Co-extruded 3 Layer Films
Multi-layer co-extrusion has the following advantages:

- It has a cross-linking effect between the different layers, which gives the sheeting added strength. This means that co-extruded sheeting of 170 or 180 microns in thickness is stronger than a mono-film of 250 microns in thickness.
- Each layer can have a different formulation. For instance, the top layer can be UV stabilised while the bottom layer can contain anti-oxidants to prevent breakdown caused by heat exposure.

GUNDLE QUALITY
All Gundle products comply with the national building regulations and are accepted by all municipalities and government departments.

Gundle API has one of the most sophisticated and well equipped test laboratories in S.A. to ensure conformance with SABS and ISO standards. The quality of Gundle products has become a benchmark in the industry.

GUNDLE API CERTIFIED PRODUCTS - DAMP AND WEATHERPROOFING MEMBRANES

- **UT White® 3 Layer**
  - SANS 952 - 1:2010
  - Type E

- **Hyperlastic Orange® 3 Layer**
  - SANS 952 - 1:2010
  - Type A

- **Brickgrip® 3 Layer**
  - DPC SANS 9521 - 2010
  - Type B

- **USB Green® 3 Layer**
  - SANS 952 - 1:2010
  - Type C
The following is an extract from the SABS 952 specification covering co-extruded films.

**Mechanical and Physical Properties for Co-Extruded (3 Layer) Films**

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirement</th>
<th>Test method subsection</th>
</tr>
</thead>
<tbody>
<tr>
<td><em><em>Thickness</em>, µm, min.</em>*</td>
<td>A Hyperlastic Orange</td>
<td>6.5.1 OR 6.5.2 as relevant</td>
</tr>
<tr>
<td></td>
<td>B Brickgrip DPC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C USB Green</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E UT White</td>
<td></td>
</tr>
<tr>
<td><strong>Tensile properties</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Breaking strength, N/mm of width, min.</td>
<td>3,75</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3,76</td>
<td></td>
</tr>
<tr>
<td>b) Elongation at break, %, min.</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td></td>
<td>350</td>
<td></td>
</tr>
<tr>
<td><strong>Puncture resistance, N/mm of thickness, min.</strong></td>
<td>30,5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25,0</td>
<td></td>
</tr>
<tr>
<td><strong>Tear strength, N/mm of thickness, min.</strong></td>
<td>53,5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>43,0</td>
<td></td>
</tr>
<tr>
<td><strong>Resistance to accelerated aging, % property retention, min.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Breaking strength</td>
<td>-</td>
<td>90</td>
</tr>
<tr>
<td>b) Elongation at break</td>
<td>-</td>
<td>90</td>
</tr>
<tr>
<td><strong>Resistance to accelerated weathering, % property retention, min.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Breaking strength</td>
<td>50</td>
<td>80</td>
</tr>
<tr>
<td>b) Elongation at break</td>
<td>50</td>
<td>80</td>
</tr>
<tr>
<td><strong>Water vapour transmission rate, g/m²·24 h, max.</strong></td>
<td>1,6</td>
<td>2,9</td>
</tr>
<tr>
<td></td>
<td>1,9</td>
<td>2,9</td>
</tr>
<tr>
<td><strong>Water penetration under hydrostatic pressure</strong></td>
<td>Nil</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Nil</td>
<td>-</td>
</tr>
</tbody>
</table>

*Thickness* refers to the minimum thickness required for each layer of the co-extruded film.
BRICKGRIP DPC 3 LAYER 250®
SANS 952 - 1 : 2010 TYPE B

DAMP-PROOF COURSE

BRICKGRIP DPC 3 LAYER 250® damp proof course is best utilised in preventing rising damp in walls. It prevents efflorescence and flaking of the wall covering. It will not absorb water and is chemically inert. Flexibility is retained between -45 and 78 degrees Celsius and the material does not extrude under pressure. Tear and puncture resistance are excellent.

