UCRETE DP

Heavy Duty Polyurethane Screed with Defined Surface Profile

Unique HD Polyurethane resin technology with exceptional resistance to aggressive chemicals, heavy impact and temperatures up to 120°C

Description

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 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 thickness specifications and three defined surface profiles 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 30 years, many of the older floors are still in service. A detailed project reference list is available upon request.

Packaging

UCRETE DP is available in:

UCRETE DP BROADCAST B4	18.69kg
UCRETE DP BROADCAST B6	22.99kg
UCRETE DP BROADCAST B9	26.69kg
FILLER F5 / F20 F25	25kg
UCRETE DP TOPCOAT	3.72kg

Colours

UCRETE DP is available in six standard colours:

Red Yellow Green Orange Grey Cream

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.

Technical data

Samples cured for 28 days at 20°C

Density (BS 6319 : Part 5)	2000-2090kg/m³
Compressive strength (BS 6319 : Part 2)	48-58 MPa
Tensile strength (ISO R527)	5-7MPa
Flexural strength (ISO 178)	12-14MPa
Compressive modulus (BS 6319:Part 6)	3250-5000 MPa
Adhesive strength (BS 6319 : Part 4)	concrete failure
Thermal expansion (ASTM C531 : Part 4.05)	2-6 x 10^{-5} °C^{-1}
Thermal conductivity (BS 874)	1.1 W/m. °C
Surface spread of flame (BS 476 : Part 7)	Class 2

Performance data

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 DIN 51130 as follows:

UCRETE DP 10 R11
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 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. 9 mm specifications are fully serviceable up to 120°C. Correctly installed UCRETE DP at 9 mm thickness can withstand regular and routine discharges of boiling water, hot oils and fats.

Non Tainting:

The UCRETE DP systems are solvent free and non tainting as tested by the Campden & Chorleywood Food Research Association.

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. 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 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 house keeping employed.

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

Cleaning & 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 Industrial Flooring 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 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.

Specification

The UCRETE DP system consists of three surface textures, 10, 20, and 30, 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 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*), from Degussa Construction Chemicals, of 19 Broad Ground Road, Redditch, Worcestershire, B98 8YPB, installed at 4/6/9* mm (*select depending on service conditions*) installed in accordance with the manufacturers' instructions. ***A** 4 mm UCRETE DP floor is fully resistant to liquid spillage and discharge up to 60ºC. ***A** 6 mm UCRETE DP floor is fully resistant to liquid spillage and discharge up to 70ºC and can be lightly steam cleaned.

***A** 9 mm UCRETE DP floor is fully resistant to high temperature spillage and discharge up to 120ºC and is fully steam cleanable. 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 DP floor and sealed with a suitable sealant.

Storage

In covered warehouse conditions, above 5ºC and below 30ºC and out of direct sunlight. Materials must be raised off the floor and kept dry. Parts 1 & 2 must be protected from frost.

Application Conditions

For best results materials, substrate and air temperature should be in the range 15-30°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.

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.

Cleaning

Regular cleaning and maintenance will enhance the life and appearance of any floor. UCRETE DP is readily cleaned with industry standard cleaning chemicals and equipment. Please consult your local cleaning chemical or equipment supplier.

Quality

All products produced by Degussa certified manufacturing facilities, are produced to conform to systems designed to meet internationally recognised quality standards.

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