BLOME INTERNATIONAL

Surrounding You with Exceptional Protection

CHEMICAL PROOFING SYSTEMS

CP-350C

Carbon Filled Vinyl Ester Polymer Concrete

PRODUCT DESCRIPTION

Blome CP-350C is a three-component, Carbon Filled Vinyl Ester Polymer Concrete used for the construction of chemical resistant floors, pads, curbing, trenches and sumps. CP-350C is based on a unique formulation that exhibits virtually no curing shrinkage. This makes CP-350C ideal for concrete overlay applications and equipment grouting. CP-350C exhibits superior resistance to strong mineral acids including 65% nitric, 70% sulfuric, 37% hydrochloric, as well as resistance to fluorides and hot caustic solutions, oxidizing bleaches, and splash and spill exposure to many organic acids, such as dilute acetic. The material exhibits excellent bond strength to concrete and physical properties at least 3 times that of standard concrete. Blome CP-350C withstands heavy traffic, physical abuse and is suitable for temperature excursions up to 220°F in many harsh chemical environments.

In addition to field installations, Blome CP-350C is supplied in Precast Shapes. These include precast trench sections, sumps, pits, floor slabs, pump pads and other fabrications that are made to fit the exact dimensions of each specific project. Precast shapes are fabricated off site and delivered to job site, ready to drop into place. Construction joints in precast pieces are quickly and easily seamed on site. These precast systems minimize downtime.

TYPICAL USES

Blome CP-350C Carbon Filled Vinyl Ester Polymer Concrete is suitable for use in a variety of applications including:

- Nitric / HF Pickling Operations
- Pump pads and tank piers
- Chemical process flooring
- Pre-cast trenches and sumps

HANDLING CHARACTERISTICS

Blome CP-350C is placed by casting into forms, or by screeding into place as an overlay on floor slabs and concrete pads. CP-350C is typically vibrated into forms or is easily screeded into place for floor overlay applications and finished immediately with steel finishing trowel dampened with solvent. Blome CP-350C 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:	144 lbs./ft^3
Mixed consistency:	Castable concrete
Pot life:	50°F 50 minutes
	77°F 25 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

CURED

Absorption (ASTM C-413)	Less than 0.1%
Bond Strength to concrete	concrete failure
Coefficient of thermal expansion (ASTM C-531)	13 x 10^{-6} in/in/^{o}F
Color	Black
Compressive Strength (ASTM C-579)	11,200 psi
Shrinkage	0.1% maximum
Tensile Strength (ASTM C-307)	1,800 psi

PACKAGING & STORAGE

Blome CP-350C is supplied as a three (3)-component product, with a Resin, Catalyst and Aggregate. CP-350C Components are packaged as follows:

COMPONENT	STANDARD KIT	LARGE KIT
CP-350C	**STANDARD UNIT (0.40 Ft3)**	**LARGE UNIT (1.6 Ft3)**
RESIN (PART A)	1 x 8.25 LB. CAN RESIN	1 x 34 LB. PAIL RESIN
CATALYST (PART B)	1 x 3 OZ BOTTLE	1 x 8 OZ BOTTLE
AGGREGATE (PART C)	1 x 45-LB BAG AGGREGATE	4 x 45-LB BAGS AGGREGATE

This mix will exhibit low slump and is best placed by screed and finished with a solvent dampened steel trowel to desired texture. Use vibration when casting material into forms.

Shelf life for CP-350C components is three (3) months. Keep CP-350C components tightly sealed in original containers until ready for use. Store components in a cool, dry place, out of direct sunlight, and on pallets between 50°F - 80°F. Protect CP-350C Aggregate from water and weather in storage and on job site.

ESTIMATED COVERAGE

Blome Polymer Concretes and Silicate Concretes are estimated and sold by the cubic foot. One cubic foot covers the following areas at stated thickness:

½" thickness	24 ft^2/cubic foot
1" thickness	12-ft^2/cubic foot
2" thickness	6-ft^2/cubic foot

BID SPECIFICATION GUIDE

Use Blome CP-350C Carbon Filled Vinyl Ester Polymer Concrete as manufactured by Blome International, O'Fallon, MO.

JOB SITE ENVIRONMENTAL CONDITIONS

Blome CP-350C must be applied while ambient temperatures are between 50°F and 90°F. Blome CP-350C components and substrate temperatures must also be maintained in this range. For best results, store CP-350C components at 75°F minimum, for 24 – 36 hours prior to installation. Installations of CP-350C 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 contaminates and all 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. Check with Blome International for optional recommendations.

Concrete substrates to which Blome CP-350C will be applied should be primed using Blome Primer 205 prior to installation of CP-350C polymer concrete. 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-350C.

If CP-350C 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-350C. These surfaces should be swept clean and be free of dirt, dust, water or other job site contaminants immediately prior to placing CP-350C.

SAFETY PRECAUTIONS

Blome CP-350C Resin, Catalyst, Aggregate, and mixes of them present various health hazards if handled improperly. Wear respirator suitable for dust and organic vapors, safety glasses with side shields, gloves and long sleeve shirts to prevent all contact with skin and eyes. After working with Blome CP-350C, wash thoroughly before eating, drinking, smoking or other activities.

APPLICATION EQUIPMENT

Blome CP-350C is best mixed with a paddle type mortar mixer or 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-350C is transferred to placement area using a clean, dry wheelbarrow or buckets. Forms are filled using clean, dry shovels or buckets. CP-350C is screeded into place using a clean, dry screed board to reach desired thickness. When placed, CP-350C is finished using a clean, dry, steel-finishing trowel to desired surface texture

MIXING AND APPLICATION

Mix Resin (Part A) and Catalyst (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 castable 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 should not be adjusted as this will potentially lead to increased shrinkage or cracking during cure. It is also important to place and finish the material immediately after mixing is completed. Within approximately 5-10 minutes after mixing, the material will have a sticky consistency making it difficult to trowel and / or finish.

For floor overlay applications, CP-350C is screeded 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. Finish immediately as screeded polymer concrete will begin to get sticky within 5-10 minutes after placement. Trowels can be lightly wetted with solvent for finishing CP-350C. Typical installations on high traffic floor slabs are placed at a nominal one-inch (1”) thickness.

When casting into forms it is important that all forms be sealed “water tight” 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-350C from permanently bonding to forms. Some vertical installations require anchors or mesh to mechanically secure CP-350C to substrates. Vibration is recommended to remove entrained air from polymer concrete castings. Maximum pour depth for typical concrete pad construction is twelve inches (12”). Deeper pours can be made in cool temperatures (<70°F), or may be poured in lifts, allowing a cool down period between lifts.

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. As 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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Supersedes all previous literature