

# Ucrete DP

## Defined Profile Heavy Duty Polyurethane Screed

### DESCRIPTION

Ucrete DP is unique HD Polyurethane resin technology with exceptional resistance to aggressive chemicals, heavy impact and temperatures up to 120°C.

Ucrete DP 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, with a gloss or matt finish, 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 a robust long lived floor is required.

With three defined surface profiles and three thickness specifications available, Ucrete DP is designed to meet 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.

An antistatic version of Ucrete DP10 and Ucrete DP20 is available, see separate data sheet.

### PERFORMANCE DATA

#### AIR QUALITY

Ucrete has been awarded the Indoor Air Comfort Gold Label following extensive VOC emission chamber testing and auditing of quality management and production control procedures.

This demonstrates that Ucrete is an extremely clean product without any volatile compounds that might taint foodstuff or affect the well-being of personnel.

All Ucrete grades give very low emissions and conform to all the emissions requirements for indoor flooring systems in Europe including AgBB in Germany, Afsset in France, where they are rated A+ for VOC emissions (the cleanest rating), and M1 in Finland.

For further information please contact your local Master Builder Solutions representative

### SLIP RESISTANCE

The Ucrete DP surface profiles have coefficient of friction as determined to EN13038 Part 4 using the 4S rubber on the wet floor as follows:

|             |         |
|-------------|---------|
| Ucrete DP10 | 45 - 50 |
| Ucrete DP20 | 45 - 55 |
| Ucrete DP30 | 50 - 60 |

The UCRETE DP surface profiles conform to DIN51130 as follows:

|             |     |              |
|-------------|-----|--------------|
| Ucrete DP10 | R11 | -            |
| Ucrete DP20 | R12 | - or R13 V4* |
| Ucrete DP30 | R13 | V8           |

\*Depending upon specification

The extremely robust aggregates used to provide the texture of Ucrete DP20 and Ucrete DP30 are designed to maintain optimum slip resistance for many years. Where there is heavy hard wheeled traffic it is recommended that Ucrete DP30 is used.

Optimum slip resistance can only be maintained with regular cleaning.

### TEMPERATURE RESISTANCE

The Ucrete DP 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 DP at 9mm thickness can withstand regular and routine discharges of boiling water, hot oils and fats

### NON TAINING

Ucrete DP systems are non-solvented and non-tainting from the end of mixing, as tested by Campden Technology Ltd.

### IMPACT RESISTANCE

With high mechanical strengths and a low elastic modulus, Ucrete DP 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

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### CHEMICAL RESISTANCE

Ucrete DP offers exceptional resistance to a wide range of chemical aggressors. For example Ucrete 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.

Ucrete DP is also resistant to a wide range of mineral oils, salts and inorganic acids, extensive chemical resistance tables are available upon request.

Note: some staining or discolouration may occur with some chemicals, depending upon the nature of the spillage and the standards of housekeeping employed.

### PERMEABILITY

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

### CLEANING & 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 DP 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 UK Ltd office.

### 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.

### COLOURS

Ucrete DP is available in eight standard colours:

|      |        |       |             |
|------|--------|-------|-------------|
| Red  | Yellow | Green | Orange      |
| Grey | Cream  | Blue  | Green/Brown |

All colours are available with a matt or gloss finish

Ucrete floor systems have been formulated to provide the very highest chemical and heat resistance. As a direct result some yellowing of the installed floor will occur in areas of direct UV exposure. This is most apparent in lighter colours.

### SPECIFICATION

The Ucrete DP system consists of three surface textures, DP10, DP20, and DP30, which can be installed at thicknesses of 4, 6 or 9mm depending upon the service conditions.

The specifier should specify the grade and surface texture required, as Ucrete DP10, Ucrete DP20 or Ucrete DP30 and the required thickness and whether a gloss or matt finish.

For example:

The floor finish shall be Ucrete DP10/20/30\* (\*select depending upon required texture), from Master Builders Solutions UK Ltd, of 19 Broad Ground Road, Redditch, Worcestershire, B98 8YP, installed at 4/6/9\*mm (\*select depending on service conditions) with a matt/gloss\* (select as required) finish installed in accordance with the manufacturer's instructions.

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

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\*A 6mm Ucrete DP 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 DP 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 DP will cure out effectively over a wide range of temperatures the optimum appearance and profiles are most readily achieved under good site conditions

Low temperatures will retard the setting and can impair the visual appearance of the floor.

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

### CURING

Normally Ucrete DP floors can be put into service within 24 hours even at 8°C.

### UCRETE LICENSED APPLICATORS

To achieve the best floor possible with a professional installation, you must use one of our fully trained Ucrete Licensed Applicators.

To view our most up to date Licenced Applicators please click here: <https://www.master-builders-solutions.com/en-gb/about-us/news/ucrete-licensed-applicators>

### BIM OBJECTS

All Ucrete products have a dedicated BIM object available to download from the NBS National BIM Library, the industry source for generic and proprietary BIM content.

To view our most up to date Ucrete BIM Objects please click here: <https://www.nationalbimlibrary.com/en/basfplc-construction-chemicals/>

### 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

Part 2 containers should be decontaminated with 5% sodium carbonate (washing soda) solution after use and disposed of as building waste in accordance with local regulations.

### HANDLING AND TRANSPORT

Usual preventive measures for the handling of chemical products should be observed when using this product, for example do not eat, smoke or drink while working and wash hands when taking a break or when the job is completed.

Specific safety information referring the handling and transport of this product can be found in the Material Safety Data Sheet. For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

Disposal of product and its container should be carried out according to the local legislation in force. Responsibility for this lies with the final owner of the product.

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### CONTACT DETAILS

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| Product Data                                           |                                       |
|--------------------------------------------------------|---------------------------------------|
| 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

|                                                                                                         |                                  |
|---------------------------------------------------------------------------------------------------------|----------------------------------|
|                       |                                  |
| Master Builders Solutions UK Ltd<br>19 Broad Ground Road<br>Lakeside, Redditch<br>Great Britain B98 8YP |                                  |
| 04                                                                                                      |                                  |
| 01040054, 01040055, 01040056                                                                            |                                  |
| 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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Ucrete DP - Master Builders Solutions UK Ltd, Version 1

### Health and Safety

\*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

### Solvent Based Products

Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

### Resin Products

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

### Spillage

Chemical products can cause damage; clean spillage immediately.

### DISCLAIMER

"Master Builders Solutions UK Ltd" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.