

Grace Preprufe[®] 160R

Cold Fusing, Blind Side Adhesive Sheet Membrane

Description

A unique, preformed, multi-layer sheet of a tough high-density polyethylene (HDPE) film, a specially formulated, chemically reactive adhesive and a protective coating.

When concrete is poured onto or against Preprufe[®]160R, it bonds by a chemical, cold fusion reaction with the special adhesive layer to give a permanent union.

Uses

Preprufe[®]160R is ideally suited to basement walls, tunnels, lift pits, etc on tight access sites where over excavation to allow external application of Grace Bituthene[®] or other Chemind liquid membrane is impossible.

Also for basement floors placed on piled unstable sites where conventional sheet membranes bonded to a working slab may be damaged by settling of the subsoil.

Features

Preprufe[®] 160R waterproofing membrane is the result of years of research and worldwide patented Grace technology.

- Cold applied - no toxic fumes.
- Performs equally well in salt water.
- Does not dehydrate like clay panels.
- Permanently bonded.
- BBA Certified and Fully Warranted.
- Proven track record, Worldwide.
- Quick and clean installation no primer.
- Not reliant on confining pressure.
- May be applied in wet conditions and at temperatures of -4 °C or above.
- Not affected by temperature extremes, will not become brittle with age.
- Systems for Total Project Specification.
- Used with Grace Bituthene[®] or Chemind membrane systems to provide a total membrane envelope.

Typical Properties

Colour	White
Nominal Thickness (ASTM D3767 Method A)	0.8mm
Roll Size	1.2 metres x 35 metres
Tensile Strength (ASTM D412)	27.6 MPa
Elongation (ASTM D412)	300% (Min.)
Puncture Resistance (ASTM E154)	445N
Water Vapour Permeance (BS 3177:1959 –1995)	0 gm-2 per day
Peel Adhesion to Concrete (ASTM D903)	880N/m
Resistance to Hydrostatic Head (ASTM D5385)	>70m
Crack Cycling @ -23°C (ASTM C836)	Pass

Substrate Preparation

No gaps greater than 12mm span.

Horizontal substrate to be smooth screeded concrete blinding layer or compacted sand.

Vertical surfaces of concrete, shotcrete, lost formwork, plywood, steel piling or other solid material able to support concrete placement.

Application

Generally

- Apply Preprufe[®]160R with HDPE side down and printed coated white side up.
- Allow end and side overlaps of 75 mm.
- Accurately position side overlap before peeling off release liner to effect bond.
- Roll side laps to ensure continuous seal.
- End laps are sealed with Preprufe Tape.
- Stagger end laps to prevent build-up.
- Full rolls of Preprufe[®] 160R weigh 42 kg and should be handled by two persons.

Horizontal

- Lay Preprufe®160R taking care to fully roll and seal all laps.
- Use Grace Preprufe® Tape to overband laps, seal cuts, clouts and detail to penetrations, pile caps, etc.
- The unique bond of Preprufe®160R to concrete provides continuity of vapour protection at laps.
- Slab reinforcement and concrete can be placed immediately.
- Ensure that Preprufe®160R membrane lays flat and no openings occur.
- Remove and discard release liner film.

Vertical

- Cut Preprufe®160R to length, secure with a stainless steel batten 50mm below top edge.
- Appropriate mechanical fasteners must be used to fix Preprufe®160R in place through selvedge.
- Use galvanised clouts to support and hold membrane flat against substrate.
- Cover any fixings not overlapped in the selvedge with piece of Preprufe Tape.
- Ensure that Preprufe®160R does not balloon from substrate, as this may lead to damage by concrete placement.
- Remove and discard release liner film.

Penetrations

Penetrations should be single items and not clustered together. Grout around unstable penetrations and over flash using Preprufe® Tape and Grace Bituthene Liquid onto the surrounding membrane layer.

Repair

Apply Preprufe® Tape centred equally over the damaged area and roll firmly.

Concrete Placement

Ensure all release liner is removed from Preprufe®160R and Tape. Place concrete within 42 days of installation of membrane. Concrete must be placed and compacted carefully to avoid membrane damage.

NOTE:

Removal of formwork should occur only after concrete has achieved 10N/mm² or about 1 week after placement.

Coverage

Allowing for overlaps, each 42 m² roll of Preprufe®160R will cover approx. 40 m².

Packaging

Preprufe®160R in 42 m² rolls of 42 kg.
Preprufe® Tape in 100mm x 15m rolls
Bituthene® Liquid Membrane in 5.7lit kits

For more information, see the  web site at www.graceconstruction.com.



HEAD OFFICE
74 Annie Street
ROCKLEA QLD 4106
AUSTRALIA
Ph: (+617) 3255 5755
Fax: (+617) 3255 5991
ABN: 63 250 804 992

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