

Ucrete® IF

Iron armored heavy duty polyurethane hybrid floor system

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.

RECOMMENDED USES

Ucrete IF is used to protect horizontal surfaces including:

- Waste transfer station
- 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.

FEATURES AND BENEFITS

- **Fast application** - Can be applied onto 5 days old concrete or 3 days old polymer screeds.
- **Fast cure** - Fully serviceable within only 24 hours (subject to temperature)
- **Non Tainting** - Is solvent free and non-tainting as tested by the Campden & Chorleywood Food Research Association
- **Malleable treated cast iron aggregate** - Higher abrasion and impact resistance than natural aggregates
- **High temperature resistance** – Cleanable with direct steam contact.
- **No primer required** - Rapid installation in a single application.

PERFORMANCE DATA

Density (kg/m ³) (BS 6319:Part 5)	2800
Compressive strength (MPa) (BS 6319:Part 2)	55-60
Tensile strength (MPa) (ISO R527)	8
Flexural strength (MPa) (ISO 178)	17
Compressive modulus (MPa) (BS 6319:Part 6)	3350
Adhesive strength to concrete (BS6319:Part 4)	Concrete failure
Fire Testing (EN13501: Part 1)	B _{FL} – S ₁
Surface spread of flame (BS 476:Part 7)	Class 2
Slip resistance (EN 13036 Part 4) 4S Rubber	40 - 45
Water Absorption(mL) (CP.BM 2/67/2)	0

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 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 discoloration may occur with some chemicals depending upon the nature of the spillage and the standards of housekeeping employed.

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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.

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.

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 colours.

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

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

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

ESTIMATING DATA

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

Thickness	Consumption
9mm	28 - 30 Kgs/m ²

PACKAGING

Ucrete IF is supplied in multi-component polykit as given below:

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

SHELF LIFE

Ucrete IF has a shelf life of 12 months. Store in covered warehouse conditions above 5°C and out of direct sunlight. Materials must be raised off the floor and kept dry. Parts 1 and 2 must be protected from frost and if frozen should be discarded.

PRECAUTIONS

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

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions 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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