



# HATCRETE

## Colour Hardener

A coloured admixture for producing integral colour in concrete.

C1/SfB	(43)	Eu5	(G5)

### TECHNICAL DATA

# TD 10

### COLOUR TECHNOLOGY FOR CONCRETE

#### DESCRIPTION

HATCRETE® Colour Hardener is a non-metallic, coloured, dry-shake, cementitious product for colouring and surface hardening freshly placed concrete. It produces an attractive, uniformly coloured, dense, wear-resistant surface and is available in 20 colours and natural. The product is chloride-free and contains pigments that are stable and colourfast in the presence of lime and sunlight (UV). HATCRETE® Colour Hardener offers a decorative and interesting alternative to plain grey concrete. It is ideal for interior floors, architectural design projects, civic buildings, shopping areas and any projects requiring a coloured, decorative floor area with hard wearing properties.

Freshly placed concrete surfaces treated with HATCRETE® Colour Hardener may be trowelled to a smooth finish or given a light texture. The surface may also be imprinted to give the appearance of cobbles, pavers, setts, bricks, tiles, flagstones or other custom designs.

#### MAIN FEATURES

- ; **Ready to use dry-shake application.**
- ; **Available in 20 standard colours.**
- ; **Custom colours made to order.**
- ; **Packaged in 25 kg water resistant bags.**
- ; **Exceptional wear resistance.**
- ; **Dense, fade resistant coloured surface.**
- ; **Quality assured to BS EN ISO 9002.**
- ; **Pigments used conform to BS EN 128 78: 1999.**

#### SPECIAL PROPERTIES AND USES

HATCRETE® Colour Hardener provides a highly durable, non-dusting surface. During the development of this product, samples were rigorously tested at Aston University for impact and abrasion resistance. Excellent results were achieved in both tests.

Sample Product	Depth of Wear BS 8204 Abrasion	Measured Indentation BRE Impact Test
HATCRETE® Colour Hardener	0.02 mm	0.25 mm
Power Trowelled Concrete	0.49 mm	0.50 mm

The full investigative report is available on request.

For commercial and industrial floors, depending on the specification, either HATCRETE® Industrial Quartz or HATCRETE® Industrial Metallic should be used. More detailed information is available in Technical Data Sheets TD9 and TD11.

#### COVERAGE

HATCRETE® Colour Hardener is supplied in 25 kg water resistant bags. One bag is sufficient for an area of approximately 8 square metres based on the standard coverage of 3 kg per square metre.

#### HAND APPLICATION

HATCRETE® Colour Hardener must be applied at a minimum rate of 3 kg per square metre and up to 5 kg per square metre for lighter colours or for heavily trafficked areas.

#### MACHINE APPLICATION

HATCRETE® Colour Hardener may be applied by mechanical spreader at a minimum rate of 5 kg per square metre. If insufficient material is applied by either method, the abrasion resistance may be reduced and the concrete substrate may show through.

#### AVAILABILITY

HATCRETE® Colour Hardener is normally available ex-stock in the 20 standard colours. Custom made colour options can usually be manufactured within one week of approved colour match.

#### STORAGE

Bags should be stored off the floor, unopened, in a dry, frost-free environment. Shelf life for this product when stored correctly is approximately 12 months.

#### SUB-BASE

The sub-base should be graded to ensure a uniform thickness of concrete. It should be compacted, well-drained but moist, and completely free from standing water or frost. Laying on a polythene slip membrane is highly recommended.

#### CONCRETE

In accordance with good concrete practice, the laying and curing of concrete in temperatures below 5°C should be avoided at all costs. For most applications, the concrete should contain a minimum cement content of 325 kg per cubic metre. All aggregates must be non-reactive and if admixtures are incorporated they must not contain chlorides or any other ingredient that will cause "blooming" or affect the colour. The mix water should be kept to the minimum required for satisfactory placement and finishing of the concrete. The concrete must be protected from the elements at all stages of construction. Tents should be employed to deflect heat or rain. In windy conditions it is important to provide shelter to minimise the possibility of surface cracks.

After placing and compacting, the concrete should be brought to an even surface by means of a wooden float on small areas or, on larger areas, by a power trowel fitted with a pan/disc, to ensure that the surface stays "open".

#### APPLICATION

It is advisable to prepare an on-site sample panel of the required finish prior to installation, which should be assessed for final appearance, chemical resistance and wet and dry slip properties. This should be a minimum of 5 square metres and must utilise the same raw materials as the final project.



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HATCRETE® Colour Hardener should be applied to newly placed concrete when all excess bleed water has disappeared or been dispelled from the surface, but the concrete remains soft and 'plastic'.

## HAND APPLICATION

The colour hardener must be applied in two separate "shakes" at a minimum rate of 3 kg per square metre, depending on colour and application. Prior to commencement, it is helpful if the bags are placed at intervals around the job, equivalent to the relevant coverage rate.

