

System Specification
COLORCHROME SYSTEM
Division 9 Finishes
Section 09 67 00 - Fluid-Applied Flooring

NOTE TO SPECIFIER:

ColorChrome® System is a metallic, seamless resinous flooring system. The designer flooring system possesses a truly unique, three-dimensional blend of pigment colors that can vary from soft and subtle to striking and vivid. The use of high-performance resins makes it an exceptionally durable and long-lasting flooring system. It is designed for any commercial or residential application where a durable and elegant floor is desired. This includes dining areas, restrooms, bars, night clubs, commercial interiors, sporting venues, residential interiors and garage floors.

PART 1 – GENERAL

- 1.1 Related Work Specified in Other Sections (Delete if Not Applicable):
- 1.1.1 ColorChrome: Is a three-dimensional, blend of pigment colors, that is suspended in SK-E400 which is placed on SK-E100 pigmented epoxy primer bonded direct to concrete. The portland cement concrete substrate shall be placed, finished and leveled in accordance with industry standards.
- a. New portland cement concrete shall be placed in accordance with American Concrete Institute, ACI 302.2R Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.
 - b. Per ACI 302.2R the new concrete is to be placed directly on the subgrade moisture barrier in accordance with ASTM E1745 Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.
 - c. Existing portland cement concrete must be cored to determine if it was placed (in accordance with ACI 302.2R) on an adequate positive side moisture barrier. If not, the existing concrete surface will most likely require a positive side moisture mitigation primer.
- 1.1.2 ColorChrome is placed direct to Cementitious Overlayment must be placed on properly prepared concrete that conforms to 1.1.1 above.
- 1.1.3 Testing Moisture Levels and Allowable Moisture Limits:
- a. Moisture Vapor Transmission testing per ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Substrate Using Anhydrous Calcium Chloride. Limit is three pounds per 1,000 square feet in 72 hours. If the moisture limit exceeds the manufacturer's published limits a manufacturer's approved moisture mitigation primer shall be required.
 - b. Relative Humidity testing per ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes. Limit is a Relative Humidity of 75% or less in 72 hours. If the relative humidity limit is exceeded a manufacturer's approved moisture mitigation primer shall be required.
- 1.1.4 Concrete Condition:
- a. A maximum height variation not to exceed 1/4 inch in 10 feet.
 - b. No curing agents, other additives and contaminates which might prevent a bond must

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- be removed.
- c. Concrete is to be free of sodium silicate and potassium silicate sealers or densifiers. If they are present they must be removed.
 - d. Concrete or cementitious overlayers must be sound and durable, if not they must be repaired.
- 1.2 Quality Assurance:
- 1.2.1 Acceptable Manufacturer:
- a. Materials shall meet or exceed the Specification minimum or maximum physical and mechanical properties.
 - b. Materials shall be manufactured by single manufacturer.
 - c. Material manufacturer must provide Application Instructions, clearly stating that the submitted products meet the requirements of the Specification.
 - d. Alternative material suppliers must submit Technical Data Sheet, Application Instructions and Certification of Compliance at least twenty-eight (28) days prior to bid. Submittals made after the required stated lead-time, shall be considered non-responsive and rejected.
- 1.2.2 Acceptable Installer:
- a. Acceptable installers shall have a written endorsement from the manufacturer stating that they are qualified to install the materials in this specification.
 - b. Acceptable installers shall submit a letter from the material manufacturer and signed by an officer of the company stating that the installer is in good financial standing with the material manufacturer.
 - c. Acceptable installer shall perform all work in accordance with the material manufacturer's Application Instructions.
 - d. The installer must furnish a detailed list of projects of similar magnitude to the one specified that they have completed in the last three years. The package must include a list of specific contacts, job titles, addresses and the phone number of contacts.
- 1.3 Submittal:
- 1.3.1 Samples:
- a. The installer shall submit a maximum of three samples, minimum 6" x 6" for each color specified and the samples shall be clearly labeled.
 - b. ADA (Americans with Disabilities Act) Compliant to Dry or Wet, Flat or Ramp, if required.
- 1.3.2 Maintenance Literature:
- a. The installer shall submit a copy of the material manufacturer's recommended care and maintenance procedures.

