

## Product Description

Uretech HFS is a three-component, all liquid, polyurea system specially formulated for high friction surfacing applications. When cured, Uretech HFS has excellent adhesion to bituminous, cementitious, wood and metal surfaces and to most aggregates, including calcined bauxite and granite. Uretech HFS performs particularly well on concrete surfaces where, as with the other surfaces above, no primer is necessary. Uretech HFS will adhere to damp or uncured concrete (over 4 days old).

The system is supplied as three components.

- ▶ Component 'A' - A coloured blend with reactive fillers.
- ▶ Component 'B' - A slightly milky aqueous dispersion.
- ▶ Component 'C' - A modified isocyanate with low viscosity

## Typical Applications

Uretech HFS is cold applied, high friction surfacing system where the three components are mixed together and spread over the surface to be coated. The wet film is then broadcast with aggregate and allowed to cure.

### Bituminous Surfaces: (Blacktop)

Blacktop covers various forms of bituminous surfacing, and is classed as 'flexible pavement'. New blacktop should have a PEN number of less than 125 and should be allowed to age and oxidise for a minimum of 2 weeks before application of the surfacing. Blacktop is always liable to some degree of flexing and movement, which can result in visible cracks in the surfacing, and therefore precautions should be taken to minimise the movement. Be aware that blacktop is liable to movement (flow) especially where slopes are found. Proper compaction should be ensured - Refer to BS 4987.

## Installation

Prior to use of the product, the Uretech HFS training manual should be consulted. Uretech HFS is mixed using a drill and paddle in 20kg kits and then spread using a fabric roller or serrated squeegee.

Stir the 'A' component for one minute to disperse any settlement, stop, then add the other two components and continue to stir until mixed. Full mixing should take no more than 60 seconds with the correct equipment. Contact Star Uretech for information concerning suitable mixing equipment. The mixed material remains in a mobile, liquid form for approximately 6-10 minutes, after which a light gel is formed (lasting approximately 15 minutes). The material then sets into a soft solid. Excess material can be removed whilst in the gel form.

The material is fit for traffic after approximately 2 to 3 hours but will increase in properties over a period of a few days. Aggregate should be broadcast into the material in its liquid state.

It is vitally important that this is carried out as soon as possible after spreading and certainly within 5 minutes. Aggregate will not adhere properly to semi-cured or cured adhesive. For Type 1 approved high friction surfaces, a 1mm to 3mm calcined bauxite should be used.

### **Patent Protected. No: 99 211 78.1**

When applied at 1.3 mm and scattered with 6 kg/m<sup>2</sup> of Chinese bauxite, Uretech HFS easily passes the Transport Research Laboratory scuffing test for Type 1 surfacing to Report 127 (appendix G).

An erosion index of zero (0 best, 30 worst: pass mark  $\leq 3$ ) and a texture index of 1.4 (pass mark  $\geq 1.2$ ) is obtained.

## Packaging

Uretech HFS is available as a 20kg kit consisting of three pre-weighed components.

- A: 20 litre plastic bucket / 14.200kg
- B: 2.5 litre plastic jerry / 2.700kg
- C: 2.5 litre plastic jerry / 3.100kg

## Handling & storage

Uretech HFS should always be stored in a dry, covered area and good standards of industrial hygiene should be observed when handling all components. The recommendations made in the Health and Safety data sheet for this product should be observed at all times.

- ▶ Component 'A'  
Store in a dry, covered area between 15°C and 25°C.  
Expected shelf life of 6 months.
- ▶ Component 'B'  
Store in a dry, covered area between 5°C and 25°C.  
Expected shelf life of 12 months.
- ▶ Component 'C'  
Store in a dry, covered area between 5°C and 25°C.  
Expected shelf life of 12 months.

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.

## Technical information

	Part 'A'	Part 'B'	Part 'C'
Viscosity @ 25°C (cps)	20000 max	200 max	200 max
Specific Gravity	1.8	1.01	1.21
Colour	Grey/ Brown	Cloudy White	Brown

CURED MATERIAL		
Hardness	Shore D	75
Compressive strength at first failure	N/mm <sup>2</sup>	20
Compressive strength at 40% compression	N/mm <sup>2</sup>	45
Deflection at failure	%	10
Compressed cylinder (edge) break	N/mm <sup>2</sup>	6
Compressed cylinder (edge) crack propagation	N/mm <sup>2</sup>	6
Compressed cylinder (edge) deflection at break	%	10

## Disposal

The condition of this product will determine the required method of disposal. Used containers with fully cured product remaining around the edges or bottom of the container should have the hazard label removed or obscured before disposal as general building waste. Uncured/Liquid product should be disposed of as hazardous waste.

## Coverage

The adhesive should be applied at a minimum depth of 1.33mm (2.13kg/m<sup>2</sup>). A 20kg kit should cover between 8m<sup>2</sup> and 9m<sup>2</sup> on a good surface.

At this rate the binder should retain 6kg of 3mm aggregate per m<sup>2</sup>. Do not try to spread the material to more than 9m<sup>2</sup> per kit. Proper wear characteristics are achieved when the aggregate particles are half-buried into the adhesive and this will not occur if there is not enough depth of adhesive.

An area of 8m<sup>2</sup> meters will require one 20kg kit of Uretech HFS and 100kg of 1mm to 3mm aggregate of which approximately 45kg will be recovered by sweeping.

## Order detail

The order reference for Uretech HFS is HFS-020-00-3. A Full pallet consists of 24 x 20kg kits (192m<sup>2</sup> to 216m<sup>2</sup>).

## Related documentation

- ▶ Uretech HFS Safety Data Sheets (GHS)
- ▶ Uretech HFS Training manual
- ▶ Uretech HFS (BBA) HAPAS Certificate
- ▶ Star Uretech Architects Manual
- ▶ Uretech HFS Carbon Footprint Report
- ▶ Calcined Bauxite Specification

## Contact details

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