BLOME INTERNATIONAL

Surrounding You with Exceptional Protection

CHEMICAL PROOFING SYSTEMS

CP-35 FURAGROUT

High Flow, Furan Polymer Concrete

PRODUCT DESCRIPTION

Blome CP-35 Furagrout is a two-component, furan polymer concrete used for construction of chemical resistant pump pads, equipment pads, curbing, trenches and sumps. CP-35 Furagrout is well suited for construction of pump pads, equipment pads, chemical trenches, and structures requiring resistance to non-oxidizing acids, alkalis, solvents and other corrosive chemicals. CP-35 Furagrout exhibits superior resistance to strong organic acids including glacial acetic, citric, and formic, 37% hydrochloric, as well as aggressive chlorinated solvents, and caustic solutions. CP-35 Furagrout withstands temperatures to 375°F.

In addition to field installations, Blome CP-35 Furagrout 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 jobsite, ready to drop into place. Construction joints in precast pieces are quickly and easily seamed on site. These quick turnaround precast systems minimize downtime.

TYPICAL USES

Blome CP-35 Furagrout Furan Polymer Concrete is suitable for use in a variety of industrial process applications including:

- Pump pads and tank piers
- Precast trenches and sumps
- Chemical process flooring

HANDLING CHARACTERISTICS

Blome CP-35 Furagrout is placed by casting into forms, or by screeding into place as an overlay on floor slabs and concrete pads. CP-35 Furagrout flows well into forms and is easily screeded into place for overlay applications and finished immediately with steel finishing trowel. Blome CP-35 Furagrout cures rapidly, offering quick turnaround with minimal downtime for maintenance and new construction applications.

While Blome CP-35 Furagrout provides excellent physical properties and chemical resistance, the material provides only a minimal bond to concrete and steel substrates. Therefore, interface areas with concrete and steel substrates are best treated using an appropriate primer or membrane system prior to installation of CP-35 Furagrout. Cast in place, vertical installations should be anchored to substrate with studs or mesh to mechanically secure CP-35 Furagrout polymer concrete. Blome CP-35 Furagrout is installed by casting to a two inch (2”) minimum thickness. CP-35 Furagrout may be placed up to 12” in a single lift.

TYPICAL PROPERTIES
WET

Components	Two (2) – Aggregate & Resin
Wet density	135 lbs./ft^3
Mixed consistency	Castable, flowable concrete
Pot life	50°F 60 minutes
	77°F 30 minutes
Initial set	50°F 12 - 18 hours
	77°F 4 - 6 hours
Final cure	50°F 7 days minimum
	77°F 5 days minimum

CURED

Absorption (ASTM C-413)	0.25% maximum
Bond Strength to concrete	>concrete w/Primer 75
Coefficient of thermal expansion (ASTM C-531)	12 x 10^{-6} in/in/°F
Color	Black (when cured)
Compressive Strength (ASTM C-579)	9,500 psi
Shrinkage (ASTM C-531)	0.05%
Temperature Limit	375°F
Tensile Strength (ASTM C-580)	1,250 psi

PACKAGING & STORAGE

Blome CP-35 Furagrout is supplied as a two (2) component product, with an Aggregate and Resin. CP-35 Furagrout Components are packaged as follows:

Unit Size	2.5 ft^3
Aggregate (Part A)	300 lbs. (6 x 50 lb. bags)
Resin (Part B)	40 lbs. (1 x 40 lb. pail)

Shelf life for CP-35 Furagrout components is one (1) year. Keep CP-35 Furagrout 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-35 Furagrout Aggregate from water and weather while in storage and on jobsite.

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 thicknesses:

- 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-35 Furagrout Furan Polymer Concrete as manufactured by Blome International, O'Fallon, MO.

JOB SITE ENVIRONMENTAL CONDITIONS

Blome CP-35 Furagrout must be applied while ambient temperatures are between 50°F and 90°F. Blome CP-35 Furagrout components and substrate temperatures must also be maintained in this range. For best results, store CP-35 Furagrout components at 75°F minimum, for 24 – 36 hours prior to installation. Installations of CP-35 Furagrout should be protected from water and weather during installation and curing.

SURFACE PREPARATION

While Blome CP-35 Furagrout provides excellent physical properties and chemical resistance, the material provides only a minimal bond to concrete and steel substrates. Therefore, interface areas with concrete and steel substrates are best treated using an appropriate primer or membrane system prior to installation of CP-35 Furagrout. Cast in place, vertical installations should be anchored to substrate with stainless steel studs or mesh to mechanically secure CP-35 Furagrout polymer concrete. Use only FRP or Epoxy Coated Rebar.

New concrete must be free of curing compounds, form release agents and any other contamination that might inhibit adhesion. Old concrete must be free of existing coatings or toppings and any loose or unsound concrete must be removed. All concrete must be cleaned, as necessary, in accordance with ASTM D 4258. The resultant surface should be free of all oil, grease, laitance, efflorescence and other contamination.

