

# Ucrete<sup>®</sup> CS

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## Heavy-duty colour stable flooring for enhanced aesthetics

### DESCRIPTION

Based on unique heavy-duty resins **Ucrete CS** offers highly attractive colour stable floors with exceptional resistance to aggressive chemicals, heavy impact and temperatures up to 120°C.

**Ucrete CS** is a family of products with defined surface profiles suitable for applications in wet and dry process environments.

The system offers a uniformity of surface texture with enhanced aesthetics resistant to staining and yellowing, so providing a safe and attractive working environment.

It is dense and impervious, providing the ideal floor finish for applications in the food and beverage, pharmaceutical and chemical industries and wherever an attractive, robust and long-lived floor is required.

With three defined surface profiles and three thickness specifications available, **Ucrete CS** meets a wide range of service and temperature requirements.

Ucrete Industrial Flooring has been widely used throughout industry for more than 50 years, many of the older floors are still in service. A detailed project reference list is available upon request.

Antistatic versions, **Ucrete CS10AS** and **Ucrete CS20AS** are available, see separate data sheet.

### ADVANTAGES

- Light stable and non-yellowing matt sheen finish for an attractive working environment
- Very low staining when in contact with a wide range of aggressive chemicals and food industry products
- Range of Slip-resistant Profiles R11, R12, R13
- Non-tainting after 5 hours as tested by Campden Technology Ltd.
- Rapid curing, allowing one-day installation and early return to service even at chill temperatures

### COLOURS

**Ucrete CS** is available in 12 light stable colours:

Blue, Bright Yellow, Cream, Green, Green/Brown, Grey, Light Blue, Light Green, Light Grey, Orange, Red, Yellow.

All colours are available in a matt sheen finish

### NON-TAINTING

**Ucrete CS** systems are non-tainting after 5 hours, as tested by Campden Technology Ltd. Food products should be kept out of the area during the installation process. Ensure adequate ventilation until returning the floor to service after 5 hours.

### TEMPERATURE RESISTANCE

The **Ucrete CS** resins do not start to soften until temperatures above 130°C are exceeded. 9mm specifications are fully serviceable up to 120°C and suitable for freezer temperatures down to -40°C.

Correctly installed **Ucrete CS** at 9mm thickness can withstand regular and routine discharges of boiling water, hot oils and fats.

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## TYPICAL PROPERTIES\*

Density	2000 – 2090 kg/m <sup>3</sup>
Compressive strength (EN13892-2)	48-54 MPa
Tensile strength (BS6319 Part 7)	5 - 7 MPa
Flexural strength (EN13892-2)	12 - 14 MPa
Compressive modulus (BS 6319:Part 6)	3250 - 5000 MPa
Adhesive strength to concrete (EN13892-8)	concrete failure
Coefficient of thermal expansion (ASTM C531:Part 4.05)	4 x 10 <sup>-5</sup> °C <sup>-1</sup>
Fire Testing (EN13501: Part 1)	B <sub>FL</sub> – S <sub>1</sub>

**Note:** Samples cured for 28 days at 20°C

## CHEMICAL RESISTANCE

**Ucrete CS** floors offer exceptional resistance to a wide range of chemical aggressors. For example, **Ucrete CS** is resistant to the following commonly encountered chemicals:

Acetic Acid, 50%: As spirit vinegar widely used in the food industry, indicative of resistance to vinegar, sauces, etc.

Concentrated Lactic Acid @ 60°C: Indicative of resistance to milk and dairy products.

Oleic Acid, 100% @ 60°C: Representative of the organic acids formed by oxidation of vegetable and animal fats widely encountered in the food industry.

Concentrated Citric Acid: As found in citrus fruits and representative of the wider range of fruit acids which can rapidly degrade other resin floors.

Methanol, 100%: Representative of alcohols and the wider range of solvents used in the pharmaceutical industry.

Nitric acid: as used in many CIP cleaning solutions. Ucrete TCCS is particularly resistant to the staining commonly encountered where these are used

**Ucrete CS** is also resistant to a wide range of mineral oils, salts and inorganic acids, extensive

chemical resistance tables are available upon request.

**Ucrete CS** flooring is resistant to staining or discolouration that occurs with other flooring systems when exposed to aggressive chemicals. Such staining is greatly reduced depending upon the standards of housekeeping employed.

## IMPACT RESISTANCE

With high mechanical strengths and a low elastic modulus, **Ucrete CS** is very resilient and able to withstand severe impact loads. While no material is indestructible and surface chipping may occur, brittle modes of failure resulting in cracking and disbondment are unknown with Ucrete floors.

## SUBSTRATE MOISTURE TOLERANCE

Ucrete Industrial Flooring is extremely tolerant to residual substrate moisture and can be installed directly onto 7-day old concrete, or onto old good quality concretes with high moisture contents without the use of special primers, provided there is a functioning DPM within the structure.

This enables rapid construction programmes to be maintained and facilitates refurbishment work in wet process areas.

