Ultracrete PY4 Data Sheet

Specification notes

Product: Ultracrete PY4

Supplier:

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...for technical, specification & application advice;

or

...for more information on our other repair, maintenance, engineering and construction specialist products.
PY4
Polyester Resin Mortar

Effective for the rapid installation and reinstatement of manhole covers and frames in heavily trafficked areas.

• HAPAS Approved since 2005
• Rapid strength gain
• Conforms to HA104/09
• Compressive strength of 61.5N/mm² in 1 hour
• Open to traffic: 40 minutes

Applications
UltraCrete PY4 is a two component, fast setting polyester resin mortar. It is particularly suitable for rapid installation and reinstatement in heavily trafficked areas.

Technical
To avoid unnecessary waste, PY4 is supplied as a two component system, which contains 2 equal parts of resin and 2 parts of activator/filler. Always use 1 tin of resin to 1 pack of filler/activator. When laying the material, a minimum thickness of 5mm and a maximum of 50mm should be observed. PY4 can achieve 60 N/mm² compressive strength in one hour and is ideal for use as a bedding material for rapid construction in accordance with HA104/02 part 5, clause 6.1.

Preparation
All surfaces must be clean, dry and free from loose particles. Any contamination of oil, grease, paint, etc., must be removed prior to application. Always work on a sound and level substrate.

Mixing
PY4 should be mixed thoroughly with a forced action mixer or vigorously by hand with an appropriate tool. Add 1 tin of resin to 1 unit of filler/activator. Pour all the resin from the tin into the outer bucket and slowly add the filler until a homogeneous mix is attained. Mix only enough material to apply in 4 minutes. Do not part mix. Use immediately after mixing.

Placing
The bedding material should be placed on the supporting structure immediately and used within 4 minutes of mixing. The frame should be lowered into position using suitable lifting equipment and placed on the bedding mortar, ensuring it is fully supported. Check that the frame does not overhang the mortar at any point. Care should be taken to prevent voids in the bedding material under the frame, particularly in the vicinity of the cover seating. Once the bedding material has reached its initial set, the backfill material UltraCrete QC10 can be placed.

Storage
Filler/activator: Store in a dry place at temperatures between 5°-25°C. Avoid frost
Resin: Flammable/combustible. Keep away from oxidisers, heat and flames. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep in original container. Avoid contact with oxidising agents.

Shelf life
Shelf life in correct conditions for sealed containers is 8 months. High temperatures and high humidity will lead to a reduced shelf life.
Health, Safety and Environmental
Please ensure that appropriate PPE is used when preparing, mixing and applying products. Always wash your hands before consuming food and make sure that materials are kept safely out of reach of children and animals. Please dispose of packaging and waste responsibly and in accordance with local authority requirements. A full material datasheet relating to this product is available from instarmac.co.uk.

Quality assurance
All products are manufactured in a plant whose quality management system is certified / registered as being in conformity with BS EN ISO 9001. Our products are guaranteed against defective materials and manufacture, and will be replaced or money refunded if the goods do not comply with our promotional literature. We cannot however accept any liability arising from the application or use of our products because we have no direct or continuous control over where and how our products are used. All products are sold subject to our conditions of sale, copies of which may be obtained on request.

Technical data

<table>
<thead>
<tr>
<th></th>
<th>1 hour</th>
<th>2 hours</th>
<th>28 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressive strength (N/mm²)</td>
<td>61.50</td>
<td>70.00</td>
<td>85.00</td>
</tr>
<tr>
<td>Tensile strength (N/mm²)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 hour</td>
<td>8.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 hours</td>
<td>8.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28 days</td>
<td>9.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexural strength (N/mm²)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 hour</td>
<td>19.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 hours</td>
<td>19.60</td>
<td></td>
<td></td>
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<tr>
<td>Set time*</td>
<td>5-15 minutes</td>
<td>15 minutes</td>
<td></td>
</tr>
<tr>
<td>Coverage</td>
<td>Approx 1 x 400mm x 400mm standard ironwork cover and frame @ 25mm, dependant on bed depth, brickwork and substrate</td>
<td></td>
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<tr>
<td>Yield</td>
<td>12.5 litres approx</td>
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<tr>
<td>Colour</td>
<td>golden brown</td>
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</tbody>
</table>

*Depending on temperatures – test carried out at 20°C. Cool temperatures retard, warm temperatures accelerate product performance.

Design Manual for Roads & Bridges – Volume 4, Section 2
Complies with Highways Agency Document HA104/02 Part 6.1, HA104/02 Chamber Tops & Gully Tops for Road Drainage and Services.

Which States:
The material should be non–shrink.
The materials should have a minimum workable life of 15 minutes.
The compressive strength should exceed 30N/mm² in 3 hours.
The tensile strength should exceed 5N/mm² in 3 hours.

Transport hazard class:
ADR/RID/ADN Class 3
ADR/RID/ADN Class Class 3: Flammable liquid

See full Material Safety Datasheet for further information available at instarmac.co.uk