Prime concrete with Blome Primer 75. Primer 205, Primer 71 or EC-200HMW may also be used as a primer layer. For improved physical adhesion: Broadcast, clean/dry 20-40 mesh aggregate to refusal into the WET primer layer. Only dry aggregate shall be visible on surface. Allow to fully cure. Completely remove all excess broadcast aggregate and proceed with Blome CP-35 Furagrout placement.

If a bond is required at interface areas with steel, these steel substrates should be primed using Blome 75 Epoxy Primer prior to installation of CP-35 Furagrout polymer concrete. Apply Blome 75 to prepared steel substrates using brush or roller. Allow primer to cure prior to installing CP-35 Furagrout polymer concrete.

If CP-35 Furagrout is being cast in place over a membrane system, install appropriate membrane system to prepared substrate. All liquid or sheet applied membrane surfaces should be fully cured, clean and dry prior to installation of Blome CP-35 Furagrout. These surfaces should be swept clean and be free of dirt, dust, water or other jobsite contaminants immediately prior to placing CP-35 Furagrout.

SAFETY PRECAUTIONS

Blome CP-35 Furagrout Aggregate, Resin, and mixes of them present various health hazards if handled improperly. CP-35 Furagrout Aggregate contains silica dust, CP-35 Furagrout Resin and mixed polymer concrete will cause eye injury and irritate skin. Wear respirator suitable for silica dust, safety glasses with side shields, gloves and long sleeve shirts to prevent all contact with skin and eyes. After working with Blome CP-35 Furagrout, wash thoroughly before eating, drinking, smoking or other activities.

APPLICATION EQUIPMENT

Blome CP-35 Furagrout is best mixed with a dedicated, paddle type mortar mixer. All mixing and application equipment must be clean, dry and free of any contaminants including Portland cement, other mortars or resins. When mixed, CP-35 Furagrout is transferred to placement area using a clean, dry wheelbarrow or buckets. Forms are filled using clean, dry shovels or buckets. CP-35 Furagrout is screeded into place using a clean, dry screed board to reach desired thickness. When placed, CP-35 Furagrout is finished using a clean, dry, steel finishing trowel to desired surface texture.

MIXING AND APPLICATION

Pour one (1) – 40 lb. pail of Blome CP-35 Furagrout Resin (Part B) into the clean, dry, paddle type mortar mixer and turn the mixer on. Add six (6) – 50lb. bags of Aggregate (Part A) 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 varied as the catalyst system is in the aggregate.

Equipment/Tools used in the handling and placement of CP-35 Furagrout must be clean, dry and MUST NOT be contaminated with concrete or other residues.

When casting into open 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-35 Furagrout from permanently bonding to forms. If necessary, vibration may be used 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 can be poured in lifts, allowing a cool down period between lifts. Cast in place, vertical installations should be anchored to substrate with studs or mesh to mechanically secure CP-35 Furagrout polymer concrete.

CP-35 Furagrout must be placed without interruption. Should a delay occur beyond the working time of the material, all equipment used in mixing and placing the CP-35 Furagrout, shall be cleaned.

A headbox or similar device is required for a continuous pour to avoid air pockets under baseplates. All CP-35 Furagrout 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.

When installing CP-35 Furagrout under long baseplates, start pouring from one end across the short dimension and work down the longer side as the material fills under the baseplate.

When pouring Blome CP-35 Furagrout through grout fill holes, placement shall proceed continuously with a headbox/funnel until the CP-35 Furagrout has risen in the next hole. Maintain head pressure at initial hole so that CP-35 Furagrout stays in contact with the bottom of the baseplate at all times. Commence CP-35 Furagrout placement at the next hole with an additional headbox/funnel. Continue process, alternating headboxes until CP-35 Furagrout placement is complete.

When pouring, the headbox/funnel shall be kept at least half full and filled in a manner to avoid air entrapment. If necessary, to assist the flow, a plunger may be used. This procedure shall continue until the CP-35 Furagrout rises above the bottom edge of the baseplate on the opposite side. Throughout the pour, forms shall be constantly checked for leaks. All leaks shall be sealed immediately.

If two or more layers are necessary, the surface temperature of the initial pour shall have cooled to 90 °F (32 °C) maximum prior to placing additional layers.
For floor overlay applications, CP-35 Furagrout must be installed over an appropriate membrane system. Consult Blome for membrane recommendations. When mixed, the material is screeded into place at

desired thickness and then finished using steel, finishing trowel to work the aggregate into place, and bring sufficient resin to the surface for required finish texture. Broadcast silica sand onto wet surface of polymer concrete if a non-skid texture is desired. Minimum thickness for installations on floor slabs is two inches (2”).

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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