

UCRETE® DP

Heavy duty non slip polyurethane concrete flooring system

DESCRIPTION

Unique Heavy Duty Polyurethane resin technology with exceptional resistance to aggressive chemicals, heavy impact and temperatures from -40°C 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 uniform surface texture with enhanced aesthetics, providing a safe and attractive working environment

It is dense and impervious providing an 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 thicknesses specifications and three defined surface profiles, **Ucrete DP** is designed to meet a wide range of service and temperature requirements..

FIELDS OF APPLICATION

UCRETE DP is recommended for conditions requiring the maximum chemical resistance, and a slip-resistant surface is required.

Specific applications include:

- textile and film plants
- food and beverage production
- warehousing and storage
- confectionery production
- electronic component manufacture and assembly
- pharmaceutical production
- chemical plants

FEATURES AND BENEFITS

"**HACCP Accredited** Ucrete products have been accredited for use in facilities covered by HACCP accreditation."

Ucrete DP has approval for use as flooring for HACCP accredited facilities.



Expert application Installed only by trained and approved specialist contractors.

Fast application/rapid access Can be applied to 6-day-old concrete or 2 day old polymer screeds. Short curing time and 8 hour access to foot traffic; 20 hours for vehicles.

Hygienic/safe Slip resistant, non-tainting, non-dusting, monolithic (minimum joints), easy to maintain, microbiologically inert.

Durable/long life Wide chemical resistance, wear and impact resistant, resists temperatures

from -40°C to 120°C at 9 mm thickness; 25 years of international use.

Prepacked Preweighed/ prepacked for immediate use; batch to-batch colour matched for consistency.

Non Tainting Solvent free and non-tainting as tested by the Campden and Chorleywood Food Research Association.

TYPICAL PERFORMANCE DATA

Samples cured for 28 days @ 20°C	
Density (BS6319:Part 5)	: 2000-2,090 kg/m ³
Compressive Strength (BS6319:Part 2)	: 48-58 MPa
Tensile Strength (ISO R527)	: 5 – 7 MPa
Flexural Strength (ISO178)	: 12 – 14 MPa
Compressive Modulus (BS 6319-Part 6)	: 3,250-5000 MPa
Adhesive strength (BS6319:Part 4)	: Concrete fails
Thermal expansion (ASTM C531:Part 4.05)	: 2-6 x 10 ⁻⁵ °C ⁻¹
Thermal conductivity (BS 874)	: 1.1W/m°C
Surface Spread of Flame (BS476:Part 7)	: Class 2

PROPERTIES

SLIP RESISTANCE - **Ucrete DP** conforms to the HSE Guidance Sheet 156 and Food Sheet No.22, issued by the health and Safety Executive, on slip resistance.

The **Ucrete DP** surface profiles have coefficient of friction as determined using the TRRL slip resistance tester with 4S rubber on the wet floor as follows:

Ucrete DP 10	50-60
Ucrete DP 20	55-75
Ucrete DP 30	60-80

The Ucrete DP surface profiles conform to DIN51130 as follows:

Ucrete DP 10	R11	V4
Ucrete DP 20	R13	V4
Ucrete DP 30	R13	V8

The extremely robust aggregates used to provide the texture of **Ucrete DP 20** and **Ucrete DP 30** are designed to maintain optimum slip resistance for many years. Where there is heavy hard wheeled traffic it is recommended that **Ucrete DP 30** 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

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The Chemical Company

UCRETE[®] DP

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

CHEMICAL RESISTANCE – **Ucrete DP** offers exceptional resistance to a wide range of chemicals.

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.

All concentrations of 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 industrial.

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 on the nature of the spillage and the standards of housekeeping employed.

IMPACT RESISTANCE – With high mechanical strengths and 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.

CLEANING AND HYGIENE – **Ucrete DP** is cleaned using industry standard cleaning chemicals and equipment. The use of a food industry standard scrubber drier machine is recommended.

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

SUBSTRATE MOISTURE TOLERANCE – **Ucrete DP** is extremely tolerant to residual substrate moisture and can be installed directly onto 7 day old concrete, or onto old good quality concrete 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 facilities 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.

SPECIFICATION

The **Ucrete DP** system consists of three surface textures, 10,20 and 30, 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 DP 10**, **Ucrete DP 20** or **Ucrete DP 30** and the required thickness.

For example – “The floor finish shall be **Ucrete DP 10/20/30** (select depending upon required texture), installed at 4/6/9mm (select depending on service conditions)”.

At 4mm, Ucrete DP is fully resistant to liquid spillage and discharge up to 60 °C.

At 6mm, Ucrete DP is fully resistant to liquid spillage and discharge up to 70 °C and can be lightly steamed.

At 9mm, Ucrete DP is fully resistant to high temperature spillage and discharge up to 120 °C and is fully steam cleanable.

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

APPLICATION

Refer to the “Ucrete Application Manual” available from your local BASF Construction Chemicals representative.

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.

SHELF LIFE

UCRETE DP can be kept for 12 months from date of manufacture, original unopened packing, if stored above under cover and ground level at 30°C or less, avoiding exposure to direct sunlight. Part 1 and 2 must be protected from frost.

CURING

Normally **Ucrete DP** floors can be put into service within 4 hours even at 8 °C

PRECAUTIONS

For detailed Health, Safety and Environmental recommendations, please consult and follow instructions on the product Material Safety Data Sheet.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** 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

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