ColorKote
Decorative Glass Fabrication

SECTION 088113 (MASTERFORMAT 1995 08820)

DECORATIVE GLASS GLAZING

PART 1

1- GENERAL

1.1 SECTION INCLUDES

A. Decorative color coated opaque or translucent monolithic glass for interior applications.

B. Decorative color coated opaque or translucent laminated glass for interior applications.

C. Decorative color coated opaque or translucent glass for furniture, cabinets and tabletops.

D. Color coated opaque monolithic glass for exterior spandrel applications.

E. Color coated opaque insulated glass units for exterior spandrel applications.

1.2 RELATED SECTIONS

A. Section 081100 – Metal Doors and Frame

B. Section 084100 – Entrances and Storefronts (MasterFormat 1995 08400)

C. Section 084226 – All Glass Entrances (MasterFormat 1995 08450)

D. Section 084300 – Storefronts

E. Section 084400 – Curtain Wall and Glazed Assemblies (MasterFormat 1995 08900)

F. Section 097000 – Wall Finishes (MasterFormat 1995 09700)

1.3 PERFORMANCE REQUIREMENTS

A. Provide color-coated decorative glass capable of withstanding normal shipping, handling, installation and use without visible abrasion, discoloration or failure.

B. Color coating must be suitable for both interior and exterior applications. Coating should not crack, peel, delaminate, discolor or chalk under normal exterior UV exposure levels. (Surface 2 – Coated surface – not exposed to the elements)

C. Chemical resistance: coating must be tested using UNI 12720:2013 to withstand 24-hour contact testing with the following chemicals: Ethyl Alcohol, Mineral Spirits, 5% Sodium Hydroxide solution, 5% Hydrochloric Acid solution, Household glass cleaner (e.g. Windex), Household surface cleaner (e.g. Fantastic), Cold water immersion. Coating must show no visible degradation when viewed through the glass including blistering, cracking, peeling or discoloration after such tests.

D. Coating adhesion: coating must be tested for adhesion using ISO 2409 (Cross cut test) Method performed with the right tool described in the norm: a cross-cut made on painted surface; breaking or detachment of the obtain evaluated after 60 to 120 second of pressure applied to proper adhesive surface. Movement the surface evaluated.

E. Persoz Pendumlum Test: Coating hardness: coating must be tested using EN ISO1522-2007 method with results of 68 or higher

F. Coating humidity resistance: Coating must be tested using EN 1279-2 and show no visible defects, i.e. blisters or cracking, etc.

1.4 SUBMITTALS

A. Submit under provisions of Section 013000 (MasterFormat 1995 01300).

B. Product Data: Manufacturer's brochures or data sheets on each product to be used, including:
1. Results of ASTM, ISO, UNI, EN tests on coating.
2. Storage and handling requirements and recommendations, if any.
3. Preparation instructions and recommendations, if any.
4. Installation methods/guidelines. Final installation method determined by Glazier/installer.

C. Samples: For each type specified, two samples, minimum size 4 inches (102 mm) by 4 inches (102 mm), representing actual type of glass, color, patterns etc.

D. ColorKote's warranty information for review by Architect.

1.5 QUALITY ASSURANCE

A. Coating Manufacturer Qualifications: Manufacturer of decorative coating material must be able to show installations of at least 10 years without visible degradation to decorative glass products, when viewed from a distance of 3 feet or greater.

B. Installer Qualifications: glazier meeting all required licensing and training requirements mandated by appropriate Federal, State or City agencies.

C. Comply with safety requirements.

1.6 DELIVERY, STORAGE AND HANDLING

A. Comply with manufacturer's instruction for receiving, handling, storing and protecting glass and glazing materials.

B. Deliver materials in manufacturer's original, undamaged containers with identification labels intact.

C. Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

D. Prevent edge damage to glass, and damage/deterioration to coating on glass.

E. Protect insulating glass units against substantial altitude changes in accordance with insulating glass fabricator's recommendations.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Maintain environmental conditions including temperature, humidity and ventilation within limits recommended by the manufacturer for optimum results. Do not install products under environmental conditions outside of manufacturer's absolute limits.

