

Waterproofing of Basement

Site Requirements for Basement waterproofing

- Application shall be possible in damp areas
- Good tensile and elongation strength
- Good tear and puncture resistance
- Water permeability nil
- Good bond with the grade slab
- Capable of accommodating thermal and structural movements
- Readily formed to contours with easy application
- Facilitate subsequent grade slab concreting directly without any protection layer on it
- With stand very high hydrostatic pressure up to 70M head of water
- Lateral migration of water shall be nil

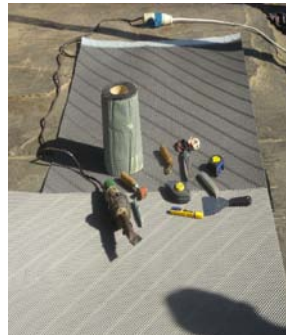
Recommended System

Proofex Engage* at 4mm thick Pre-applied HDPE waterproofing membrane which mechanically bonds to poured concrete slabs, remaining in place if settlement of substrate occurs

ADVANTAGES

- Basement waterproofing protection to grades 2, 3 and 4 as defined in BS8102:1990
- To provide a vapor and waterproof membrane in building and civil engineering structures
- Resistant to attack from chemicals and aggressive ground salts
- Forms a tenacious mechanical bond to poured concrete remaining in place if settlement of the substrate occurs
- Simple application - no primers or protection material required
- Inert product - no risk of a reaction with ponded water prior to concrete being poured
- Durable - withstands inclement weather and resists construction related damage.
- Can be trafficked immediately after application
- Facilitates flexible construction programming

Properties



Membrane thickness,	4 to 5mm
Tensile strength (Peak) ASTM D412	11.6 N/mm ²
Elongation (Peak) ASTM D412	648%
Puncture resistance ASTM E 154	672N
Peel Adhesion to Mortar BS 4254	74N/25mm wide Strip
Shear strength of joints Selvedge Detail strip	377 N/50mm wide Strip 506N
Hydrostatic pressure resistance up to 70 M Head of water as per ASTM D5385 Membrane Selvedge Detail strip	No leak after 1 hour

Application Methodology for Basement Slab:

- The substrate shall be free from loose aggregate or other sharp protrusions.
- Standing water must be removed to prevent contamination of overlaps and subsequent compromise of waterproof properties.
- Cut the membrane to a convenient length for installation.
- Carefully align the membrane and roll it out with the ribbed surface uppermost.
- Lay the adjacent sheets accurately so they overlap the previous sheet 68mm along the adhesive selvedge.
- The overlaps should be firmly rolled to ensure complete adhesion between layers.
- If cold or damp conditions prevail the selvedge adhesive may be tackified by wiping with Fosroc Solvent .
- Proofex Engage Detail Strip may be gently warmed with a slack flamed gas torch or heat gun to remove moisture and promote initial adhesion in cold or humid conditions.
- This procedure may also be used to assist bending Proofex Engage through 90 degrees at the grade slab to wall junction.
- **Proofex Engage Detail Strip** : A reinforced, double sided waterproof adhesive tape shall be used for sealing and jointing roll ends, cut edges and wall to floor detailing, It consists of a strong synthetic fiber fabric impregnated and coated both sides with a bitumen rubber adhesive. Each side of the tape is protected by a removable plastic film.