

Ucrete MF

Heavy duty polyurethane hybrid flooring system

Material Description

Ucrete MF is a unique HD Polyurethane resin floor with exceptional resistance to aggressive chemicals.

It provides a smooth protective floor finish suitable for applications in predominantly dry environments.

It is dense and impervious, providing the ideal floor finish for applications in the food, pharmaceutical and manufacturing industries including clean room, laboratory, packing hall and warehouse applications and wherever a robust, long lived floor is required.

Ucrete Industrial Flooring has been widely used throughout the industry for more than 40 years; many of the older floors are still in service. A detailed project reference list is available upon request.

Areas of Application

Ucrete MF is recommended for conditions requiring the maximum chemical resistance and where a smooth, even and easy to clean surface is required.

- Specific applications include:
 - Textile and film plants
 - Food and beverage production
 - Warehousing and storage
 - Confectionery production
 - Electronic component manufacture & assembly
 - Pharmaceutical production
 - Chemical plants

Characteristics and Benefits

- Expert application - installed only by trained and approved specialist contractors.
- Fast application /rapid access - can be applied to 7 day old concrete/2 day old polymer screeds.
- Short curing time - 8 hour access to foot traffic; 24 hours for vehicles.
- Hygienic/Safe - non-tainting, non-dusting, monolithic (minimum joints); easy to maintain; microbiologically inert.
- Durable/long life - wide chemical resistance; wear and impact resistant; resists cleaning temperature up to 80°C at 6 mm thickness and at 4mm to 70 °C; 25 years of international use.

- Pre-packed - pre-weighed/pre-packed for immediate use; batch-to-batch colour matched for consistency.
- Colours – Grey, Cream, Yellow, Green, Red, Light Green and Light Grey.

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 Afsset in France and MI in Finland.
- Ucrete MF is non-tainting from the end of mix-ing, as tested by the Campden Technology Ltd.

Properties

Compressive Strength (MPa) (BS6319:Part 2)	48-53
Flexural Strength (MPa) (ISO I78)	21 N/mm ²
Compressive Modulus (MPa) (BS6319:Part 6)	3250 – 4000
Tensile Strength (MPa) (ISO R527)	9
Concrete Adhesion (BS6319:Part2)	Concrete failure
Abrasion Resistance (Taber H 22) (Taber CS17)	1410mg 120mg
Coeff. Thermal Expansion (ASTM C531)	3.6x10 ⁻⁵ °C ⁻¹
Thermal Conductivity (BS874)	0.9 W/m°C
Slip Resistance	
EN 13036 (4S Rubber)	35

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DIN 51130	R10
Surface resistivity (BS2050)	2×10^{11} ohms
Density (BS 6319: Part)	1970kg/m ³
Water Adsorption (CP:BM 2/67/2)	0 mL
Fire Testing (EN 13501:Part 1)	B _{FL} – S ₁
Service temperatures	
6mm	-25°C to 80°C
4mm	-15°C to 60°C

Samples cured for 28 days at 20°C. The performance data is typical and based upon controlled laboratory conditions. Actual performance on the job site may vary from these values based on actual site conditions.

Chemical Resistance

Ucrete MF offers exceptional resistance to a wide range of chemical aggressors. For example, Ucrete is resistant to spillages of the following commonly encountered classes of chemicals:

Most dilute and concentrated organic acids such as, Acetic Acid, Lactic Acid, Oleic Acid and Citric Acid as commonly found in the food industry,

Dilute and concentrated acids: hydrochloric, nitric, phosphoric and sulphuric.

Dilute and concentrated alkalis, including sodium hydroxide to 50% concentration

Animal fats and vegetable oils, sugars flavorings and essences.

Mineral oils, kerosene, gasoline and brake fluids

A wide range of organic solvents including Methanol, Xylene, Ethers and Chlorinated solvents

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

Extensive chemical resistance tables are available in the separate data sheet 'A guide to the chemical resistance of Ucrete Flooring'. For detailed information, please contact your Technical Sales Representative.

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.

Impact Resistance

With high mechanical strengths and a low elastic modulus, Ucrete MF 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 debonding are unknown with Ucrete floors.

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.

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

For information about application, please obtain a copy of the Ucrete Application Manual.

Priming

Ucrete MF shall be applied to a cured scratch coat of **Ucrete MF** of 1 mm nominal thickness.

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Estimating Data

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

Thickness	Consumption
4mm	8 - 10kg/m ²
6mm	12 - 14kg/m ²

Packaging

Ucrete MF is supplied in multi-component polykits, consisting of:

Ucrete MF Part 1	2.52 kg
Ucrete MF Part 2	2.86 kg
Ucrete MF Part 3	14.4 kg
Ucrete Liquid Pigment Part 4	0.5 kg

Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

Disclaimer

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STATEMENT OF RESPONSIBILITY

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