Preprufe® 160 Flex

Pre-applied flexible waterproof membrane that develops an adhesive bond to poured concrete for irregular permanent formwork

Description

Preprufe® 160 Flex waterproof membrane is a composite sheet comprising of a robust highly 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 Plus** – used typically below concrete slabs
- **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® SAS 500S** – the ultimate self adhesive hydro expansive waterstop system for construction joints & penetrations.

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.

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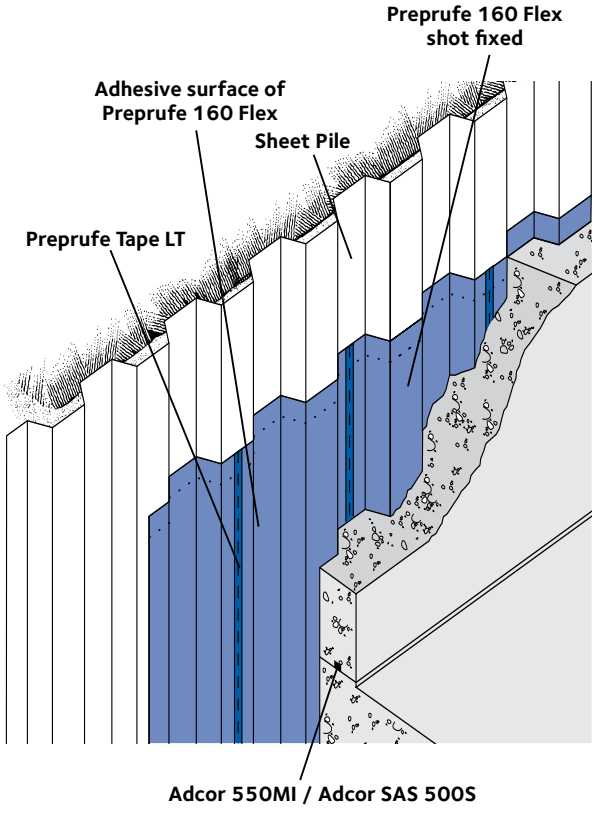
Application

Material Storage

Sequence deliveries to avoid delays and minimise onsite 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.



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

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
- 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 GCP 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. Minimum application temperature +5ºC. 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.

CE 0836	GCP Applied Technologies (UK) Limited Ipswich Road, Slough, Berkshire SL1 4EQ United Kingdom 06 06/F017
	EN 13967 Preprufe® 160 Flex Flexible Sheets for Waterproofing, Type T Reaction to fire: E Watertightness: Pass at 60 kPa

Installation - Slab to Wall

The installation of Preprufe 160R/300R Plus in the horizontal position should be carried out as outlined in separate Preprufe 160R/300R Plus 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 Plus 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 Plus 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

Refer to clause J40 297.

Health and Safety

There is no legal requirement for a Safety Data Sheet for Preprufe. For health and safety questions on this product please contact GCP Applied Technologies.

For Bituthene LM read the product label and Safety Data Sheet (SDS) before use. Users must comply with all risk and safety phrases. SDS's can be obtained from GCP Applied Technologies or from our web site at gcpat.com.

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 Plus	1.17 m x 31 m
Preprufe Tape LT	100 mm x 15 m
Adcor SAS 500S	6 x 5 m rolls
Adcor 550MI	8 x 5m rolls
Bituthene LM	5.7 litre pack

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

Declared values according to EN 13967

Property	Declared Value	Test Method
Visible defects - MDV	None	EN 1850-2
Straightness - MDV	Pass	EN 1848-2
Length (m) - MDV	35.15 ± 0.25	EN 1848-2
Thickness (mm) - MDV	0.8 ± 0.05	EN 1849-2
Width Carrier Sheet (m) - MDV	1.206 ±0.010	EN 1848-2
Mass per unit area (g/m²) - MDV	760 ± 50	EN 1849-2
Water tightness to liquid water (at 60 kPa)	Pass	EN 1928
Resistance to impact (Al-board (mm) - MLV)	≥ 200	EN 12691
Resistance to tearing (Nail Shank)- unreinforced sheets (N) - MLV	≥160	EN 12310-1
Joint strength (N/50mm) - MLV	≥ 110	EN 12317-2
Water vapour transmission (μ= sD/d) - MDV	250.000 ± 30%	EN 1931 Method B

Declared values according to EN 13967

Property	Declared Value	Test Method
Durability of water tightness against ageing/ degradation (at 60 kPa)	Pass	EN 1296 EN 1928 Method B
Durability of water tightness against chemicals (at 60 kPa)	Pass	EN 1847 Method B EN 1928 Method B
Compatibility with bitumen	Pass	EN 1548
Resistance to static loading	≥ 20 - Pass	EN 12730
Tensile properties - unreinforced sheets (N/6mm) - MLV	Long[1] ≥ 65 Trans[2] ≥ 65	EN 12311-2 Method B
Tensile properties - unreinforced sheets (Elongation %) - MLV	Long[1] ≥ 400 Trans[2] ≥ 400	EN 12311-2 Method B
Reaction to fire (Class; test conditions)	E	EN 13501-1

Footnotes: *1. Longitudinal - related to the roll direction 2. Transversal - related to the roll direction 3. MDV: Manufacturer Declared Value 4. MLV: Manufactured Limiting Value 5. NPD: No Performance Determined.*
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.

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