Epoxy surface DPMs should not be used as they soften under high temperature conditions and will lead to floor failure.

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## PERMEABILITY

**Ucrete CS** exhibits zero absorption when tested to CP.BM2/67/2.

## SLIP RESISTANCE

The **Ucrete CS** surface profiles have a coefficient of friction as determined to EN13036 Part 4 using the 4S rubber on the wet floor as follows:

<b>Ucrete CS10</b>	45 - 50
<b>Ucrete CS20</b>	45 - 55
<b>Ucrete CS30</b>	50 - 60

The **Ucrete CS** surface profiles conform to DIN51130 as follows:

<b>Ucrete CS10</b>	R11 -
<b>Ucrete CS20</b>	R12 - or R13 V4*
<b>Ucrete CS30</b>	R13 V8

\*Depending upon the specification

The extremely robust aggregates used to provide the texture of **Ucrete CS20** and **Ucrete CS30** are designed to maintain optimum slip resistance for many years. Where there is heavy hard wheeled traffic it is recommended that **Ucrete CS30** is used.

Optimum slip resistance can only be maintained with regular cleaning.

## SPECIFICATION

The **Ucrete CS** system consists of three surface textures, CS10, CS20, and CS30, which can be installed at thicknesses of 4, 6 or 9 mm depending upon the service conditions.

The specifier should specify the grade and surface texture required, as **Ucrete CS10**, **Ucrete CS20** or **Ucrete CS30** and the required thickness.

For example:

The floor finish shall be **Ucrete CS10/20/30\*** (\*select depending upon required slip resistance), from Master Builders Solutions UK Ltd, of 19 Broad Ground Road, Redditch, Worcestershire, B98 8YP, at 4/6/9\*mm thickness (\*select depending on service conditions) installed in accordance with the manufacturer's instructions.

\*A 4mm **Ucrete CS** floor is fully resistant to liquid spillage and discharge up to 70°C. Suitable for freezer temperatures down to -15°C.

\*A 6mm **Ucrete CS** floor is fully resistant to liquid spillage and discharge up to 80°C and can be lightly steam cleaned. Suitable for freezer temperatures down to -25°C.

\*A 9mm **Ucrete CS** floor is fully resistant to high-temperature spillage and discharge up to 120°C and is fully steam cleanable. Suitable for freezer temperatures down to -40°C.

In extreme thermal shock environments, a well-designed substrate of good quality concrete is essential.

## SUBSTRATE QUALITY

Concrete substrates should be visibly dry and have a minimum tensile strength of 1.5 MPa.

Refer to the guide 'The Design & Preparation of Substrates for Ucrete Industrial Flooring'

All joints in the substrate concrete subject to movement should be reflected through the Ucrete floor and sealed with a suitable sealant.

## APPLICATION CONDITIONS

For best results, materials, substrate and air temperature should be in the range 15–25°C. Whilst **Ucrete CS** will cure out effectively over a wide range of temperatures the optimum appearance and profiles are most readily achieved under good site conditions.

High temperatures will shorten the open time and can impair the appearance of the floor.

Rapid curing specifications are available for use at chill temperatures.

## CURING

Normally **Ucrete CS** floors can be put into service after 5 hours even at 10°C.

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## CLEANING AND HYGIENE

Ucrete flooring systems are accredited for use in facilities operating HACCP based food safety systems.

Regular cleaning and maintenance will enhance the life and appearance of any floor.

**Ucrete CS** is cleaned using industry standard cleaning chemicals and equipment. The use of a food industry standard scrubber drier machine is recommended.

Detailed cleaning guidelines are available from your local Master Builders Solutions Construction Chemicals office.

## STORAGE

In covered warehouse conditions, above 5°C and below 30°C and out of direct sunlight. Materials must be raised off the floor and kept dry. Liquid components must be protected from frost.

## DISPOSAL

Containers should be disposed of in accordance with local regulations.

## HEALTH AND SAFETY


In its cured state, Ucrete is physiologically non-hazardous.

For normal flooring applications, Ucrete does not require the use of respiratory protective equipment during installation.

Operatives should consult the CoSHH risk assessment and their work instructions.

\* Properties listed are based on laboratory controlled tests.

® = Registered trademark of the MBCC Group in many countries.

	
Master Builders Solutions UK Ltd 19 Broad Ground Road Lakeside, Redditch Great Britain B98 8YP	
19	
01190280, 01190281, 01190282	
EN 13813:2002	
Synthetic resin screed material	
Reaction to fire:	B <sub>FL</sub> – S <sub>1</sub>
Release of corrosive substances:	NPD
Water permeability:	NPD
Mechanical resistance:	NPD
Wear resistance:	AR0,5
Bond strength:	B>2,0
Impact resistance:	IR>4
Sound insulation:	NPD
Sound absorption:	NPD
Thermal resistance:	NPD
Chemical resistance:	NPD
Electrical resistance:	NPD



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## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

## NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by Master Builders Solutions either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions, are responsible for carrying out procedures appropriate to a specific application.

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