

# PY4

## Polyester Resin Mortar

**ULTRA  
CRETE**



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/mm<sup>2</sup> 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/mm<sup>2</sup> 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](http://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

Compressive strength (N/mm <sup>2</sup> )	
1 hour	61.50
2 hours	70.00
28 days	85.00
Tensile strength (N/mm <sup>2</sup> )	
1 hour	8.25
2 hours	8.30
28 days	9.91
Flexural strength (N/mm <sup>2</sup> )	
1 hour	19.00
2 hours	19.60
Workability*	5-15 minutes
Set time*	15 minutes
Coverage	Approx 1 x 400mm x 400mm standard ironwork cover and frame @ 25mm, dependant on bed depth, brickwork and substrate
Yield	12.5 litres approx
Colour	golden brown <i>As with all raw materials, colour variation may occur. This does not affect the consistency or characteristics of the product.</i>

\*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/mm<sup>2</sup> in 3 hours.

The tensile strength should exceed 5N/mm<sup>2</sup> 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](http://instarmac.co.uk)

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