

Substructure Waterproofing - Membranes

Preprufe® 160 Flex

Pre-applied flexible waterproof membrane that develops an adhesive bond to poured concrete.

Description

Preprufe® 160 Flex waterproof membrane is a composite sheet comprising of a robust flexible backing, a pressure sensitive adhesive and a trafficable weather resistant coating.

Uniquely, the membrane develops a continuous adhesive bond to concrete poured against it. This prevents water migration between the structure and the membrane, substantially reducing the risk of leaks.

Applications

- Water and vapour proofing all basement grades to BS8102: 2009.
- Waterproofing civil engineering substructures.
- Methane, carbon dioxide and radon gas protection in excess of the standard membrane requirements in BRE report 211 (Radon) and 212 (Methane and Carbon Dioxide).

System Components

- Preprufe® 160 Flex – used typically in the vertical position against irregular permanent shuttering.
- Preprufe® 300R – used typically with concrete slabs thicker than 350 mm.
- Preprufe® Tape LT – incorporating Preprufe coating for continuous concrete adhesion at laps and detail.
- Bituthene® LM – high performance membrane for detailing terminations such as pipe penetrations.
- Adcor® 500S – hydro-expansive waterstop for concrete construction joints.

Application

Material Storage

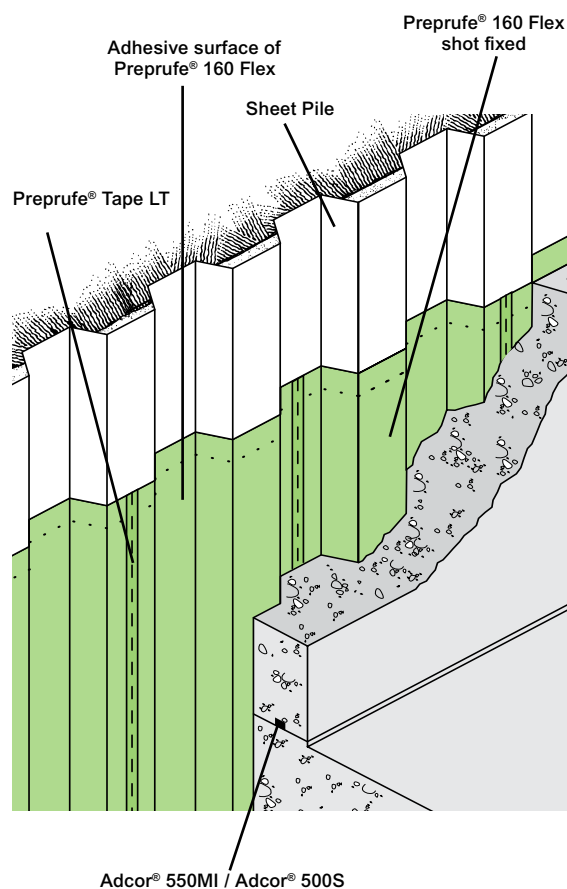
Sequence deliveries to avoid delays and minimise on-site storage. Select a safe, covered secure location for material storage. Store materials for each day's use in a location that will not require movement a second time. Do not double-stack pallets of waterproofing on the job site. Provide cover on top and all sides.

Substrate Preparation

Substrates should be uniform with no gaps or voids greater than 12 mm. Where these exist fill with a material of sufficient strength to support the membrane. All substrates must be free of sharp protrusions. The surface does not need to be dry, but standing water must be removed. Substrates must have sufficient rigidity not to move during the concrete pour.

Advantages

- Can be used with irregular profiles such as sheet, secant and soldier piling.
- Adhesive seal to concrete - proven to resist water migration.
- Lightweight and flexible - easy to handle and install without special corner pieces.
- Inert - unaffected by groundwater conditions.
- Remains sealed to structure even if ground settles.
- Smooth surface – site contamination easily removed.
- Excellent chemical resistance.



