cracks up to 0,3mm.

Functional coating: 0.2 ~ 0.4 mm thick coating greatly reduces the UV effect on the elastoplastic gel layer. No protective material is needed to enter the membrane after laying. When the concrete is cast against the membrane, a microporous structure forms a unique continuous adhesion to the concrete.



1. PRODUCT INFORMATION

Product	Data
Design	Rolled cylindrical, using suitable packaging material
Width (m)	1,2 / 2,4
Thickness (mm)	1,2 / 1,5
Length (m)	20
Roll size (m ² /roll)	24 / 48

2. TECHNICAL INFORMATION

Test item	Test Method	Unit	Requirement
Water tightness to liquid water	EN 1928	-	60KPa,24h,Pass
Resistance to static loading	EN 12730	kg	20
Tensile force	Longitudinal	N/50mm	≥800
	Transversal	N/50 mm	≥800
Elongation	Longitudinal	%	≥500
	Transversal	%	≥500
Durability of water tightness against chemicals	EN 1847 Test afterwards to EN 1928	-	60KPa,24h,Pass
Durability of water tightness against ageing	EN 1296 Test afterwards to EN 1928	-	60KPa,24h,Pass
Resistance to impact	EN 12691-B	mm	600
Resistance to tear(Nail Shank)-unreinforced sheets	Longitudinal	N	≥500
	Transversal	N	≥500
Peel resistance of joint	EN 12317-2	N/50mm	≥400
Resistance to alkali	EN 1847 Test afterwards to EN 1928	-	60KPa,24h,Pass
Length	EN 1848-2	m	≥20
Width	EN 1848-2	m	2,4 ±0,024
			1,2 ±0,012
Mass per unit area	EN 1849-2	kg/m ²	≥1,45 (1,5 mm)
			≥1,15 (1,2 mm)
Straightness	EN 1848-2	mm/10m	≤20
Visible defects	EN 1850-2	-	No visible defects
Bitumen compatibility	prEN 1548 and EN 1928	-	60KPa,24h,Pass

Typical properties

Test	Tekniskt Index	Typical properties
Yield strength	≥ 650 N/50mm	750
Elongation at break	≥ 550%	700
Nail tear resistance	≥ 500 N	550
Heat resistant	70°C, 2h, No displacement, flowing and dripping	70°C, 2h, No displacement, flowing and dripping
Mobility low temperature	-25°C, No cracks	-25°C, No cracks
Resistance to hydrostatic pressure	6 Bar. Impervious	6 Bar. Impervious
Water tightness, membrane/concrete	See separate report*	8 Bar. Test Vattenfall AB
Waterproof joint	See separate report*	8 Bar. Test Vattenfall AB
Waterproof penetration	See separate report*	8 Bar. Test Vattenfall AB
Methane gas permeability(ml/m ² /dag)	See separate report**	39
Adhesion to the concrete	≥ 2,5 N/mm	2,8 N/mm
Radon permeability k***	SP-metod 3873	<4,9 x 10 ⁻¹² m ² /s
Adhesion overlap	≥ 500 N/50mm or damage	600 N/50mm

* Vattenfall AB has on behalf of Hydratec Scandinavia AB performed several tests for this product. Separate test protocols are available.

** Precision Geosynthetic Laboratories (USA)

*** Tested by RI.SE

3. APPLICATIONS

HyDra FB membrane 3080 is suitable for all underground constructions.

4. FEATURES AND BENEFITS

- Simple, cold-applied installation - no primer, special equipment or heating work.
- Quick assembly with "kick-out" rolls.
- Time saving: Possibility to choose roll width according to project, available in widths 1.2 and 2.4 m
- Good environmental choice - No protective plastic to remove before casting. Only protective tape wrap joints are removed.
- Complete waterproofing system including membrane, tape, sealing compound for pipe penetration / piles / foundations, joint tape, joint plate etc.
- Fully Bonded system – permanent bonding to the newly cast concrete.
- Very good chemical resistance

5. MONTAGEPROCESS

Horizontal mounting

Prepare the ground → Plan the membrane work → Apply the membrane → Check the overlap → Preform detail work → Reinforce → Concrete casting

Vertical mounting

Assemble form → Plan the membrane work → Apply the membrane → Attach the membrane mechanically → Check overlap → Preforme detail work → Reinforce → Concrete casting

Wrap joint

Overlap all wrap joints by at least 80 mm and ensure that the membrane is clean and free of dirt and other contaminants. The longitudinal membrane has a pre-glued surface. Wipe with a cloth on the underside of the membrane to ensure a dry and clean surface for the adhesive to adhere to use a pressure roller to ensure that the wrap joint is fully adhered. At temperatures lower than

+ 0°C, the joint is supplemented with HyDra Tape T120S LT centrally over the joint. Use pressure roller to ensure full adhesion.

Joint short-ended or cut membrane: Lay the membrane around at least 80 mm. Tape with HyDra Tape T120 S LT centrally over the joint. Use pressure roller to ensure full adhesion.

6. TRANSPORT AND STORAGE

Products of different types and specifications should be stacked separately during storage and transport.

Avoid damaging the products during transport and storage. Store in a well-ventilated and dry place. The storage temperature should be below 45°C.

The membrane can be stored horizontally for a maximum of five levels. Standing storage is always recommended. Avoid storage in direct sunlight, rain, high temperature. Avoid contact with acids, alkalis, oils and organic solvents. Shelf life 12 months from date of manufacture under normal storage and transport conditions.

7. PRECAUTIONS AND RESTRICTIONS

Installers should undergo specialized training before mounting the membrane.

When mounting under rain and snow, it should be avoided unless it can be ensured that wrap joints can be made correctly. The temperature of the concrete surface, air, membrane and tape should be above 5 ° C. At temperatures -5 ° C and 5 ° C, HyDra FB Tape T120S LT is recommended for all joints.

Make sure the underside of the subsequent membrane is clean and dry before attempting to mount the overlap.

Note that damaged membrane must be repaired according to instructions.

The concrete casting process should be completed within 40 days after the membrane is laid.

People who have sharp shoes / soles must not enter the membrane.

8. HEALTH AND SAFETY

Read the safety instructions carefully, contact HyDratec Scandinavia for further advice on safety, health and the environment.

9. PRODUCT LIABILITY

The information provided in this sheet is based on data and knowledge that HyDratec Scandinavia finds true and correct and is offered to the user for consideration, examination and verification.

As the conditions of use are beyond our control, there is no guarantee that the results in the sheet can be achieved. None of our claims, recommendations or proposals constitute a guarantee or are legally binding. No part of the information, recommendations or suggestions may be used if it causes trademark or patent infringement by third parties.

This data sheet should be checked at your nearest HyDratec office or on Hydratec's website to determine that it has not been replaced by a later edition. The information in this sheet supersedes all previously published versions. Personal visits from HyDratec's staff at construction sites do not constitute our supervisory responsibility.

These products may be subject to patent rights or patent applications.