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 Resinous
 Flooring

Ucrete[®] HF60RT

Heavy Duty Polyurethane Floor Finish

PACKAGING

MasterSeal P 255
 – 3.4-gallon (12.9 L) pail

Part 1 and 2: 3 liter jugs filled to provide the proper ratio

Part 3: 49.6 lbs (22.5 kg) bag

Part 4: 1.1 lbs. (.5kg) pigment sachet

SHELF LIFE

MasterSeal P 255: 1.25 years

Part 1: 9 months when properly stored

Part 2: 1 year when properly stored

Part 3: 9 months when properly stored

Part 4: 2 years when properly stored

STORAGE

Store and transport in unopened container in a clean, dry area at stable temperatures approximating 40 to 86 °F (5 to 30 °C).

Must be protected from frost.

COLORS

Ucrete HF60RT is available in eight standard colors: Red, Yellow, Green, Orange, Grey, Cream, Blue, Green/Brown

SUBSTRATE

– Over new and existing concrete surfaces and toppings; when applying over other substrates, contact Master Builders Solutions Technical Service.

WHERE TO USE

- Meat, Poultry and Seafood Plants
- Dairy Plants
- Beverage and Bottling Facilities
- Pharmaceutical Plants
- Commercial Kitchens and Restaurants
- Freezers and Coolers

LOCATION

- Wet conditions requiring a heavily texture slip resistant surface
- Some color instability in direct UV exposure
- Interior or exterior applications

YIELD

¼" (6 mm): 20–23 sq ft

For coverage rates, refer to the Ucrete Contractor Installation Guideline.

DESCRIPTION

Ucrete HF60RT is a ¼" (6mm) flow applied floor topping based upon the unique Ucrete HD polyurethane resin system.

Ucrete HF60RT is designed for rapid installation, making it ideally suited for large fast track new build and refurbishment projects.

Ucrete HF60RT provides a lightly textured protective floor finish suitable for applications in wet and dry process environments. 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.

Ucrete Industrial Flooring has been widely used throughout industry for more than 50 years, many of the older floors are still in service.

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 where they are rated A+ for VOC emissions (the cleanest rating).

NON-TAINTING

Ucrete HF60RT is non-tainting from the end of mixing, as tested by the Campden Technology Ltd.

TEMPERATURE RESISTANCE

The Ucrete HF60RT resins do not start to soften until temperatures above 266 °F (130 °C) are exceeded.

Ucrete HF60RT floors are fully serviceable up to 176 °F (80 °C). Suitable for freezer temperatures down to -13 °F (-25 °C).

FEATURES	RESULTS
• Thermal stability	Resists steam or continuous hot-water
• Fast curing, in temps as low as 50 °F / 10 °C	Minimized down time
• Solvent free	Low odor; VOC compliant
• Can be applied to 7–10 day old concrete	Accelerates work schedules
• Chemical resistant	Tolerates organic and inorganic acids, alkalis and salts
• Unaffected by freeze/thaw cycles	Handles wide temperature fluctuations
• Wide temperature in-service range	Exceeds that of typical epoxy overlays
• Excellent impact abrasion and resistance	Handles heavy traffic
• For the use in facilities operating HACCP	Can be used in food and beverage facilities

NOTE: With high mechanical strengths and a low elastic modulus, Ucrete HF60RT 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 disembodyment are unknown with Ucrete floors.

TECHNICAL DATA COMPOSITION

Ucrete HF60RT is a four-component polyurethane concrete system.

Test Data Header

PROPERTY RESULTS TEST METHOD	RESULTS	TEST METHOD
Compressive Strength, psi (MPa)	6960 – 7830 psi (48 – 54 MPa)	ASTM C579, Load Rate
Tensile Strength, psi (MPa)	870 psi (6 MPa)	ASTM C307
Density, lb./ft ³ (g/cm ³)	122.9 lbs/ft ³ (1970kg/m ³)	
Flexural Strength	2030 psi (14 MPa)	ASTM C580
Compressive Modulus	4.35 x 10 ⁵ psi (3000 MPa)	ASTM C 469
Adhesive Strength to Concrete	Concrete Failure	ASTM C1583 / ASTM D4541
Coefficient of Thermal Expansion	4.1 x 10 ⁻⁵ °C ⁻¹	ASTM C531: Part 4.05
Fire Testing	BFL – s1	ASTM E84

Chemical Resistance

Ucrete HF60RT offers exceptional resistance to a wide range of chemical aggressors. For example, Ucrete is resistant to the following commonly encountered chemicals

- Acetic Acid, 50%: Spirit vinegar is widely used in the food industry, indicative of resistant to vinegar, sauces, etc
- Concentrated Lactic Acid @ 140 °F (60 °C): Indicative of resistance to milk and dairy products.)
- Oleic Acids, 100% @ 140 °F (60 °C): Representative of the organic acids formed by oxidation of vegetables 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
- Resistant to a wide range of mineral oils, salts and inorganic acid

HOW TO APPLY

Ucrete systems are installed by approved contracting firms who have completed the manufacturer's training workshops. Ucrete is a globally branded product line with industry synergies around the world.

The following is only a summary of the installation techniques used by your Ucrete approved contractors. Refer to the Ucrete Contractor Installation Guideline for more information.