Details shown are typical illustrations only and not working drawings. For assistance with working drawings and additional technical advice please contact Grace Technical Services

Supply

Preprufe® 160 Flex	1.2 m x 35 m roll (42 sq m) Weight 42 kg
Storage	Store upright in dry conditions below +30°C
Ancillary Products	
Preprufe® 300R	1.2 m x 30 m
Preprufe® Tape LT	100 mm x 15 m
Adcor® 550MI	8 x 5 m rolls
Adcor® 500S	6 x 5 m rolls
Bituthene® LM	5.7 litre packs

Equipment by others: Lap roller, Spiral mixing paddle

Typical Properties

Property	Typical Value	Test Method
Thickness (mm)	0.8	EN 1848-2
Hydrostatic Head Resistance (m)	> 70 m	ASTM D 5385
Joint Strength (Shear) @ 23°C (N/mm)	3.36	EN 12317-2
Peel Strength (BTC) @ 23°C	2.68	ASTM D 903
Elongation (%)	1193	ASTM D 882
Tensile (MPa)	15	ASTM D 882
Puncture Resistance (N)	348	ASTM E 154
Determination of Watertightness (pass at 60 kPa)	Pass	

All declared values shown in this data sheet are based on test results determined under laboratory conditions and with the product sample taken directly from stock in its original packing without any alteration or modification of its component parts

Installation - General

Tools /materials required:

Stanley /Utility knives

Tape measure

Cotton cleaning cloths

Flat hard surface to cut on

Metal straight edge

Chalk line

Broom

2 metre long pipe or heavy broom handle

Hot air heat gun

Spiral mixing paddle for mixing Bituthene® LM

Round nose trowel or spatula

Required protection and/or drainage boards and other ancillary products.

It is recommended that training by Grace personnel is provided prior to installing Preprufe 160 Flex.

Preprufe® 160 Flex membrane is supplied in rolls of 1.2 m wide and 35 m long. All laps, cuts and penetrations must be taped with Preprufe® Tape LT.

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Minimum application temperature +5°C.

When installing Preprufe in cold or marginal weather conditions (<13°C) the use of Preprufe® Tape LT is recommended at all laps and detailing. Preprufe® Tape LT should be applied to clean dry surfaces and the release liner must be removed immediately after application.

End Laps and Cut Edges

Overlap all roll ends and cut edges by a minimum 75 mm and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary. Allow to dry and apply Preprufe® Tape LT.

Installation – Vertical

Apply the membrane with the thick white plastic face against the substrate. Mechanically fasten the membrane vertically using suitable watertight shot fixings. The membrane may be installed in any convenient length. Secure the top of the membrane by folding it over the top of the sheet pile if possible. Ensure there are sufficient fixings to hold the material uniformly against the substrate.

On completion of installation completely remove release liner from all sheets.

Installation - Slab to Wall

The installation of Preprufe® 300R/160R in the horizontal position should be carried out as outlined in separate Preprufe® 160R/300R data sheet, with the following exception.

Bring the Preprufe® in the horizontal position to the permanent formwork and cut to the profile providing a close finish to the vertical/horizontal junction.

Allow the Preprufe® 160 Flex in the vertical position to dress onto the already laid Preprufe® 300R in the horizontal by overlapping 300 mm, making cuts to fan out and fold. Use Preprufe® Tape LT to make the junction between Preprufe® 160 Flex and Preprufe® 300R in the vertical position.

Ensure all cuts and folds are dressed with Preprufe® Tape LT.

Limitations of Use

- Do not use Preprufe® between concrete infilled hollow block walls.
- It is recommended that concrete be poured within 56 days (42 days in hot climates) of application of the membrane.

NBS Specification Clause

Refer to clause J40 297.

Health and Safety

There is no requirement for a Material Safety Data Sheet for Preprufe®. For health and safety questions on this product please contact Grace.

For Bituthene® LM, read the product label and Material Safety Data Sheet (MSDS) before use. Users must comply with all risk and safety phrases. MSDS's can be obtained from Grace Construction Products.

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