

# CrownCrete U™ 3/8" Trowel Grade

## Product No. 838

## Technical Data Sheet

### Product Description

**CrownCrete U™ Trowel Grade Product No. 838** is a three-part urethane polymer concrete trowel grade product. It is a high density packed heavy duty system applied at 3/8" thick depending upon design requirements. It is formulated to withstand the aggressive environments offering excellent chemical resistance and superior thermal shock resistance with top of the line functional performances of the CrownCrete U family.



### Advantages

- Water-Based Low Emission
- Contains 20% Plant Based Ingredients
- Meets USDA, FDA, and CFIA Standards
- Self-Priming for Superior Adhesion
- Superior Impact Resistant
- Meets California VOC and SCAQMD Requirements
- Wide Temperature Service Range  
from -50°F to 200°F
- Minimum Application Temperature, 35°F and Above
- High Tolerance to Moisture Vapor Pressure, Up to 15 lbs.
- Green Concrete Applicable, 7 Day Old Concrete
- Resistance to Growth of Bacteria and Fungi

### Recommended Usage

- Chemical Processing
- Food Processing Areas
- Restaurants
- Pharmaceutical
- Bakeries
- Cage Wash Areas
- Bottling Areas
- Sanitize/Wash Area
- Plant Vehicle Aisles
- Warehouses
- Mechanical Rooms

### Concrete Moisture Condition:

CrownCrete U Trowel-Grade can withstand moisture vapor pressure up to 15 lbs./1,000 sq. ft./24 hours. It is the responsibility of the owner or the owner's representative to examine the substrate for contaminants, moisture, and condition of the concrete slab.

Please contact Crown Polymers' Technical Services Team for additional guidelines.

### Technical Properties:

Mechanical Properties	Test Method	Result
Hardness	ASTM-D-2240	80D
Compressive Strength	ASTM C-579	5,000 psi
Shrinkage	ASTM C-531	0.20%
Tensile Strength	ASTM C-307	720 psi
Flexural Strength	ASTM C-580	2,500 psi
Adhesion to Concrete	ASTM D-7234	>400 psi, Concrete Failure
Impact Resistance	ASTM D-2794	>160 in./lb
Water Absorption	ASTM C-413	< 0.01%
Flame Spread/NFPA 101	ASTM E-648	Class 1
Abrasion Resistance CS 17 wheel, 1000-gram load, 1000 cycles	ASTM D-4060	70mg Loss
Coefficient of Friction (James Friction Tester)	ASTM D-2047	0.60, Meet ADA

Physical Properties	Data
Percentage Solids by weight	100%
Mix Ratio (By Volume)	3 Component Kit
Viscosity at 70°F	Not Applicable
Pot Life at 70°F	15-20 minutes
Dry Time at 70°F	6-8 hours
Working Time at 70°F	15 minutes
Spread Rate	18 sq.ft./kit @ 1/4" thickness 12 sq.ft./kit @ 3/8" thickness
Volatile Organic Compounds (VOC)	<5g/l

### Surface Inspection:

All surface overlays should be carefully inspected for surface stains, contaminants, and unsound areas, such as soft or dusting surfaces and delaminations. Surface overlays should be carefully checked to locate weak material or delaminated areas. All cracks should be identified and labeled as structural, moving, or non-moving to determine a proper repair method. Control, isolation and expansion joints should be identified for repairs and sealing. Prior to commencing work, the Architect, Engineer, Owner, and/or the owner's agent must be notified of any project condition changes, detrimental or unsatisfactory conditions that could either delay the completion of the project, interfere with execution of the contract, or result in a defective or faulty installation. Work should not proceed until all conditions have been met to the satisfaction of all parties with respect to all agreed upon changes.

### Surface Preparation:

Remove all unsound concrete, tiles, weak grout, laitance, existing coatings, overlayments, mastics, adhesives, curing compounds, unsound joint materials, and all other materials that may impede proper adhesion of the polymer system. Be sure to use mechanical and abrasive methods that do not create micro-cracking of the substrate. Acid or caustic etching may be required on some projects. When abrasive blasting is not required, acid etching and chemical detergent cleaning is often an acceptable method. Concrete substrate must be neutralized after chemical cleaning: Contact Crown Polymers for more information. Surfaces exposed to oils, grease or fatty acids need to be carefully washed with a detergent and emulsifier before abrasive blasting. The required Concrete Surface Profile (CSP) achieved with mechanical preparation should be performed in accordance with ICRI Guidelines.

CSP 4-6, concrete surface profile, are needed for CrownCrete U Trowel-Grade application.

### **Contaminated Substrate:**

Detergent scrub and rinse with clean water to remove surface dirt, oil, grease and any other contaminants.

### **Materials:**

CrownCrete U Trowel-Grade is available in a kit.

Each kit is comprised of: A component (resin), B component (hardener), and C component (Aggregate).

CrownCrete U 3/8 Trowel-Grade is best applied with an epoxy screed box. It can also be applied with a Cam rake and/or manual trowel followed by spike roll.

<b>Product 838</b>
CrownCrete U 3/8" Trowel-Grade
<b>Tools</b>
Cam Rake, Finish Trowel, Screed Box and Spike Roll
<b>Spread Rate</b>
18-20 sq. ft. per unit @ 1/4"

## **DO NOT MIX UNTIL READY FOR IMMEDIATE USE**

### **General Mixing:**

Proper planning of mixing and application work flow are essential elements to achieving a seamless and aesthetically-pleasing floor.

