

## Preprufe® 300R & 160R

Pre-applied waterproofing membranes that bond integrally to poured concrete for use below slabs or behind basement walls on confined sites.

### Advantages

- Forms a unique integral seal to concrete poured against it. This prevents water migration and makes it unaffected by ground settlement beneath slabs.
- Fully-adhered watertight laps and detailing
- Provides a barrier to water, moisture and gas – physically isolates the structure from the surrounding ground.
- BBA Certified for basement Grades 2, 3, & 4 to BS 8102:1990
- Zero permeance to moisture
- Solar reflective - reduced temperature gain
- Simple and quick to install, requiring no priming or fillets.
- Can be applied to permanent formwork - allows maximum use of confined sites.
- Self protecting - can be trafficked immediately after application and ready for immediate placing of reinforcement.
- Unaffected by wet conditions - cannot activate prematurely.
- Inherently waterproof, non-reactive system:
  - not reliant on confining pressures or hydration
  - unaffected by freeze/thaw, wet/dry cycling
- Chemically resistant, effective in all types of soils and waters - protects structure from salt or sulphate attack.

### Description

Preprufe® 300R & 160R membranes are unique composite sheets comprising a thick HDPE film, an aggressive pressure sensitive adhesive and a weather resistant protective coating.

Unlike conventional non-adhering membranes, which are vulnerable to water ingress tracking between the unbonded membrane and structure, the unique Preprufe seal to concrete prevents any ingress or migration of water around the structure.

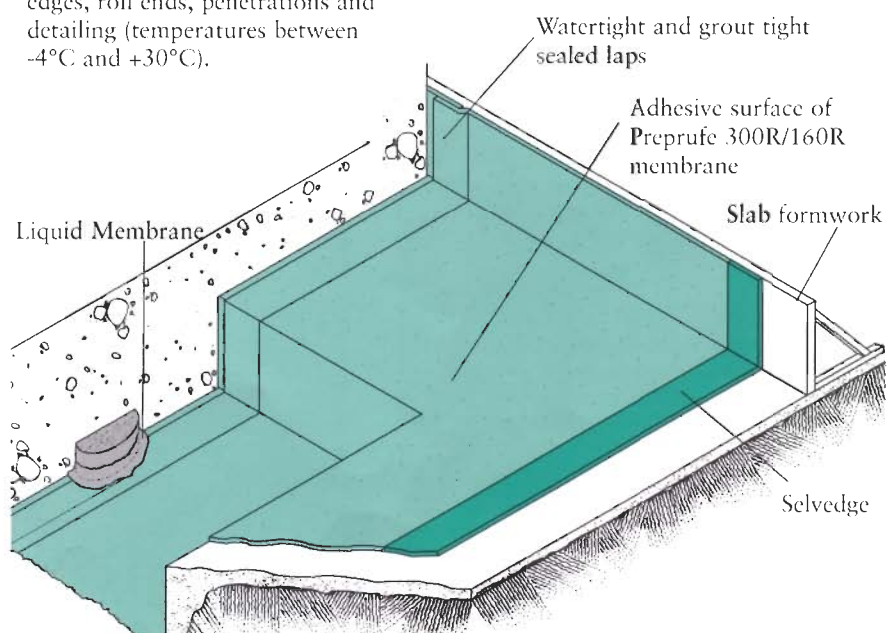
The Preprufe R System includes:

- **Preprufe 300R** - heavy-duty grade for use below slabs and on rafts (i.e. mud slabs). Designed to accept the placing of heavy reinforcement using conventional concrete spacers.
- **Preprufe 160R** - thinner grade for lighter applications and reverse tanking (i.e. blindside zero property line) applications against permanent formwork such as soil retention systems.
- **Preprufe Tape LT** - for covering cut edges, roll ends, penetrations and detailing (temperatures between -4°C and +30°C).

- **Preprufe Tape HC** - as above for use in Hot Climates (minimum 10°C).
- **Liquid Membrane** - for sealing around penetrations, etc.

Preprufe 300R & 160R membranes are applied either horizontally to smooth prepared concrete or well rolled and compacted sand or crushed stone blinding; or vertically to permanent formwork or adjoining structures. Concrete is then cast directly against the adhesive side of the membranes. The specially developed Preprufe adhesive layers work together to form a continuous and integral seal to the structure.

