



Custom System 45 Type CC™ for CastCotta™* Terra Cotta Substitution System

SYSTEM OVERVIEW:

Custom System 45 Type CC™ from Edison Coatings, Inc., is part of a proprietary latex-modified cementitious restoration mortar system with a successful performance history spanning more than 40 years. It is designed for use in producing cast replacement units for terra cotta and brick.



CastCotta™ is a system of custom-manufactured substitute masonry units that reproduce the appearance and function of terra cotta in repair and replacement applications. **CastCotta™** can be produced in both glazed and unglazed formats, to match the original terra cotta materials on any project.

When used to produce substitute unglazed units, **Custom System 45 Type CC** is custom color-matched to the existing clay masonry. To produce substitutes for glazed units, the castings are coated with compatible, custom-matched breathable finishes from Edison Coatings. Depending on original unit appearance, the coatings utilized may include **Elastowall 351**, **Aquathane UA210** and/or **AquaSpex 220**. Finishes are produced in levels of gloss ranging from High Gloss to Extra Flat as required to match original materials.

Because **Custom System 45 Type CC** is strong and tough enough to perform in thin sections, it can be cast as hollow units with 1" wall thickness. Coupled with the material's low density, the units are significantly lighter in weight than precast concrete, stone or even original terra cotta.

The cast units do not require incorporation of steel reinforcement, thus eliminating the potential for corrosion and spalling.

Linear Coefficient of Thermal Expansion is similar to terra cotta, allowing even the largest units to function compatibly in wall assemblies without the need for sealant joints or modification to mortar joint dimensions.

The cementitious castings do not support combustion.

TYPICAL PROPERTIES: Custom System 45 Type CC

Property	Result	Comments
Compressive Strength, psi ASTM C109/109M	5000 psi min.	Note: Terra cotta units are non-structural
Density, lbs./cu. Ft.	90-100	Lightweight compared to terra cotta, limestone and cast stone
Linear Coefficient of Thermal Expansion	Approx. 4×10^{-6} in/in/°F	Better thermal compatibility with terra cotta than cast stone
Freeze-Thaw Resistance ASTM C666, 50 cycles	No scaling	Excellent freeze-thaw resistance
Salt Scaling Resistance ASTM C672, 50 cycles	1	Excellent resistance to scaling when subjected to repeated freezing and thawing in the presence of ponded salt solution
Saturation Coefficient ASTM C67	Approx. 0.45	Suitable for severe weather exposures
Drying Shrinkage	<0.05%	Low Shrinkage

FINISHES:

Property	Elastowall 351	Aquathane UA210E	AquaSpex 220
Binder Chemistry	Internally-plasticized self-crosslinking 100% acrylic elastomer	Self-crosslinking aliphatic polyurethane elastomer	Self-crosslinking aliphatic polyurethane elastomer
Dry Film Thickness	5-12 mils	2-5 mils	2-25 mils (Formula Dependent)
Appearance	Opaque, custom color, matte finish	Clear, custom-color, translucent or opaque; Gloss, Satin, Flat, Extra Flat finishes	Speckled; color flakes in clear film; Gloss, Satin, Flat, Extra Flat finishes
% Elongation	Approx. 160%	Approx. 300%	Up to 300% (Formula Dependent)
Moisture Vapor Permeance, ASTM E96	30.8 perms (2-coat application)	1 coat: 41 perms 2 coats: 36 perms	Up to 41 perms (Formula Dependent)
Tensile Strength	Approx. 400 psi	Approx. 4000 psi	Approx. 4000 psi
Performance History in Combination with Custom System 45 substrates	>35 years	>30 years	>15 years



All products are manufactured in the United States of America.

***CastCotta** is a trademark of **ConSpec Associates, Inc.**, exclusive marketing agents for **Custom System 45 Type CC™**. **Custom System 45 Type CC™** is a trademark of Edison Coatings, Inc.

Custom System 45 Type CC is available only to trained installers. Training workshops are held annually, or may be scheduled on demand, either on-site or virtually. For additional information, contact Edison Coatings, Inc.

GENERAL INSTRUCTIONS:

A. Mixing: Best results are obtained when Part A and B are mixed at consistent proportions. Determine the powder to liquid proportion which works and handles best for your application and Custom SYSTEM 45 Type CC formulation, and then measure the same proportions for each mix. Mix ratios are generally between 5:1 and 7:1 by weight, or between 3 qts. (3 liters) and 5 quarts (5 liters) per 45-pound (20 kg) pail. Good results can also be obtained by thorough hand mixing. Do not mix more material than can be applied in about 15 minutes. Product will perform best if not mixed too wet. Use high amplitude/low frequency vibration if desired to aid in compaction and air release.

B. Cold Weather: Minimum temperature for optimum color control is 50°F (10°C). While good mechanical results are obtained at temperatures above 40°F (4°C), color development tends to be lighter at low temperatures. For optimum color control, temperature must be above minimum at time of application, and must be maintained until product has dried thoroughly. At temperatures below 50°F (10°C), use of RL-6CC winter grade latex is recommended to accelerate curing. Store SYSTEM 45 components in a heated area until just before use. Do not apply to frozen surfaces. Hot water rinsing of surfaces can help achieve minimum temperatures under marginal conditions. If auxiliary heating is used, do not direct hot exhaust gases at patches. Moderate temperatures and air flows work best, and heated air is preferable to burner exhausts, which are high in CO and CO₂.

C. Hot Weather: Store materials in a cool place, out of direct sun. Dampen contact surfaces thoroughly with cold water prior to application to reduce suction and slow product drying. Do not thin excessively or retemper with additional liquid or water. To improve hot weather workability, use Restoration Latex RL-5CC to extend working time.

D. Color Blending: On masonry exhibiting unit-to-unit color variations, more than one custom color may be needed to achieve inconspicuous repairs. Generally, varied blends of patch or finish colors are less conspicuous than a single, uniform repair color.

E. Demolding and Finishing: Product set time is temperature and formula-dependent. Consult Edison Coatings for guidance on set times and set acceleration options. Once demolded, units should be allowed to air-dry for a minimum of 24-48 hours before applying finishes. Thicker, solid units may require extension of this drying interval.

F. Curing: Product should be allowed to dry cure after demolding. Protect from overly-rapid drying, if necessary, under hot, dry and/or windy conditions. Do not steam clean or pressure wash units which have not fully cured.

Packaging:

Dry components may be packaged in 45-lb. multi-wall paper bags, 5-gallon plastic pails (45-lbs. net) or 1 cubic yard supersacks (2475 lbs. net). Liquid components are available in 1-gallon, 5-gallon and 55-gallon containers.

Yield: A 45-lb. unit yields approximately ½ cubic foot.

Storage & Handling:

Proper care should be taken when handling cement-based materials, to avoid skin and eye contact and avoid breathing dust. Some formulations contain free silica, and proper NIOSH-approved silica dust filters should be used. Products should be stored in a dry place, off the ground or floor, at moderate temperatures. KEEP FROM FREEZING. For complete safety and handling information, refer to Safety Data Sheets furnished with this product. Shelf life for properly stored material is minimum of 1 year from date of production.

FOR COMMERCIAL & INDUSTRIAL USE

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