Plan ahead by laying out installation into sections. Allow the full width of the area to be completed in 15 minutes or less to ensure no placement lines are visible, as cold joint lines will show in the finished floor. Edge details, sloping, and proper pitching are critical for proper flooring system installation. Crack repairs must also be addressed before installation of the CrownCrete U system.

### **Basic mixing:**

1. Pour Part A (resin) into a 5-gallon pail. Make sure the entire content of Part A (resin) is completely drained.
2. Add Part B (hardener) to Part A (resin).
3. Mix Part A (resin) and Part B (hardener) together use a high speed drill (800 RPM) with a 5" Jiffiler type-blade for at least 30 seconds.
4. Gradually add Part C (aggregate) and mix continuously for at least 2 minutes until a homogeneous mix is attained. Move the blade around continu-

ously to ensure the mixture is completely mixed and uniform.

## **THOROUGH AND COMPLETE MIXTURE IS CRITICAL**

The application tool must be kept as clean as possible to avoid excessive buildup of old material. Utilize new or clean tools as necessary to avoid disrupting the application work flow. Avoid dripping solvent into the material during application. Check the floor for proper thickness frequently to ensure your tools are still delivering proper coating thickness.

Allow the installed coatings to fully cure. A minimum of eight (8) hours is needed for light foot traffic when applied at 75°F or above. A minimum cure time of 24 hours may be required for temperatures below 75°F. Material should not be applied at temperatures below 50°F. Additional cure time is needed for heavy traffic loads, such as for fork lifts and heavy machinery.

### **Color Selections:**

Blue, Grey, Dark Grey, Charcoal, Green, Tile Red, and Chestnut.

### **Storage:**

- Must be stored in a dry environment between 50°F - 90°F. Do not allow Part A (resin) or Part B (hardener) to freeze.
- Part A (resin) and Part B (hardener) have approximately 1-year shelf life from the date of manufacture.
- Part C (aggregate) has approximately six (6) months shelf life from the date of manufacture.
- Must be in original, factory sealed container.
- Store drums on wooden pallets to avoid direct contact with the ground.
- Do not open until ready

### **Limitations:**

- Do not use broken, damaged or wet bags of Part C (aggregate).
- Do not split, subtract, or add to the kits unless there are inert materials such as pea gravel or sand for extending purposes.
- Bleaching and staining are possible in pigmented systems due to certain chemicals. (This will not affect performance).
- This product is not UV stable. Sunlight and metal halide exposure will cause yellowing. (This will not affect the performance).

- Batch-to-batch color variations may occur. For best results, use the same lot number together for color consistency.
- Do not apply to un-reinforced sand cement screeds, asphalt or bitumen substrates, glazed tile or nonporous brick and tile, magnesite, copper, aluminum, polyesters or elastomeric membranes.
- Old, damaged, bags of Part C (aggregate) may affect flow, leveling and healing properties.
- **Caution! Do not remove any materials from any pre-measured kits.**

### Cleanup:

Clean up mixing station, tools, and application equipment immediately after completion. Use suitable solvent as specified by Crown Polymers' Technical Services Team or if permissible by law, xylene, as a general over-the-counter solvent. Observe all fire hazards, legal, and health and safety precautions when handling or storing solvents, particularly in confined spaces. Make sure the working area is well-ventilated at all times.

### Maintenance:

Occasionally inspect the installed floor by spot cleaning and spot repairing any damaged or cracked areas. To prolong the life of the flooring system, a daily cleaning

maintenance program is highly recommended to ensure the floor is safe for its intended purpose.

### Safety Precautions:

The installation crew must have proper personal protective equipment (PPE) at all times before, during, and after handling all products. All product safety data sheets (SDS) must be read completely and thoroughly prior to starting work.

Follow and observe all manufacturer, local, state, and federal regulations and safety hazards warnings, procedures, and guidelines. Use only as directed. For professional use only. **KEEP OUT OF THE REACH OF CHILDREN.**

### Disposal:

Dispose all excess materials, packaging, and other waste in accordance with federal, state, and local regulations.

### Packaging:

CrownCrete U is sold in kits as follow:

	Prod. No. 810 Skim Coat	Prod. No. 818 1/8" Self-Leveling	Prod. No. 814 1/4" Self-Leveling	Prod. No. 838 Trowel Grade	Prod. No. 811 Cove Base
<b>Part A (Resin)</b>	5 lbs.	8 lbs.	8 lbs.	<b>5 lbs.</b>	3 lbs.
<b>Part B (Hardener)</b>	5 lbs.	8 lbs.	8 lbs.	<b>5 lbs.</b>	3 lbs.
<b>Part C (Aggregate)</b>	5 lbs.	25 lbs.	39 lbs.	<b>40 lbs.</b>	30 lbs.

### LIMITED WARRANTY

Crown Polymers warrants its products to be free of manufacturing defects and meets all Crown Polymers current published physical properties. Crown Polymers' sole responsibility shall be to replace the portion of any product proved to be defective. There are no other warranties by Crown Polymers of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. Crown Polymers shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. Crown Polymers shall not be responsible for the use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee pertaining to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator will be issued. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. Crown Polymers reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

### DISCLAIMER

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests. The accuracy and completeness of such tests are not guaranteed and are not to be construed as a warranty, expressed or implied. It is the responsibility of the user to document information and tests to determine the intent of the product for ones' own use. The application, job conditions and user assumes all risks and liability resulting from use of the product. We do not suggest or guarantee any hazards listed herein are the only ones which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use the product. Recommendations or statements, whether in written or verbal, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and Crown Polymers makes no claim that these tests or any other tests accurately represent all environments. Not responsible for any typographical errors.