Preprufe can be returned up the inside face of slab formwork but is not recommended for conventional twin-sided formwork on walls, etc. Use Bituthene self-adhesive membrane or Procor fluid applied membrane to walls after removal of formwork for a fully bonded system to all structural surfaces.



## Supply

Preprufe®	300R	160R	Tape LT or HC*
Thickness (nominal)	1.2 mm	0.8 mm	
Roll size	1.2 x 30.0 m	1.2 x 35.0 m	100 mm x 15.0 m
Roll area	36.0 m <sup>2</sup>	42 m <sup>2</sup>	
Roll weight	50 kgs	42 kgs	2 kgs
Minimum edge/end laps	75 mm	75 mm	75 mm

\*LT denotes Low Temperature (between -4°C and +30°C)  
HC denotes Hot Climates (>+10°C)

### Ancillary Products

Liquid Membrane, 5.7 litre or 15.1 litre

### Physical Properties

Property	Typical Value		Test Method
	300R	160R	
Colour	White		
HDPE Thickness	0.75 mm	0.4 mm	
Peel Adhesion to Concrete	144 N per 50mm 880 N/m		MOAT 27:5.1.3 ASTM D903 Modified3
Shear Strength of Joints	476 N per 50mm		MOAT 27:5.2.2/3/4
Methane permeability	9.1 mls/m <sup>2</sup> /day	N/A	University of London, QMW College <sup>5</sup>
Resistance to Hydrostatic Head	>6 m >70 m		MOAT 27:5.1.4. <sup>5</sup> ASTM D5385 Modified <sup>2</sup>
Low Temperature Flexibility	<-20°C		MOAT 31:6D
Puncture Resistance	990 N	445 N	ASTM E 154
Elongation (strain %)	long 826 trans 756	long 753 trans 825	BS 2782:320A (test speed 100mm min)
Elongation	300% minimum		ASTM D412 modified <sup>4</sup>
Tensile Strength, Film	27.6 Mpa (400 lbs/in <sup>2</sup> )		ASTM D412
Crack Cycling @ -23°C (-10°F)	Pass		ASTM C 836
Moisture Vapor Transmission	0 gm-2 per day		BBA Laboratories BS 3177:1959 (1995) (75% RH / 25°C)
Permeability <sup>1</sup> (hydraulic conductivity)	K=<1.4 x 10 <sup>-11</sup> cm.s <sup>-1</sup>		ASTM D5084-90

#### Footnotes:

1. Result is lower limit of apparatus. Membrane therefore considered impermeable.
2. Hydrostatic head tests are performed by casting concrete against the membrane with a lap. The cured block is cracked and then placed in a chamber where water is introduced to the membrane surface including the lap up to a maximum of 50 m head.
3. Concrete is cast against the protective coating surface of the membrane and allowed to properly cure (7 days min.). Peel adhesion of membrane to concrete is measured at a rate of 50 mm (2 in.) per minute at room temperature.
4. Elongation of membrane is run at 50 mm per minute.
5. Tested on laps. Result is limit of test.

### Specification Clauses

Preprufe 300R or 160R shall be applied with its adhesive face presented to receive fresh concrete to which it will integrally bond. Only Grace Construction Products approved membranes shall be bonded to Preprufe 300R/160R. All Preprufe 300R/160R system materials shall be supplied by Grace Construction Products, and applied strictly in accordance with their instructions. Specimen performance and formatted clauses are also available.

### Health and Safety

Refer to relevant Material Safety data sheet. Complete rolls should be handled by a minimum of two persons.

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Australia		Hong Kong	Tel: (852) 26757898	Fax: (852) 26759193
Melbourne	Tel: (61-3) 93592121	Indonesia	Tel: (62-21) 8934260	Fax: (62-21) 8934315
Sydney	Tel: (61-2) 97438811	Japan	Tel: (81-46) 2258800	Fax: (81-46) 2249254
China:		Korea	Tel: (82-32) 8142051	Fax: (82-32) 8211559
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Guangzhou	Tel: (86-20) 87779208/8	Taiwan	Tel: (886-3) 4615462	Fax: (886-3) 4615463
Shanghai	Tel: (86-21) 64720697/7	Thailand	Tel: (66-2) 7094470	Fax: (66-2) 3231386

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