SPECIFICATION

The damp-proof course shall consist of BRICKGRIP DPC 3 LAYER 250® bearing SABS 952 - 1 : Type B well lapped at joints and intersections and bedded and joined in cement mortar.

BENEFITS

• Prevents rising damp
• Will not absorb water
• Easy to handle
• Chemically inert
• Excellent breaking strength
• Excellent puncture resistance
• Convenient widths

SOLID WALL CONSTRUCTION

CAVITY WALL CONSTRUCTION

CAVITY WALL. PLAN OF DOOR JAMB. COPING & ROOF SLAB DETAIL

Plan of door jamb

Coping and roof slab detail

• At lintel opening

Brickgrip DPC
USB GREEN 3 LAYER 170®
SANS 952 - 1 : 2010 TYPE C

UNDER-SURFACE BEDS

USB GREEN 3 LAYER 170® is co-extruded, consisting of the following: Outer layer - Black low-density polyethylene containing carbon black, which is a natural ultra-violet inhibitor. Middle layer - Black low-density polyethylene. Outer layer - Green low-density polyethylene, which allows for easy identification on site and has enhanced puncture resistance.

Note: Because of their high carbon content, USB GREEN 3 LAYER 170® can also be used where SABS black sheeting is specified, as it exceeds the minimum specification required for SABS black.

SPECIFICATION

One layer of USB GREEN 3 LAYER 170® damp proof sheeting bearing SABS 952 - 1 : 2010 shall be laid in the widest practical widths to minimise joints and shall be turned up, dressed to load bearing walls, and lapped with Brickgrip SABS DPC. Gunplas USB GREEN 3 LAYER 170® may be lapped according to specifications.

BENEFITS

- Prevents rising damp
- Prevents contamination of concrete
- Prevents efficiency loss of under-floor insulation
- Specially formulated as a damp-proof membrane
- Good puncture resistance
- Good tear strength
- Wide widths

SOLID WALL CONSTRUCTION

INSTALLATION OF CO-EX MEMBRANES

USB Green sheeting

Gunplas tape

Overlap 100mm

48mm
UT WHITE 3 LAYER 180®
SANS 952 - 1 : 2010 TYPE E

UNDER-TILE MEMBRANE

UT WHITE 3 LAYER 180® is a polyethylene membrane that has been specially formulated for use under roof tiles. It is supplied in rolls of 1,5 x 30m and is dimensionally stable, light in weight, translucent and weatherproof; handling and installation is easy.

The product is a three layer laminate with a blue outer layer for easy, on site identification.

SPECIFICATIONS

One layer of UT WHITE® 3 LAYER 180® weatherproof sheeting, installed over common rafters and under battens to receive tiles. Allow a minimum overlap of 150 mm.

OPEN SOFFIT DETAIL

Boarding to be used at the open eaves to carry the UT WHITE 3 LAYER 180® to the gutter. The boarding gives added security to the structure because it prevents wind-lift of the tiles from the underside of the open soffit.

CLOSED SOFFIT DETAIL

Turn down the UT WHITE 3 LAYER 180® over the fascia board at the eaves and seal into the gutter.

BENEFITS

- The material equalizes the pressure and complements the function of the roof tiles.
- It is flexible, translucent and easily handled.
- It is used for the prevention of draughts and dust penetration into the roof spaces through tiles, and prevents damage to ceilings, rotting of timbers and corrosion of plumbing.
- The membrane is also designed to prevent moisture from warm damp air reaching and condensing on ceiling boards and other vulnerable points in the building fabric.

TYPICAL SECTION
BASEMENT TANKING

The waterproofing of a basement is dependent on the structural design. Gundle Tanking Membrane keeps your basement dry and keeps the damp from seeping into the walls when a portion of your house is underground or built against a hill, where you are most likely to have a high moisture content. Available are widths of 3m and 4m, in 30m lengths.

SPECIFICATION

One layer of 375µm HYPERLASTIC ORANGE® waterproof sheeting bearing SABS 952-1 2010 Type A. Joining: All joining shall be carried out strictly in accordance with the manufacturer’s instructions.