Technical Data Guide

MASTER® BUILDERS SOLUTIONS

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Resinous Flooring

Ucrete® TCCS

Heavy Duty Color Stable Encapsulation Resin for Enhanced Aesthetics – Topcoat for Ucrete DP Base Coats

PACKAGING
Ucrete TCCS: 16.19 lbs (7.35 kg) unit
Part A 15.43 lbs (7 kg) Metal Pail
Part B 0.52 lbs (0.235 kg) Small Bottle Container
Part C 0.24 lbs (0.11 kg) Tube

SHELF LIFE
Part A - 2 years when properly stored
Part B - 1 year when properly stored
Part C - 1 year when properly stored

STORAGE
In covered warehouse conditions, above 41 ºF (5 ºC) and below 86 ºF (30 ºC) and out of direct sunlight.

Materials must be raised off the floor and kept dry. Liquid components must be protected from frost.

COLORS
Ucrete TCCS is available in 12 light stable colors: Blue, Cream, Green, Grey, Green/brown, Orange, Red, Yellow, Bright Yellow, Light Grey, Light Green, Light Blue

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
110 sq. ft. per kit

DESCRIPTION
Ucrete TCCS is a three component, heavy duty encapsulation resin available in 12 light stable colors.

Ucrete TCCS is to be used with DP Basecoat flooring systems providing attractive, hygienic and slip resistant floors.

Ucrete TCCS is not a floor coating it is a topcoat. It exhibits exceptional chemical and temperature resistance when used as part of a Ucrete floor application.

PRODUCT HIGHLIGHTS
- Light stable and non-yellowing matt sheen finish.
- Very low staining when in contact with a wide range of chemicals and food industry products
- Expert installation by fully trained applicators
- Non-tainting after 5 hours, as tested by Campden Technology Ltd.
- Rapid curing allowing a rapid return to service

NON TAINTING
Ucrete TCCS is non-tainting after 5 hours, as tested by Campden Technology Ltd. Food products should be kept out of the area during the installation process. Ensure adequate ventilation until returning the floor to service after 5 hours.

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
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 facilites

Technical Data Composition
Ucrete TCCS is a three component, heavy duty encapsulation resin.

Chemical Resistance

Ucrete CS 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 byoxidation 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 offruit acids which can rapidly degrade other resin floors
- **Methanol, 100%:** Representative of alcohols and the wider range of solvents used in thepharmaceutical industry
- Resistant to a wide range of mineral oils, salts and inorganic acid
- **Concentrated Citric Acid:** As found in citrus fruits and representative of the wider range of fruit acids which can rapidly degrade other resin floors
- **Nitric acid:** as used in many CIP cleaning solutions. Ucrete TCCS is particularly resistant to the staining commonly encountered where these are used

NOTE: Full chemical resistance is achieved after curing for 7 days. For chemical resistance to a specific compound, consult the Chemical Resistance Guide. Some staining or discoloration may occur with some chemicals, depending upon the nature of the spillage and the standards of housekeeping employed. Contact your local Master Builders Solutions representative for more information.

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
The surface of the Ucrete TCCS basecoat must be clean, dry and free from loose particles of aggregate, prior to the application.

Once abraded the surface should be swept and thoroughly vacuumed.

Important: Failure to follow this step will result in surface defects (pinholes and material tearing) and poor aesthetics. It is a mandatory application process.

PLANNING
It is important to remember that you are not painting the floor but applying a Ucrete Topcoat. The width of the bay should be such as to produce a strip of material **minimum 18–20 inches** across along the whole width of the bay to allow for efficient use of the squeegee and roller.

On larger floors plan how the area is to be divided to produce the most practical and aesthetically acceptable floor.

Make sure there are sufficient operatives on site to apply the whole of the mix within the 3-4 minutes before the next mix arrives. **This should not be fewer than 4 people**.

Operatives can wear spiked shoes but these must have flat spikes to prevent damage to the floor. Alternatively they may wear 30–60 grit self-adhesive sandpaper (“deck,” or “grip,” tape). This allows for more freedom of movement and reduces damage to the aggregate surface.

As with all grades of Ucrete the mixing and the application of the material must occur at the same rate.

Ensure adequate ventilation and that there are no foodstuffs in the area during application. There is an odour during application. The floor is non tainting after 5 hours. The air must be removed from the area and exchanged with fresh air prior to reintroducing foodstuffs, forced ventilation may be required in some circumstances, e.g. in the middle of a factory.

TEMPERATURE REQUIREMENTS
Site temperatures 50–86 °F (10–30 °C), material temperatures 54–77 °F (12–25 °C). Temperature is critical to the correct application of the Ucrete TCCS. Ucrete TCCS is a system sold where aesthetics is a key selection factor. Ensuring better control of site and materials temperatures during installation will give a better-looking floor. These should be factored into the site discussions with the client and main contractor. Temperatures below 54 °F (12 °C) will make application more prone to problems. The air and substrate temperature during application should be above 50 °F (10 °C). Do not use at temperatures above 86 °F (30 °C).

MIXING

Mixing is critical. Mix in the Part A container with a high-speed electric drill at **minimum 450 RPM** with a paint stirrer head / helical paddle **minimum 3 inches diameter**.

Add the Part B to the Part A container and mix for 30 seconds.

Next using the Part C Wand discharge the Part C into the Part A container and mix for **2 minutes**.

Do NOT leave to stand in the bucket. Immediately discharge the full mix onto the application area.