SURFACE PREPARATION

1. Repair concrete as necessary.
2. Use commercial degreaser to clean floors of oil, grease and other bond-inhibiting materials.
3. Remove curing and parting compounds and other surface hardeners and floor coatings in accordance with the manufacturer's instructions.
4. Mechanical surface profiling is the method of surface penetration for both new and existing floors. Mechanically profile the floor to a minimum CSP 4–5 as described by the International Concrete Repair Institute.
5. Apply at least a 100 square foot test in an inconspicuous area that meets the owner's expectations for appearance, slip resistance, and performance.
6. Floors must be structurally sound and properly cured. The prepared concrete surface should appear dry at the time of installation.

PRIMING

Primer is recommended to minimize outgassing from prepare concrete substrate. The recommended primers are the Ucrete Primer FS or MasterSeal P255.

MasterSeal P255

CURING – Allow it to cure 4 hours.

COVERAGE – It should be apply at a rate 200 to 250 sq/ft per gallon

Ucrete Primer FS

CURING – Prior to application of a subsequent coat, check that the surface is hard and tack-free. The re-coating time is dependent upon humidity and temperature, but typically PRIMER FS can be overlaid: after 7 hours at 41 °F (5 °C), after 4 hours at 50–59 °F (10–15 °C), after 3 hours at 68 °F (20 °C), after 2 hours at 86 °F (30 °C). Defects in the primed surface, such as blow holes in the surface as a result of air rising out of bleed run pores in the substrate, should be remedied prior to overlaying. Failure to do so may lead to surface defects in the finished floor. If the time between coats exceeds 30 hours, or if condensation or water impacts the surface, fully abrade the surface prior to overlaying.

UCRETE PRIMER FS COVERAGE

Coverage is greatly influenced by substrate texture and porosity as well as temperature and mixer efficiency. Typical coverage rates are: 0.6–2 kg/m² (6–20 m² / unit) Typically 0.6 kg/m² where otherwise a rollcoat primer might be used. Typically 1–1.5 kg/m² where otherwise a scratchcoat primer is required.

APPLICATION

*Note: temperature is critical in the correct application of the Ucrete HF60RT systems. The air and substrate temperature during application should be above 54 °F (12 °C).

1. Open jugs of Part 1, Part 2 and Part 4 liquid pigment pack.
2. Mix the 3 components using a mechanical mixer. The materials are supplied in pre-measured containers. If using the Ucrete Accelerator, reference curing table for recommended dosage (per kit). Varies by room temperature.
3. Add the powdered Part 3 and continue mixing for another 2–4 minutes (temperature dependent). Scrape sides at least once. Do not mix by hand.

4. Immediately discharge the product and place material on substrate to be coated. Mix subsequent batches immediately.
5. Spread the mix evenly over the substrate using a pin rake, with pins set to the appropriate depth. Use a steel trowel for edgework.
6. Use a spiked roller to produce a smooth even finish. The whole floor should be spike rolled twice. The first pass to assist with flow, and remove pin rake marks. The second pass, the roller should be held lightly on the surface to bring the resin to the surface.
7. The working life is approximately 10 minutes. Multiple units may be mixed, but do not mix more than can be applied in 10 minutes.

Note: If the Basecoat does not flow sufficiently and pin rake marks remain on the surface, even after spike rolling, try the following:

- Prime or scratch coat the substrate
 - Raise or lower the material temperature
 - Increase the mix time
 - Increase thickness
 - Raise the substrate or site temperature
- Failure to address the problem will result in poor aesthetics, variable surface texture and sub standard finish.

CURING TIME

Allow to cure overnight (typically 16 hours). If using Ucrete Accelerator, reference table to understand accelerator requirements at various room temperatures and corresponding cure times. Material should be conditioned at 70 °F (21 °C) for optimal cure results and workability.

TEMPERATURE	1 OZ	2 OZ
70 °F	2 hrs	Not Recommended
60 °F	4 hrs	3 hrs
50 °F	5 hrs	4 hrs
40 °F	Not Recommended	3 hrs

FOR BEST PERFORMANCE

- The owner and architect should discuss joint details with the flooring contractor before the job starts.
- Substrates must be structurally sound, clean, dry, and free of any foreign matter that could inhibit adhesion.
- Do not apply directly to unreinforced sand cement screeds, asphalt or bitumen substrates, glazed tile or nonporous brick and tile, magnesite, copper, aluminum, existing coatings, epoxies, or polyesters. For optimal performance, apply directly to concrete. Consult with your Ucrete representative for advice.
- Master Builders Solutions representatives and flooring specialists are available to assist you in the selection of the proper flooring system. Call 1-800-243-6739 for in-house and field technical assistance.-Make certain the most current versions of the product data sheets and SDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by Master Builders Solutions personnel are for the purpose of making technical recommendations only and not supervising or providing quality control on the jobsite.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.com/en-us, e-mailing your request to mbsbscst@mbcc-group.com or calling 1(800)433-9517. Use only as directed.

IN CASE OF EMERGENCY: Call CHEMTEL +1 (800) 255-3924 or if outside the US or Canada, +1 (813) 248-0585.

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