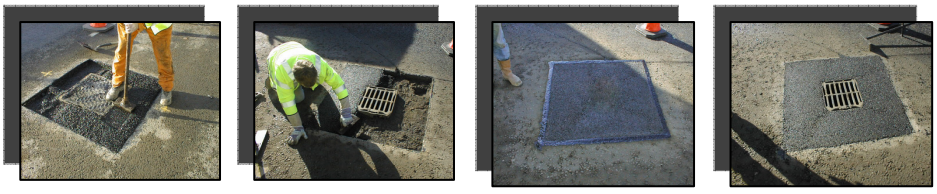
Star Uretech
Adhesives, Binders, Coatings



Technical Data Sheet

Uretech RRL

Road Repair Locking System

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Product Description

Uretech RRL is a four component, polyurea system specially formulated for the locking and repairs around highway ironwork and concrete.

When cured, Uretech RRL has excellent adhesion to bituminous, concrete and ductile iron surfaces and to most aggregates, aggregate chippings or pebbles, including calcined bauxite, granite, limestone, marble, Derbyshire spar, gritstone, basalt, silica sand, flint, calcined flint, rounded gravel and Bridport stone.

- Component 'A' — A blend of tough, sharp aggregates.
- Component 'B' — A off-white mix of pigments and fillers.
- Component 'C' — A modified isocyanate with low viscosity.
- Component 'D' — A low viscosity polyol dispersion.

Packaging & Mix Ratio

Uretech RRL is available as a 20kg kit of pre-measured components.

Typical Applications

Uretech RRL is designed for use in the locking and repairs around roadways ironwork and concrete where the four components are mixed together and used as a high performance mortar compound.

Processing & Application

Uretech RRL should be mixed with the aggregate in a forced action mixer such as a CreteAngle. The required amount of aggregate is already blended in the tub supplied. This should be added to the mixer and if the ambient temperature is less than 20°C and a fast cure is required, the aggregate should be warmed to 35°C. using a gas torch.

(note: the product will not be affected in any way if the aggregate is not heated other than the cure time will be slower)

Uretech RRL components A, B and C should be added and mixing should continue until a uniform coating covers all the aggregate.

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With a CreteAngle mixer, this is normally around 30 seconds to two minutes depending on the mixer volume and the charge size. Other forced action mixers such as the Imer or Baron are not as efficient and revolve more slowly and mixing may take up to 10 minutes especially in cold conditions. Small quantities can be mixed in the plastic tub containing the components using a large drill and paddle and the mixing should be complete in three to five minutes. The mixed aggregate should be poured into place, spread and fully compacted using a tamping block or, for the wearing surface, a float.

For trafficked surfaces a wacker plate may cause over-compaction with excess binder pushed to the surface.

If the repair is to be covered with an anti-slip surface then compaction can be achieved with a wacker plate but do not use water to lubricate the plate. The material should not be laid at less than 30mm depth and the hole to be filled should be cut to provide clean sharp edges and to ensure that the minimum depth is achieved. It is normal to apply the product in layers of 50mm, tamping between each layer. Any depth can be laid in this manner.

The mixed material remains in a mobile form for approximately 10 minutes, after which a light gel is formed (lasting for a further 10 minutes or so) which can still be worked if necessary. The material then sets into a soft solid and is fit for traffic after approximately 20 - 40 minuets.

Handling & Storage

Parts B, C and D should be stored in a covered area between 5°C. and 25°C.

- Part ‘A’ - Classified irritant but is not considered hazardous for transportation.
- Part ‘B’ - Classified as non-hazardous.
- Part ‘C’ - Classified as harmful by inhalation but is not considered hazardous for transportation.
- Part ‘D’ - Classified as non-hazardous.

Good standards of industrial hygiene should be observed when handling all components. Protective gloves and goggles should be worn. The recommendations made in the Health and Safety data sheet for this product should be observed at all times. Part C contains 4,4’diphenylmethanediisocyanate and the advice contained in the Star Uretech Health and Safety Data Sheet for this component is of particular importance.

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Technical Information

CURED MATERIAL (without aggregate)		
Hardness	Shore D	75
Compressive strength at first failure	N/mm^2	20
Compressive strength at 40% compression	N/mm^2	45
Deflection at failure	%	10
Compressed cylinder (edge) break	N/mm^2	6
Compressed cylinder (edge) crack propagation	N/mm^2	6
Compressed cylinder (edge) deflection at break	%	10

	Part 'A'	Part 'B'	Part 'C'	Part 'D'
Viscosity @ 25°C (cps)	Aggregate Mix	Powder	60 max	250 max
Specific Gravity	Aggregate Mix	1.3 Bulk	1.21	1.01
Colour	Aggregate Mix	White	Amber	White

Note: The fully mixed product has a density of approximately 2.2-2.3

Related Documentation & Services

- Uretech RRL MSDS (Material Safety Data Sheet)
- Uretech RRL Method Statement
- The Star Uretech Architects Manual

At Star Uretech we are committed to providing our customers with assistance in achieving the best possible results when using the Uretech product range. This often includes advice on product choice, specification, consumption rate calculation and the testing of the suitability of our products for particular applications. We advise on aggregate choice and type and can provide mixers for hire if necessary. Product familiarisation training and application demonstrations are held regularly, throughout the year.