Technical Product Datasheet
Edition: 21/11/2019
Identification no. AXIOMUNI

AXIOM UNISEAL
Liquid Waterproofing

Features & Benefits
- Perfect for detailing irregular profiles and penetrations
- Creates a fillet in just one pass - NO Complicated build-ups
- Compliments Visqueen’s self-adhesive waterproofing membranes
- Formulated for masonry applications including blockwork

Description
Visqueen Axiom UniSeal is a two part system: the first component a bitumen-extended polyurethane fluid with a secondary part an accelerator hardener. This unique system cures rapidly to give a continuous tough rubber-like, fully bonded waterproofing coating

The 2 part system is available in one 5.2 or 15.6 kilo clamped tin containing:
- Part A - 5 or 15 kilos of bitumen-extended polyurethane liquid
- Part B - 200 or 600 grams of the accelerator hardener

Application
The product is specially formulated for waterproofing below ground structures in the following applications:
- Fillet and reinforcement material at inside corners
- Detailing irregular profiles and pipe penetrations such as steel stanchions
- Waterproofing blockwork externally and internally
- Sealing steel reinforcements
- Sealing materials at terminations
- Radon protection

Visqueen Axiom UniSeal is used where a high performance tanking liquid waterproofing membrane is required in accordance with BS8102 – Grades 1, 2 and 3 apply. It is classified as a fully bonded Type A membrane.
System Components

Visqueen Axiom UniSeal is ideally suited for use with Visqueen Self Adhesive waterproofing membranes:

- Visqueen Self Adhesive Membrane (SAM) – a tanking or damp proof membrane for both horizontal and vertical applications
- Visqueen Gas Resistant Self Adhesive Membrane (GR SAM) - a tanking or damp proof membrane for both horizontal and vertical applications where bulk gases exist.
- Visqueen Pre Applied Membrane
- Visqueen TorchON Tanking Membrane

Surface Preparation

All surfaces should be smooth, clean, dry and free from frost, oil, grease, condensation and other contamination. UniSeal in fillet applications should be applied prior to the application of the self-adhesive membrane.

Application temperature should be above 5°C although the product has been proved to work at 0°C.

Gloves and suitable PPE should be worn prior to application.

Mixing instructions

**Mixing** – Ratio 1:1

A variable speed mixer with paddle is required

1. Open Part A and take out Part B small tin.
2. Break seal of part B and replace lid so it is ready for use
3. Stir Part A for at least 30 secs – moving the paddle from bottom to top
4. Pour full contents of part B into A
5. Stir for further 4 mins increasing speed as part B is worked in

**Once mixed and stirred use within 1 hour**

Thoroughly mix by moving paddle up in clockwise and anti-clockwise directions. Scrape any liquids from the sides and restart stirring.

Coverage

**Angle Fillet**

In fillet applications the material should be at least 20mm thickness in the horizontal and vertical surfaces. See standard details (to follow)

For 20mm in both directions you will achieve c.78 liner metres per tin (15.6L)

**Linear bead**

- For sealing pipe penetrations or steel reinforcement – see details (to follow).
- For 10mm x 10mm bead you will achieve 156 linear metres per tin (15.6L)
- For the 150mm wide strip at 2.5mm thickness you will achieve 40 linear metres per tin (15.6L)

**Full coverage**

- Using a full tin as a render coat 2.5mm thick you will achieve 6.24m² of coverage.
- For securing steel reinforcements a 2.5mm thickness with a 300mm coverage is recommended. See standard details AX01, AX02 and AX03.
- Once mixed UniSeal must be applied within one hour at normal ambient temperatures.
- Once opened and mixed the liquid cannot be resealed and used again and MUST be discarded appropriately. Touch dry should be achieved within 3 hours

**External tanking on blockwork**

Please refer to standard detail AX10 and AX11. The horizontal sheet membrane section should be laid on a concrete blinding to project at least 300mm beyond the outer face of the structure. The base structural slabs and the walls should be formed, and the vertical Axiom UniSEAL should then be applied by trowel. The membrane should then be protected from backfilling using Visqueen Protect&Drain or Treadguard1500.

**Internal tanking on blockwork**

Installation should be carried out as per standard details (to follow). A loading coat concrete should be constructed immediately after the membrane has cured. A 50mm minimum cavity should be left between the membrane and the loading skin. This cavity must be filled with sand/cement mortar fill as work proceeds.
## Visqueen Axiom UniSeal

<table>
<thead>
<tr>
<th>Application</th>
<th>Approximate Coverage</th>
<th>15.6 kilo pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angle fillet</td>
<td>20mm</td>
<td>78 lin m</td>
</tr>
<tr>
<td>Penetrations: pipes, steel reinforcement</td>
<td>10mm x 10mm</td>
<td>156 lin m</td>
</tr>
<tr>
<td>Penetrations: overlap</td>
<td>150mm x 2.5mm</td>
<td>40 lin m</td>
</tr>
<tr>
<td>Full coverage - render coat</td>
<td>2.5mm thick</td>
<td>6.24m²</td>
</tr>
</tbody>
</table>

