

## Cementitious Polyurethane Flooring System – Perdüre UMC- TG

### Part 1 – General Information

Perdüre UMC-TG is a three-component urethane modified cementitious flooring system designed for thicknesses between 1/4" to 3/8" to protect concrete substrates from chemical corrosion, abrasion, impact and thermal shock. Cementitious polyurethane flooring systems are suitable for food processing areas, production areas, bottling plants, commercial kitchens, pharmaceutical plants, sanitize/wash areas and chemical processing areas.

### Part 2 – Surface Preparation

Surface Preparation is the most critical portion of any successful resinous flooring system application. All substrates must be properly prepared as outlined in Technical Bulletin -1. Specific attention should be paid to the following:

- a) Concrete Placement - An efficient vapor barrier should be directly under slabs on or below grade to prevent moisture migration
- b) Curing and Finishing techniques of the concrete substrate
- c) Age of concrete
- d) Previous contamination of the substrate
- e) Present condition of the substrate
- f) Make sure the floor is free of moisture vapor transmission

Also, the temperature conditions of the area to receive the flooring system should be checked. An optimum room temperature of 75°F with a slab temperature of 50°F is required for proper cure of the resin flooring system.

### Part 3 – Special Conditions

Do not apply in temperatures below 45°F, above 85°F, or if relative humidity is above 85%. To extend working time in hot temperatures, consider cooling the Part I and Part II resin components in ice water or cold storage. Do not apply to sand-cement screeds (tile setting bed mortars), asphaltic substrates, glazed tile or brick (unless glaze is mechanically abraded), copper, aluminum, softwood, or existing coatings of epoxy, polyester, or urethane. DO not apply to wet concrete or to polymer modified concrete with moisture content above 10%. Do not apply to concrete if air temperature is within 5°F of dew point. DO not featheredge application or mix material by hand.

### Part 4 – Material Quantities

- A. Guideline System Requirement for 1000ft<sup>2</sup>  
Perdüre UMC-TG – 56 kits @ 1/4" thick and 84 kits at 3/8" thick
- B. Recommended batch quantities  
1 Kit: 1/2 gallon Part A + 1/2 gallon Part B + 44lb aggregate blend  
Estimated batch coverage: 18ft<sup>2</sup> @ 1/4" thickness or 12ft<sup>2</sup> at 3/8" thickness  
DO NOT mix partial kits  
A 10gal KOL Mixal is recommended.

### Part V – Installation

- A. Priming  
No Priming required under normal circumstances.

## B. Application of Perdüre UMC-TG

### 1. Mixing Perdüre UMC-TG

- a) Start KOL mixer, add resin Part A and Part B and blend for 30 seconds.
- b) Slowly add bag of Aggregate Blend to the resin while mixing in the KOL Mixer. Mixing bucket and mixer or blades should be scraped out thoroughly and cleaned with solvent (acetone, MEK or xylene) every few batches or working time on subsequent batches may be shortened. If mixing in a plastic bucket, dispose of bucket after every 3-4 mixes and replace with a clean bucket.
- c) Continue mixing resin/aggregate mortar for 2 to 3 minutes, be sure that aggregate uniformly wets out. Working time of one batch is approximately 10-15 minutes at 70-75°F. To extend the working life in very warm temperatures, cool the resin components prior to use by placing resin units in ice filled containers of air conditioned storage.

*Set up mixing station as near to the work area as possible. Exothermic heat will be generated and flash setting may occur if material remains in the pail too long. Do not mix more than can be used in 10 minutes.*

### 2. Application

- a) Place mortar mixture on concrete surface and spread with flat steel trowel (recommend 3" X 12") to a thickness of 1/4" or 3/8". Using considerable top pressure on trowel, spread from side to side, push back into the previous, trowel from side to side, push back into the previous mix (wet edge), pull forward to establish the thickness. With lighter pressure, trowel from side to side close up.
  - b) The last few strokes should always be in one direction only, left or right or right to left, but never back and forth.
  - c) Excessive trowelling will bring resin to the surface or reduce the anti-slip surface.
3. Allow the trowelled mortar to cure a minimum 6-8 hours for foot traffic, 8-10 hours for general service operation, and 16-24 hours for heavy duty service operation and maximum chemical resistance (at 75°F). Colder temperatures will slow cure time.

## C. Grouting and Sealing

Grouting and sealing is not necessary unless required for a specific application. Consult with project specifications or your technical representative.

## D. Limitations

- a) Do not apply in temperatures below 40°F or above 85°F.
- b) Do not apply to sand/cement mortar beds or concrete with compressive strength less than 3000psi and tensile strength less than 300psi. Do not apply over any substrate except sound concrete.
- c) Edge Terminations: Do not feather-edge, all free edges of Perdüre UMC-TG will require a keyed edge to distribute mechanical and thermal stresses. A keyed edge is best achieved by forming or cutting grooves in the concrete. Grooves should have a depth and width of at least 2 times the thickness of the Perdüre UMC-TG mortar.

- d) Edge Terminations: All joints should be honored in the Perdüre UMC-TG flooring system. Isolate areas subject to thermal stresses, vibrational movements or around load-bearing columns and at vessel sealing rings. All cracks should be routed out and filled with Perdüre UMC-TG r Perdüre UMC-CO prior to floor application.