



Ucrete IF

Iron armored heavy-duty polyurethane floor finish

MATERIAL DESCRIPTION

Ucrete IF is a unique HD polyurethane resin floor which provides an extremely tough surface for environments subject to extreme impact and abrasion.

Its dense and impervious iron-armoured surface provides protection against severe abrasion making it the ideal floor finish for applications in the waste management, heavy engineering and manufacturing industries and wherever a robust long-lived floor is required.

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

TYPICAL APPLICATIONS

Ucrete IF is used to protect horizontal surfaces including:

- Waste transfer stations
- Transition strips
- Heavy engineering workshops
- Heavy process areas
- Under mixing heads
- Storage bunkers
- Loading docks
- Heavy equipment maintenance facilities

Ucrete IF is suitable for use where trafficked by racking with hot steel wheeled racks and bins, for example upon their removal from ovens or autoclaves.

ADVANTAGES

- Can be applied onto 7 day old concrete or 3 day old polymer screeds
- Fully serviceable within only 24 hours (subject to temperature)
- Solvent free and non-tainting
- Specially treated iron aggregates for maximum abrasion resistance
- Long lived and low maintenance
- Steam cleanable
- No primer required, enabling rapid installation in a single application

COLOURS

Ucrete IF is available in seven standard colours:

Red Yellow Green Orange
Grey Blue Green/Brown

Because of the iron aggregate the colour shades are significantly different from other Ucrete flooring systems.

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.

RAPID INSTALLATION

Specifications are available that enable **Ucrete IF** to be installed and cured within a 12 hour application window even at low temperatures.

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 Builders Solutions representative.

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TYPICAL PROPERTIES*

Density	2800 kg/m ³
Compressive strength (EN13892-2)	55 - 60 MPa
Tensile strength (BS6319 Part 7)	8 MPa
Flexural strength (EN13892-2)	17 MPa
Compressive modulus (BS 6319: Part 6)	3350 MPa
Adhesive strength to concrete (EN13892-8)	concrete failure
Fire Testing: (EN13501: Part 1)	B _{FL} – S ₁

Samples cured for 28 days at 20°C.

TEMPERATURE RESISTANCE

Ucrete IF floors are fully resistant to high temperature spillage and discharge up to 120°C and are fully steam cleanable.

Ucrete IF is suitable for use where trafficked by racking with hot steel wheeled racks and bins, for example upon their removal from ovens or autoclaves.

NON-TAINTING

Ucrete IF is solvent free and non-tainting from the end of mixing.

IMPACT RESISTANCE

With high mechanical strengths and a low elastic modulus, **Ucrete IF** 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.

ABRASION RESISTANCE

The carefully selected mineral and iron aggregates impart very high abrasion resistance characteristics. In heavy wear areas the iron becomes annealed on the surface providing long term protection.

CHEMICAL RESISTANCE

Ucrete IF 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 mineral acids: hydrochloric, nitric, phosphoric and sulphuric. Dilute and concentrated alkalis, including sodium hydroxide to 50% concentration.

Animal fats and vegetable oils, sugars flavourings 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 discolouration may occur with some chemicals depending upon the nature of the spillage and the standards of housekeeping employed.

Some strong mineral acids and oxidizing agents may cause some corrosion of the iron aggregates.

Extensive chemical resistance tables are upon request. For detailed information, please contact your local Master Builders Solutions office for guidance.

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.

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PERMEABILITY

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

SLIP RESISTANCE

The **Ucrete IF** surface profiles have coefficient of friction as determined to EN 13036 Part 4 using the 4S rubber on the wet floor as follows:

Ucrete IF 45 - 60

Optimum slip resistance can only be maintained with regular cleaning.

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.

CURING

Normally **Ucrete IF** floors can be put into service within 24 hours even at 8°C. Specifications are available that can be put back into service after 5 hours at 10°C.

CLEANING

Regular cleaning and maintenance will enhance the life and appearance of any floor. **Ucrete IF** is readily cleaned with industry standard cleaning chemicals and equipment. The use of alkaline based cleaners is recommended. Please consult your local cleaning chemical or equipment supplier.

Detailed cleaning guidelines are available from your local Master Builders Solutions office.

COVERAGE

9mm: 25.5 kg/m²

Note: Above coverage rates do not include wastage.

PACKAGING

Ucrete IF is supplied in 35.53kg kits working packs consisting of the following:

Ucrete IF Part 1	2.37kg
Ucrete IF Part 2	2.86kg
Ucrete IF Part 3	17.3kg
Ucrete IF Part 5	12.5kg
Ucrete pigment Part 4	0.5kg

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.

HEALTH AND SAFETY

In its cured state Ucrete is physiologically non-hazardous.

For normal flooring applications Ucrete does not require the use of respiratory protective equipment during installation.

Operatives should consult the CoSHH risk assessment and their work instructions.

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NOTE

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* Properties listed are based on laboratory controlled tests.

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