## Approximate Coverage

- **Angle fillet**: 20mm
- **Penetrations: pipes, steel reinforcement**: 10mm x 10mm
- **Penetrations: overlap**: 150mm x 2.5mm
- **Full coverage - render coat**: 2.5mm thick

## Product & Performance Data:

<table>
<thead>
<tr>
<th>Property</th>
<th>Units</th>
<th>Method</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity (Brookfield) Component A</td>
<td>cP</td>
<td>ASTM D2196-86, at 25 C</td>
<td>44000-55000</td>
</tr>
<tr>
<td>Specific weight</td>
<td>gr/cm3</td>
<td>ASTM D1475 / DIN 53217 / ISO 2611, at 20 C</td>
<td>approx. 1</td>
</tr>
<tr>
<td>Tack free time, at 77 F (25 C) &amp; 55% RH</td>
<td>hours</td>
<td></td>
<td>0.5-1</td>
</tr>
<tr>
<td>Service Temperature</td>
<td>C</td>
<td></td>
<td>-40 to 80</td>
</tr>
<tr>
<td>Hardness</td>
<td>Shore A</td>
<td>ASTM D2240 / DIN 53505 / ISO R868</td>
<td>25</td>
</tr>
<tr>
<td>Tensile strength at break at 23 C</td>
<td>Kg/cm² (N/mm²)</td>
<td>ASTM D412 / EN-ISO-527-3</td>
<td>40 (4)</td>
</tr>
<tr>
<td>Percentage elongation at 23 C</td>
<td>%</td>
<td>ASTM D412 / EN-ISO-527-3</td>
<td>&gt; 500</td>
</tr>
</tbody>
</table>

## Axiom Uniseal

<table>
<thead>
<tr>
<th>Identification properties - average thickness t range, depending on required ground gas permeation resistance and application</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water vapour diffusion resistance factor, μ-value</td>
<td>9.000</td>
<td>-</td>
</tr>
<tr>
<td>Water vapour diffusion resistance BS EN 1931 sD, calculated range from sD = t•µ (t in m)</td>
<td>22.5 – 45</td>
<td>m</td>
</tr>
<tr>
<td>Water vapour diffusion resistance, calculated range</td>
<td>112.5 - 225 MNs.g⁻¹</td>
<td></td>
</tr>
<tr>
<td>Radon diffusion coefficient D11 ISO/TS 11665-1312 (t = 2.16)</td>
<td>7.8 ± 0.7</td>
<td>10⁻¹¹ m².s⁻¹</td>
</tr>
<tr>
<td>Tensile strength at break (23 °C) BS EN ISO 5278</td>
<td>4</td>
<td>N.mm⁻²</td>
</tr>
<tr>
<td>Elongation at break (23 °C) BS EN ISO 5278</td>
<td>≥ 500</td>
<td>%</td>
</tr>
<tr>
<td>Tack free time (25 °C &amp; 55% RH)</td>
<td>0.5 – 1</td>
<td>h</td>
</tr>
<tr>
<td>Service temperature</td>
<td>-40 to 80</td>
<td>°C</td>
</tr>
<tr>
<td>Hardness BS EN ISO 8689</td>
<td>25</td>
<td>Shore A</td>
</tr>
<tr>
<td>Radon permeability - for pipe penetration applications (20 mm layer thickness) SP. Method 3873</td>
<td>9.8</td>
<td>10⁻¹² m².s⁻¹</td>
</tr>
</tbody>
</table>
About Visqueen

Visqueen is the market leader in the manufacture and supply of structural waterproofing and gas protection systems. Visqueen offers the complete package – a proven, reliable range backed by a technical support service that goes unmatched in the market - everything you would expect from a reputable and ethical company.

Complete Range, Complete Solution

- Structural Waterproofing
- Damp Proof Course
- Damp Proof Membranes
- Gas Protection and Gas Venting
- Vapour Control Layers
- Stormwater Protection

Download Library

- Technical Datasheet
- Standard Details
- Technical Service
- Visqueen Gas Protection Brochure
- NBS Clauses
- BBA Certificates
- Material Safety Datasheets
- Specification Guide

Find your local stockist

Search our directory of Visqueen specification Specialist Centres to locate your nearest Visqueen Partner.

Technical support throughout your project

We are specialists in our field and can help you specify the correct solutions with the necessary performance levels, in accordance with building regulations.

- Nationwide site support team
- Specification advice
- Installation guidance & project sign off
- System design including CAD details

CPD Seminars and Training Academy

Gas Protection CPD
The specification, technical design, and installation of gas protection systems, enabling the sustainable regeneration of brownfield sites.

Structural Waterproofing CPD
The specification, technical design, and installation of structural waterproofing systems for protection against water and damp ingress in both above and below ground projects.

Visqueen Training Academy
We are now able to offer exclusive in depth training opportunities on a wide variety of Visqueen products at our Training Academy.

Visqueen Special Projects
We provide high-level expertise, comprehensive support and experience in all types of waterproofing and gas protection.

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