The first application of two-thirds of the material should be broadcast by gloved hand in the "dry-shake" method over the surface of the concrete from a height of not more than half a metre. Do not broadcast over distances of more than 2 metres and bridging is recommended for larger areas. Float the colour hardener into the surface of the concrete by wood or power float with edges being worked first. Hard trowelling should be avoided at this stage. Follow immediately with the remaining colour hardener which should be applied by the same method to any weak toned areas first until the slab gives a complete uniform appearance throughout.

When the second shake of colour hardener has been applied and floated in, the surface can be finished with a steel trowel. A more consistent finish is achieved by power trowelling. Care must be taken to avoid over-trowelling as this may cause darkening or "burning" of the surface and may also cause a reduced slip resistance to the finished floor.

The colour hardener obtains moisture from the concrete matrix. To ensure that maximum strength and monolithic bonding occur, no additional water should be added at any stage.

## MACHINE APPLICATION

HATCRETE® Colour Hardener is suitable for use with an approved mechanical spreader in conjunction with a laser screed. It should be placed on the concrete in one application at a minimum rate of 5 kg per square metre immediately after screeding.

## FINISHING

Once HATCRETE® Colour Hardener has been applied, numerous patterns may be introduced by imprinting the surface with special mats or aluminium tools. If the colour hardened surface is to be imprinted with mat-type tools, HATCRETE® Colour Release must be used between the concrete surface and the mat, as a bond breaker. An antiqued, variegated patina can be achieved by applying the colour release in one or more contrasting colours. Application methods and more detailed information on HATCRETE® Colour Release can be found in Technical Data Sheet TD15. Where a flat, smooth trowelled surface is specified, attention should be given to ensure adequate slip resistant characteristics.

## CURING AND SEALING

**Do not cure colour hardened concrete with plastic sheeting, hessian, curing waxes or similar products, as these will have an adverse effect on the colour.**

Concrete surfaces with variegated colours, including those where a contrasting colour release has been used, should be cured using nonstaining curing paper. HATCRETE® Colour Release alone is not sufficient as a curing membrane.

Concrete surfaces with variegated colours should be sealed with HATCRETE® Clear Sealer. The concrete should be free of excess colour release and sufficiently cured to minimise the likelihood of salts migrating to the surface and being trapped beneath the sealer. For optimum results, two coats should be applied at a rate of 2 - 4 square metres per litre. Technical Data Sheet TD13 must be referred to for full instructions before using this product.

For curing uniform, single colour surfaces, HATCRETE® Cureseal should be used in a matching colour at a rate of 2 - 4 square metres per litre, per coat. A final sealing coat of HATCRETE® Cureseal should then be applied at the same rate. Technical Data Sheet TD14 must be referred to for full instructions before using this product.

In climates where a water based system is more appropriate or if the specification demands, HATCRETE® Hycure or HATCRETE® Hyseal should be considered. Refer to relevant data sheets for full instructions.

## MAINTENANCE

Colour hardened concrete surfaces finished with HATCRETE® sealers require minimal maintenance, depending on the nature and specific use of the floor. Spills should be removed as they occur and the floor may be scrubbed and hosed down with an approved proprietary detergent.

For further information on maintenance, please refer to the relevant Technical Data Sheet for HATCRETE® sealers and the separate maintenance sheet.

## SPECIFICATION CLAUSE

'The designated surface shall be coloured and hardened with HATCRETE® Colour Hardener, manufactured and supplied by PICS Ltd Unit 2, Red Shute Hill Ind. Est. Hermitage, Nr Newbury, Berkshire RG18 9QL Tel: +44 (0) 1635 202224 Fax: +44 (0) 1635 202230 in ..... (colour), applied at a minimum rate of ..... kg per square metre. The hardener shall have been tested to BS 8204. HATCRETE® Colour Hardener shall be applied in accordance with the manufacturer's current Technical Data Sheet TD10. The manufacturer shall be a BSI registered company with accreditation to BS EN ISO 9001.

## CURING & SEALING SPECIFICATION

For curing and sealing single coloured surfaces, please refer to the specification in Technical Data Sheet TD14 HATCRETE® Cureseal for solvent based systems, or Technical Data Sheet TD16 HATCRETE® Hycure for water based systems. For concrete surfaces requiring a clear protective coating, please refer to the specification in TD13 HATCRETE® Clear Sealer for solvent based systems, or TD17 HATCRETE® Hyseal for water based systems.

## HEALTH AND SAFETY

As with all cementitious products care must be taken when handling and in use.

Before using HATCRETE® Colour Hardener read Safety Data Sheet SD10 available from PICS Ltd.

Keep away from children and animals.

**PICS Ltd quality system is approved by the BSI and conforms to BS EN ISO 9001. This applies to the manufacture and supply of all PICS Ltd products.**

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