

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 through-out industry for more than 40 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.

RECOMMENDED USES

Ucrete DP is recommended for conditions requiring maximum chemical resistance, slip resistance and cleanability, especially in extreme temperature environments.

Specific applications include:

- Meat, fish and poultry processing
- Food and beverage production
- Dairies, cheese and milk production
- Commercial and industrial kitchens
- Cold rooms, chillers and freezers
- Pharmaceutical production
- Chemical plants

FEATURES AND BENEFITS

- **Expert application** - Installed only by trained and approved specialist contractors.
- **Fast application / Rapid access** - Can be applied to 7-day-old concrete or 2-day old polymer screeds.

- **Short curing time** - 8 hour access to foot traffic; 24 hours for vehicles.
- **Hygienic/Safe** - Slip resistant, non-tainting, non-dusting, monolithic (minimum joints), easy to maintain, microbiologically inert.
- **Defined Profiles** – Optimum Slip resistant surfaces even in wet process environment.
- **Uniform Surface Texture** – Enhanced aesthetics providing safe and attractive working environment

ACCREDITATION

- Ucrete flooring systems are accredited for use in facilities operating HACCP based food safety systems.
- 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.
- All Ucrete grades give very low emissions and conform to all the emissions requirements for indoor flooring systems in Europe including **AgBB in Germany**, rated **A+** for VOC emissions from **Afset in France** and **M1 in Finland**.
- **Ucrete DP** is non tainting from the end of mixing, as tested by the Campden Technology Ltd

PERFORMANCE DATA

Compressive Strength (EN 13892: Part 2)	48 - 54 MPa
Flexural Strength (EN 13892: Part 2)	12 - 14 MPa
Compressive Modulus (BS 6319 – Part 6)	3.25 – 5.0 GPa
Tensile Strength (BS 6319 – Part 7)	5 - 7 MPa
Concrete Adhesion (EN 13892: Part 8)	concrete fails
Coeff. of Thermal Expansion (ASTM C531)	4x10 ⁻⁵ °C ⁻¹
Density (BS6319:Part 5)	2090 Kg/m ³
Water Absorption (CP.BM 2/67/2)	0 mL

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Slip Resistance ¹ EN 13038: Pt 4 (4S Rubber) Ucrete DP 10 Ucrete DP 20 Ucrete DP 30	45 – 50 45 – 55 50 - 60
DIN 51130 Ucrete DP 10 Ucrete DP 20 Ucrete DP 30	R11 R12 or R13 V4 R13 V8
Service Temperature 4 mm 6 mm 9 mm	- 15°C to 70°C - 25°C to 80°C* - 40°C to 120°C
*Lightly Steam Cleaned	
<p><i>1. 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.</i></p> <p><i>Optimum slip resistance can only be maintained with regular cleaning.</i></p>	

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 discoloration may occur with some chemicals, depending upon the nature of the spill-age and the standards of housekeeping employed.

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 programs 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.

UV Resistance

The **Ucrete** resin systems have been formulated to provide the very highest chemical and heat resistance. UV exposure though not affecting the performance of the **Ucrete** will result in yellowing of the floor which is most apparent in light colors.

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.

COLORS

Ucrete DP is available in Grey, Green, Cream, Yellow, Orange, Red, Blue, Light grey & Light green colors.

APPLICATION

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

Priming

The use of a primer is not normally necessary but has been shown to be beneficial in cold conditions or on porous concrete as it reduces resin absorption into the substrate and aids application.

Ensure the primer is properly cured and dry to the touch before application of the Basecoat. If the time between coats exceeds 48 hours, or if condensation or water impacts the surface, fully abrade the surface prior to overlaying.

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Basecoat

Depending on the thickness at which **Ucrete DP** is applied different Bodycoats are used as given below.

1. Ucrete BASECOAT BC4 is used for 4mm thickness
2. Ucrete BASECOAT BC6 is used for 6mm thickness
3. Ucrete BASECOAT BC9 is used for 4mm thickness

For further details, please refer to a separate datasheet of Ucrete BASECOAT.

Topcoat

Ucrete TC is used as top coat for sealing the surface of the **Ucrete DP**. For Matt finish **Ucrete TC** is used and for glossy finishes **Ucrete TC Gloss** is used.

For further details, please refer to a separate datasheet of **Ucrete TC**.

For information about application, please obtain a copy of the Master Builders Solutions "Application Guide for **Ucrete®**" from your local representative.

Ucrete DP should be installed as per the consumption rates given below:

Grade & Thickness	Consumption (Kgs/m ²)
Ucrete DP 10 @ 4mm	
Ucrete BASECOAT BC4	6 – 8
Filler F5	4 – 5
Ucrete TC	0.4 – 0.6
@ 6mm	
Ucrete BASECOAT BC6	10 - 12
Filler F5	4 – 5
Ucrete TC	0.4 – 0.6
@ 9mm	
Ucrete BASECOAT BC9	16 - 18
Filler F5	4 – 5
Ucrete TC	0.4 – 0.6
Ucrete DP 20 @ 4mm	
Ucrete BASECOAT BC4	6 – 8
Filler F20	4 – 5
Ucrete TC	1 – 1.2

@ 6mm	
Ucrete BASECOAT BC6	10 – 12
Filler F20	4 – 5
Ucrete TC	1 – 1.2
@ 9mm	
Ucrete BASECOAT BC9	16 - 18
Filler F20	4 – 5
Ucrete TC	1 – 1.2
Ucrete DP 30 @ 4mm	
Ucrete BASECOAT BC4	6 – 8
Filler F25	4 – 5
Ucrete TC	1 – 1.2
@ 6mm	
Ucrete BASECOAT BC6	10 - 12
Filler F25	4 – 5
Ucrete TC	1 – 1.2
@ 9mm	
Ucrete BASECOAT BC9	16 - 18
Filler F25	4 – 5
Ucrete TC	1 – 1.2

Ucrete DP is supplied in three different grades and consists of Basecoat, Filler & Topcoat as follows:

	Pack size in Kgs			
	Pt 1	Pt 2	Pt 3	Pt 4
Ucrete Basecoat BC4			13.00	
Ucrete Basecoat BC6	2.52	2.86	17.30	0.5
Ucrete Basecoat BC9			21.00	
Ucrete TC	0.77	1.09	1.36	0.5
Ucrete TC Gloss	0.83	1.09	1.36	0.5
Filler F5 / F20 / F30	25 Kg bags			

Please refer the Material Safety Data Sheet for handling and storage of this product.

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