

## **CP-300 UHF-RT High Flow Vinyl Ester Floor Topping**

### **PRODUCT DESCRIPTION**

Blome CP-300 UHF-RT is a three-component, high flow, Vinyl Ester polymer floor topping used for the construction of chemical resistant floors, pads, curbing, trenches and sumps. CP-300 UHF-RT is based on a unique formulation that exhibits extremely low curing shrinkage. This makes CP-300 UHF-RT ideal for floor overlay applications, equipment grouting, and resurfacing. CP-300 UHF-RT exhibits excellent resistance to strong mineral acids including 65% nitric, 70% sulfuric, 37% hydrochloric, as well as resistance to caustic solutions, oxidizing bleaches, and splash and spill exposure to many organic acids, such as glacial acetic. The material exhibits excellent bond strength to concrete. Blome CP-300 UHF-RT withstands heavy traffic, physical abuse and is suitable for temperature excursions up to 220°F in many harsh chemical environments. CP-300 UHF-RT is available in Bisphenol A (CP-300-411 UHF-RT) and Bisphenol F (CP-300-470 UHF-RT) formulations. Consult with Blome International to determine the proper formula for specific chemistries.

### **TYPICAL USES**

Blome CP-300 UHF-RT Vinyl Ester Polymer Grout is suitable for use in a variety of applications including:

- Chemical process flooring
- Machinery grouting
- Pump pad and tank pier resurfacing

### **HANDLING CHARACTERISTICS**

Blome CP-300 UHF-RT is generally applied as a floor resurfacing material by the rake/trowel method. CP-300 UHF-RT exhibits excellent flow characteristics and will maintain a 2% slope without slumping. CP-300 UHF-RT is designed to be poured directly onto the substrate and worked into place with a notched trowel or gauge rake. A large finish trowel is used to smooth the surface and remove ridges. Blome CP-300 UHF-RT cures rapidly, offering quick turnaround with minimal downtime for maintenance and new construction applications.

### **TYPICAL PROPERTIES WET**

Components:	Three (3) Resin, Catalyst & Aggregate
Wet density:	125 lbs./ft <sup>3</sup>
Mixed consistency:	Flowable Grout
Pot life:	50°F 90 minutes 77°F 60 minutes
Initial set:	50°F 6 - 8 hours* 77°F 2 - 4 hours*
Final cure	50°F 7 days minimum 77°F 5 days minimum

\*depends on mass

## CURED

Absorption (ASTM C-413)	0.1%
Bond Strength to Concrete	Concrete failure
Coefficient of thermal expansion (ASTM C-531)	$13 \times 10^{-6}$ in/in/°F
Color	Dark gray - black
Compressive Strength (ASTM C-579)	15,500 psi
Shrinkage	0.10 - 0.15%
Tensile Strength (ASTM C-307)	1,900 psi

## PACKAGING & STORAGE

Blome CP-300 UHF-RT is supplied as a three (3) component product, with a Resin, Catalyst and Aggregate. CP-300 UHF-RT Components are packaged as follows:

	Unit Size	<u>1.9 ft<sup>3</sup></u>
CP-300 HF/UHF Resin (Part A)		40 lbs. (1 x 40 lb. pail)
VE Cure (CHP) (Part B)		15 ounces (1 x 15 oz. bottle)*
CP-300 UHF-RT Aggregate (Part C)		200 lbs. (4 x 50 lb. bags)

\*VE Cure is sold at 3 oz/gal. Use 2 oz/gal at higher temperatures.

Material may be screed and finished with hard trowel to desired texture depending on the application. Vibration is not required when using this product, unless a higher filler loading is used to achieve a stiffer mix. Tamping when casting material into forms will aid in removing air pockets, if present. CP-300 UHF-RT will accept a broadcast for a non-slip finish if desired. Broadcast media is applied at a rate of 1 – 2 LBS / ft<sup>2</sup> and finished with a suitable topcoat to encapsulate media.

Shelf life for CP-300 UHF-RT Resin is four (4) months (refrigeration can extend the shelf life). VE Cure and CP-300 UHF-RT Aggregate have a shelf life of two years if kept dry, out of sunlight and in sealed packaging. Keep CP-300 UHF-RT components tightly sealed in original containers until ready for use. Store components in a cool, dry place, out of direct sunlight, and on pallets at temperatures between 50°F – 80°F. Protect CP-300 UHF Aggregate from water and weather while in storage and on job site.

## ESTIMATED COVERAGE

Blome Polymer Grouts and Silicate Grouts are estimated by the cubic foot. One cubic foot covers the following areas at stated thicknesses:

1" thickness	12 ft <sup>2</sup> /cubic foot
½" thickness	24 ft <sup>2</sup> /cubic foot
¼" thickness	48 ft <sup>2</sup> /cubic foot

## BID SPECIFICATION GUIDE

Use Blome CP-300 UHF-RT Non-Shrink Vinyl Ester Polymer Grout as manufactured by Blome International, O'Fallon, MO.