Important: Correct mixing is critical. Insufficient mixing will lead to tacky or uncured material. Overmixing can reduce working time. **A timer must be used.** It is impossible to accurately control the mixing times without a timer, it is as important as the mixer.

TOOLS

Correct tools and equipment will facilitate the application and ensure the best possible results.

Squeegee

The wider squeegees have been found to be most effective. You should avoid using a squeegee that is less than 18 inches wide.

Large folded rubber squeegees work best to correctly spread the material. The foam should be closed cell neoprene type.

Rollers

Rollers are used to apply Ucrete TCCS. However, they are not used to move or redistribute the topcoat in the traditional way. They are used to even the surface in a similar way to a roller on the surface of Ucrete UD200.

The roller should follow the direction of the squeegee application. This is normally across the width of bay. Rolling up and down or at right angles to the squeegee application should be avoided. This can result in dropping freshly applied material into old which can lead to surface defects.

Saturated rollers which can be caused by heavy rolling or incorrect roller selection, have been found to create pinholes. The closed cell polyethene roller or adhesive roller are currently the most effective roller found to finish Ucrete TCCS.

Tools will need to be replaced every 20–40 minutes depending upon temperature due to the rapid resin cure.

APPLICATION

One or two coats depending upon specification or more if a smoother, but less slip resistant, surface is required.

For best results, the site and material temperatures should be in the range 54–72 °F (12–22 °C). Minimum substrate temperature 50 °F (10 °C).

Do not apply when atmospheric condensation is occurring or likely to occur before full cure is attained, i.e., when the dew point is reached or when the ambient or substrate temperature is within 37 °F (3 °C) of the dew point.

Mix with an electric drill and paddle and apply by squeegee and back roll. Avoid ponding. Follow application guidelines.

It is important to achieve the specified coverage rates if the required slip resistance is to be achieved.

TWO SQUEEGEE METHOD

The material is installed using the Two Squeegee method. This requires two installers to be assigned to the squeegee, both wearing flat spikes or 30–60 grit sandpaper on their shoes.

The first squeegee should be considered the spreading tool to achieve the correct consumption rate. This is similar then to a trowel, pin rake or screedbox in other installations. Emphasis should be given to spreading the material out quickly and efficiently to keep up with the continuous mixing.

The seconding squeegee should be considered the finishing tool to achieve the final level and even floor. This squeegee could be compared to the back-rolling step in other applications like UD200. Emphasis should be given to working the topcoat into the texture of the aggregate to remove any trapped air. Rolling is still required but when the second squeegee application is finished the floor should not have any ponded material and very few squeegee marks. This step is the only opportunity to move excess material down the bay.

Important: It is crucial that the material is physically forced into the texture to wet and remove the air from the troughs of the aggregate. Using this method is the simplest and fastest way to achieve a good looking, defect free floor.

Just like all Ucrete products the Ucrete TCCS basecoat will increase in temperature slightly during curing, even on the surface of the floor. This takes place more rapidly with Ucrete TCCS as it is a fast curing product. Any air left trapped under the topcoat will expand when the temperature of the curing topcoat increases. This can cause pinholes.

In the worst-case poor wetting will result in tear marks in the finished floor. This is where the squeegee has not passed over the surface multiple times, forcing the topcoat into the surface from both directions. This does not occur with the two squeegee method.

Rolling as the final finishing step is still required and is done using the closed cell texture roller. It is important to achieve the correct coverage rate and as uniform an appearance as possible with the squeegee, so the roller only needs to remove any slight irregularities.

The closed cell rollers do not pick up and move large amounts of material, so the two squeegee application must be done to a good standard.

Lightly roll across the bay to leave a uniform finish. More pressure can be used to disperse small excesses of Topcoat. If the roller picks up too much of the Topcoat it is likely that too much pressure has been used. A full roller will allow material to spill off the ends and leave deposits at the end of each stroke. Spray off the roller onto older mixes will cause defects. To avoid this remove the excess Topcoat by rolling out onto a piece of cardboard or better, change the roller sleeve.

Important: Roll across the bay and not at right angles to it. Rolling at right angles can cause defects between one mix and the next.

A uniform surface is best achieved by lightly rolling across the bay, with a wide 18 inches closed cell polyethylene roller to remove and final marks left by the two squeegees.

Fresh mixes of material should be poured close to the wet edge making sure there is not a gap left, care needs to be taken at the join between mixes to ensure the area is repeatedly squeegeed in both directions Use a brush and small squeegee for corners and edgework.

CURING TIME

Full cure is normally reached after 3–5 hours.

If necessary, the 2nd application can be applied once the first is dry to the touch, typically after 2–3 hours.

Overcoating must take place within 48 hours at 68 °F (20 °C).

DISPOSAL

Primary packaging/containers should be disposed of as contaminated/hazardous waste in accordance with local regulations.

WARNINGS AND PRECAUTIONS

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. Normal precautions for handling resinous materials should be followed. For further information consult the Safety Data Sheet.

CAUTION

Part B. If exposure to air when finely dispersed (on cleaning rags or dry absorbent materials) an exothermic reaction may occur, the material itself is not self-igniting. DO NOT use dry cleaning cloths. Spillages of material should be diluted wth water before collecting with a non-combustible absorbent material. Collect contaminated clothing/cleaning cloths/absorbent/water/spilled mixture into metal containers and seal. Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. The Part B container should be resealed after use to prevent spillage.

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. 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.

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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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