



The Chemical Company

UCRETE RG

Heavy Duty Polyurethane Render

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

Description of Product

UCRETE RG provides a robust render for vertical applications in wet and dry process environments. It is dense and impervious providing the ideal finish for applications in the food and beverage, pharmaceutical and chemical industries.

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

Fields of Application

UCRETE RG is used to protect vertical surfaces including:

- Plinths
- Drains
- Secondary containment bunds
- Tank bases
- Sumps
- Effluent storage pits
- Coving and skirting

Features and Benefits

- Suitable for application onto 7 day old concrete and 3 day old polymer screeds
- Achieves full cure in only 48 hours (subject to temperature)
- Hygienic and non-tainting
- Solvent free
- Low maintenance – easy to clean
- Steam cleanable @ 9mm and above
- Rapid installation, up to 9 mm in a single application

Performance Data

Temperature Resistance

The UCRETE RG resins do not start to soften until temperatures above 130°C are exceeded. Specifications are available that are serviceable up to 120°C and are fully steam cleanable.

Non Tainting

UCRETE RG is solvent free and non tainting as tested by the Campden & Chorleywood Food Research Association.

Chemical Resistance

UCRETE RG offers exceptional resistance to a wide range of chemical aggressors. For example it is resistant to the following commonly encountered chemicals.

- dilute and concentrated acids: hydrochloric, nitric, phosphoric and sulphuric
- dilute and concentrated alkalis, including sodium hydroxide to 50% concentration
- most dilute and concentrated organic acids
- fats, oils and sugars
- cleaning chemicals and sanitizing agents
- mineral oils, kerosene, gasoline and brake fluids
- most organic solvents

Extensive chemical resistance tables are available in the separate data sheet 'A guide to the chemical resistance of UCRETE Flooring'.

Note: some staining or discolouration may occur with some chemicals depending upon the nature of the spillage and the standards of house keeping employed.

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Impact Resistance

With high mechanical strengths and a low elastic modulus, UCRETE RG 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.

Cleaning

Regular cleaning and maintenance will enhance the life of any finish, retain the appearance and reduce the tendency to retain dirt.

Permeability

UCRETE RG 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 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.

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'

Colours

UCRETE RG is available in seven standard colours:

Red, Yellow, Green, Orange, Grey & Cream

The UCRETE resin 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.

Specification

The coving / lining / finish shall be UCRETE RG from BASF Construction Chemicals, of 19 Broad Ground Road, Redditch, Worcestershire, B98 8YPB installed at 4/6/9* mm in accordance with the manufacturers' instructions.

*A 4 mm UCRETE RG lining is fully resistant to liquid spillage and discharge up to 60°C

*A 6 mm UCRETE RG lining is fully resistant to liquid spillage and discharge up to 70°C and can be lightly steam cleaned.

*A 9 mm UCRETE RG lining is fully resistant to high temperature spillage and discharge up to 120°C and is fully steam cleanable.

Where long term contact with chemicals will occur, when lining drains and sumps, for example, a minimum thickness of 6 mm should be used

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

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Technical Data/Typical Properties

Samples cured for 28 days at 20°C

Density (BS 6319:Part 5)	2090 kg/m ³
Compressive strength (BS 6319:Part 2)	52 MPa
Tensile strength (ISO R527)	7 MPa
Flexural strength (ISO 178)	15 MPa
Adhesive strength to concrete (BS6319:Part 4)	concrete failure
Fire Testing: EN13501: Part 1	B – S1
Surface spread of flame (BS 476:Part 7)	Class 2

Coverage

4 mm: 8.5 kg/m²

6 mm: 12.5 kg/m²

9 mm: 19 kg/m²

Curing

Normally UCRETE RG can be put into service within 24 hours even at 8°C. Full chemical cure is achieved at 48hours

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. Parts 1 & 2 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.

Warnings and precautions

In its cured state UCRETE RG is physiologically non-hazardous.

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

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BASF Construction Chemicals (UK) Ltd 19 Broad Ground Road Lakeside, Redditch Great Britain B98 8YP	
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EN13813 SR-B>2,0-AR0,5-IR>4-ER ² <10 ⁶ -ER ³ <10 ⁶	
Synthetic resin screed material	
Reaction to fire:	NPD
Release of corrosive substances:	NPD
Water permeability:	NPD
Mechanical resistance:	NPD
Wear resistance:	AR0,5
Bond strength:	B>2,0
Impact resistance:	IR>4
Sound insulation:	NPD
Sound absorption:	NPD
Thermal resistance:	NPD
Chemical resistance:	NPD
Electrical resistance:	ER ² <10 ⁶ -ER ³ <10 ⁶

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Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Solvent Based Products

Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying.

Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

Powder Products

Should be handled to minimise dust formation; use light mask if excessive dust unavoidable. Cement powders when wet or moistened can cause burns to skin and eyes which should be protected during use.

Resin Products

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

Spillage

Chemical products can cause damage; clean spillage immediately.

Disclaimer

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* Properties listed are based on laboratory controlled tests.

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