## JOB SITE ENVIRONMENTAL CONDITIONS

Blome CP-300 UHF-RT must be applied while ambient temperatures are between 50°F and 90°F. Blome CP-300 UHF-RT components and substrate temperatures must also be maintained in this range. For best results, store CP-300 UHF-RT components at 75°F minimum, for 24 – 36 hours prior to installation. Installations of CP-300 UHF-RT

should be protected from water and weather during installation and curing.

## **SURFACE PREPARATION**

Concrete must be adequately cured, structurally sound and dry. It must be free of dirt and contaminants; defects should be repaired. All loose coatings must be removed. Concrete must be dry in accordance with ASTM D 4263 Plastic Sheet Test Method. Concrete surfaces must be free of all laitance, oil, curing compounds, and any dust or other loose materials prior to installation of materials. Concrete must be etched or roughened by abrasive blasting, shot blasting, grinding or in some instances, it may be acid etched. Reference ICRI CSP 5 for ideal substrate profile when installing a 1/4" – 1/2" overlay of CP-300 UHF-RT.

Concrete substrates to which Blome CP-300 UHF-RT will be applied should be primed using Blome Primer 205 prior to installation of CP-300 UHF-RT. Apply Blome Primer 205 to prepared concrete substrates using brush or roller, making certain to work primer into the pores of the concrete. Allow primer to cure tack free or until the next day prior to installation of CP-300 UHF-RT.

If CP-300 UHF-RT is being cast in place over a membrane system, liquid or sheet applied membrane surfaces should be fully cured, clean and dry prior to installation of Blome CP-300 UHF-RT. These surfaces should be swept clean and be free of dirt, dust, water or other job site contaminants immediately prior to placing CP-300 UHF-RT.

Do not apply over asphalt-based membranes or latex-modified concrete to avoid possible adhesion issues (consult Blome with any compatibility questions).

## **SAFETY PRECAUTIONS**

Blome CP-300 UHF-RT Resin, Hardener, Aggregate, and mixes of them present various health hazards if handled improperly. CP-300 UHF-RT Read Blome SDSs for precautions before use.

## **APPLICATION EQUIPMENT**

Blome CP-300 UHF-RT is best mixed with a paddle type mortar mixer for large surface areas. Small surface area applications may be mixed in a pail using a drill motor driven paddle blade. All mixing and application equipment must be clean, dry, and free of any contaminants including Portland cement, other mortars or resins. When mixed, CP-300 UHF-RT is transferred to placement area using a clean, dry wheelbarrow or buckets. Forms are filled using clean, dry shovels or buckets. CP-300 UHF-RT is troweled into place using clean / dry notched trowels. A 1/2" x 1/2" notched trowel or gauge rake will yield a nominal thickness of 1/4" after troweling to remove ridges. After placement, CP-300 UHF-RT is finished using a clean, dry, steel finishing trowel to desired surface texture. A small amount of Blome Smoothing Liquid may be applied to the trowel periodically to prevent sticking.

## **MIXING AND APPLICATION**

Mix Resin (Part A) and Hardener (Part B) together with a drill motor driven paddle mixer and blend thoroughly for 1-2 minutes. Pour this mixture into the paddle type mortar mixer and turn the mixer on. Add Aggregate (Part C) to the mixer and mix to a uniform flowable consistency. Mix for 1-2 minutes minimum, making sure there are no lumps or dry pockets of powder on the paddles or in corners of mixer.

The amount of aggregate specified above is ideal for applications requiring high flow. More aggregate can be added if less flow is desired.

For floor overlay applications, CP-300 UHF-RT is troweled or raked into place at desired thickness and then finished immediately, using a steel finishing trowel to establish pitch, work the aggregate into place, and bring sufficient resin to the surface for required finish texture. Minimal finishing is required after placement. If additional trowel finishing is desired, trowels can be lightly wetted with smoothing liquid for finishing CP-300 UHF-RT. 20-40 mesh rounded clean / bagged silica sand can be broadcast onto wet polymer grout to minimize sticky surface while trowelling. The material is then “dry-troweled” into place and finished to desired texture. Typical installations on moderate traffic floor slabs are placed at a nominal ¼” – ½” thickness.

When casting into forms it is important that all forms be sealed “watertight” to prevent weeping of resin from forms. Forms must be treated with a wax or petrolatum-based form release agent, or wrapped with Mylar, polyethylene or other plastic sheet to prevent CP-300 UHF-RT from permanently bonding to forms. Some vertical installations require anchors or mesh to mechanically secure CP-300 UHF-RT to substrates. Vibration is recommended to remove entrained air from castings. Maximum pour depth for typical grout pad construction will vary depending on the specific resin that is selected. Deeper pours can be made in cool temperatures (<70°F), or may be grout poured in lifts, allowing a cool down period between lifts.

When placing under baseplates, the use of a headbox or similar device is recommended for a continuous pour to avoid air pockets under baseplates. CP-300 UHF-RT shall be placed from one side to the other, maintaining contact with the bottom of the baseplate at all times, maximizing effective bearing area under baseplate.

## **CLEANUP**

All tools, mixing equipment, gloves and application equipment should be cleaned up immediately using a citrus or biodegradable cleanser, with hot water, while material is still wet. If material begins to cure, solvent-based cleaners will be required for removal.

## **WARRANTY**

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANT ABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

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