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- 1.3.3 Quality Assurance Certification:
- a. Material shall be delivered to the job-site in unopened containers, properly labeled by the supplier, including product name, component(s), batch or lot number.
 - b. Material manufacturer shall furnish through the installer, current Safety Data Sheets, which shall comply with current state, providence, federal government or military requirements.
- 1.4 Delivery, Storage and Handling:
- 1.4.1 Delivery of Material:
- a. Material shall be delivered to the job-site undamaged and protected from damage after delivery by the General Contractor or the installer.
 - b. Material shall be delivered to the job-site in unopened containers, properly labeled by the manufacturer and with the proper Safety Data Sheet per 1.3.3.
 - c. Proper Labels, include:
 - 1) Manufacturer's Name and Address
 - 2) Product Name and/or Number
 - 3) Component Reference'
 - 4) Mix Ratio (if applicable)
 - 5) CHEMTREC Emergency Response Information
 - 6) Lot or Batch Number(s)
- 1.4.2 Storage of Material:
- a. Materials shall be stored in a covered area, out of the elements (including direct sunlight) that is clean, dry and heated (if required) and maintained between 60⁰F – 90⁰F.
- 1.4.3 Handling:
- a. Material shall be handled only by the approved installer, in accordance with industry standards and compliance with Safety Data Sheet(s) requirements.
- 1.5 Access:
- 1.5.1 Installer shall be provided free and unencumbered access to all areas deemed necessary by the installer in order to execute the work in accordance with this Specification.
- 1.5.2 Material manufacturer shall be granted free and unencumbered access to observe the substrate prior to installation, during the installation and after the installation.
- 1.6 Warranty:
- 1.6.1 The manufacturer guarantees that the products are free from manufacturing defects and complies with their published specification.

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PART 2 – PRODUCTS

2.1 Manufacturer:

- A. ICP Construction, 4565 W. Watkins St., Phoenix, Arizona 85043, Phone: 623.435.2277.
- B. ColorChrome System.
- C. Crack and control joint filler and repair materials, if needed, shall meet the manufacturer's recommendations.

- 2.1.1 Pigmented primer water based and the pigmented top coat is 100% solids, VOC compliant, with good abrasion, chemical and wear resistant epoxy system.
- a. Apply primer SK-E100 with ColorChrome Pigment(s) at a rate of 200 – 250 square feet per gallon per coat. It is suggested that a dark deep tone ColorChrome Pigment be used to cover substrate surface color variations.
 - b. Apply intermediate coat SK-E400 epoxy plus ColorChrome Pigment(s) at a rate 100 square feet per gallon.
 - c. Apply finish coat of SK-P100, SK-P100 VOC or SK-P501 at 300 square feet per gallon.
 - d. Optional, apply SK-P5100 polyurea when a top coat with a greater thickness is desired at 100 square feet to 250 square feet per gallon per coat., instead of SK-P100, SK-P100 VOC or SK-P501.
 - e. If skid resistance is required, sprinkle broadcast 60 – 90 mesh bleached aluminum oxide at a rate of 2 to 5 pounds per 1,000 square feet and back role into the wet polyurethane or polyurea.

2.2 Physical Properties:

2.2.1 Physical Properties SK-E400:

TYPICAL PHYSICAL PROPERTIES
7 Days at 75⁰F (24⁰C) Resin and Hardener

1. Compressive Yield Strength	ASTM D695	9,850 psi
2. Ultimate Compressive Strength	ASTM D695	19,500 psi
3. Tensile Strength	ASTM D638	6,230 psi
4. Tensile Elongation	ASTM D638	11 %
5. Ultimate Flexural Strength	ASTM D790	9,680 psi
6. Hardness, Shore D	ASTM D2240	78
7. Adhesion to Concrete, 100% Concrete Failure	ASTM D7234	400 psi
8. Abrasion Resistance	ASTM D4060	35 mg lost
9. Water Absorption	ASTM D570	0.10% Maximum
10. Flammability (Bonded to Concrete)	ASTM D635	Self-Extinguishing
11. Microbial Resistant	ASTM G21	Passes Rating #1

- 2.3 Mix all components in accordance with the material manufacturer's recommendations.

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PART 3 – EXECUTION

- 3.1 Inspection:
 - 3.1.1 Examine areas to receive the ColorChrome System:
 - a. Pre-existing defects in the concrete or cementitious overlayments substrate must be corrected.
 - b. Deviation from the concrete and cementitious overlayment part of this Specification requires resolution prior to placement of the ColorChrome System.
 - c. If the substrate is found to be in non-conformity of (concrete or cementitious overlayment) the substrate specification, correct the non-conforming substrate prior to placement if the ColorChrome System.
 - d. The installer shall start work after other trades have corrected the defects.
- 3.2 Installation:
 - 3.2.1 Substrate:
 - a. Prepare the substrate to receive ColorChrome System in accordance with the manufacturer's recommendation and Application Instruction.
 - 3.2.2 Placing the ColorChrome System:
 - a. Mix and place per manufacturer's Application Instructions.
 - b. Work shall be inspected and accepted, or a punch list of corrections shall be issued by the General Manager or Project Manager or Owner or End-User.
- 3.3 Cure and Protection:
 - 3.3.1 Protect the ColorChrome System from damage from other trades in accordance with the material manufacturer's recommendations.
- 3.4 Cleaning:
 - 3.4.1 Cleaning ColorChrome System in accordance with the material manufacturer's recommendation using Super-Krete S-200 Super-Scrub and clean water.
 - 3.4.2 Cleaners not recommended by the material manufacturer may have a deleterious effect on the appearance (color, gloss, etc.) or they may affect the performance (softening, loss of texture, etc.). Prior to using a cleaner not recommended by the material manufacturer, test the cleaner in an isolated area to determine its affect.

END OF SECTION

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This Specification was prepared by:

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