1.8 WARRANTY

A. Provide a minimum 3 year manufacturer's limited warranty to cover color-coating against peeling, cracking, delamination or discoloration.

PART 2

2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturer of decorative color coating: Multi-vendor - contact ColorKote CT, LLC, 300 Hathaway Drive, Stratford, CT 06615 Tel: (203) 333-5500. Website: www.colorkote.com . Vendor determined by color code.

B. Manufacturer of float glass (prior to coating): Starphire name brand low iron glass or equivalent as noted within the guidelines or alternate glass approved by architect via sample approval.

C. Fabricator and Applicator of glass color coating: ColorKote CT, LLC, 300 Hathaway Drive, Stratford, CT 06615 Tel: (203) 333-5500. Fax: (203) 330-9293.

D. Installer / glazing contractor: As approved by the Architect.

E. Substitutions: Not permitted.

2.2 MATERIALS

A. Glass

1. Monolithic wall cladding glass shall be _____ inches (__mm) thick, (Low-iron or clear) float glass. Glass must be (annealed or fully tempered) and be of the sizes shown in the project drawings including holes, cutouts and edge treatment as specified. (Please note for back coated glass: Glass with color coating must be low iron for color matching purposes. Please continue and fill out section B if proceeding with color coating).

2. Laminated glass, consisting of one sheet of glass ___ inches (__mm) thick, (low-iron or clear) float glass laminated to another piece of glass ___ inches (___mm) thick, (low-iron or clear) float glass, with a ____ thickness interlayer composed of EVA film. If coated, (low iron glass only) the color coating will be applied on the exterior surface number 4 of the laminated unit. Laminated glass to match composition of sample provided, sample no._____. Laminated glass shall be of the sizes shown in the project drawings including holes, cutouts and edge treatment as specified. Glass (does or does not) require ANSI Z97.1 Safety Certification. If ANSI Z97.1 safety certified glass is chosen, the client (does or does not) want the safety bug to appear on surface 1 in a location noted on final drawings. Finished pieces (do or do not) require finished polished edges.

3. Magnetic Marker Boards, consisting of one sheet of ¼" (6mm) (low iron writable or low iron satin lite writable and projectable) float glass. The color coating on the number two (inboard) surface. Glass shall be (annealed or fully tempered) and be of the size shown in the project drawings including holes, cut outs and edge treatment as specified. Galvanized sheet steel to surface 4 with a ¼" +/- set back from all edges including holes, notches and cut outs. (Please continue and fill out section B)

4. Non-Magnetic Marker Boards consisting of one sheet of ¼" (6mm) (low iron writable or low iron satin lite writable and projectable) float glass. The color coating on the number two (inboard) surface. Glass shall be (annealed or fully tempered) and be of the size shown in the project drawings including holes, cut outs and edge treatment as specified. (Please continue and fill out section B)

5. Monolithic mirror wall cladding in (plain silver or antique or colored) shall be ¼" inches (6mm) thick, float glass. Please note: Glass itself may come clear, colored or low iron depending on the style chosen. Glass shall be annealed and be of the sizes shown in the project drawings including holes, cutouts and edge treatment as specified. The project (does or does not) require Category II Safety Backing. Mirrored glass to match composition of sample provided, sample no./name_____.

B. Color Coating

1. Coated glass to match composition of sample provided, sample no./name_____ as represented by architect's sample. This color provided by and proprietary to ColorKote CT.

2. The color coating must be on the number two (inboard) surface. Coating on the glass shall warranted for glass application and meeting all performance requirements specified in paragraph 1.4. The coating shall have a minimum dry-film thickness of 1.5 mils.

3. The color coating shall meet the following test requirements:
   - ❑ ISO 2409 Adhesion Test / Wet Adhesion Test
   - ❑ UNI EN 1036 High Humidity Test
   - ❑ EN16477-1 clause 8.1.4 High Temperature Test
   - ❑ ISO 111341 Determination of light fastness
   - ❑ EN ISO1522-2007 Persoz Pendulum Test
   - ❑ ISO9227:2006 Salt Spray (5% NaCi salt spray)
   - ❑ EN 1279-2 Climate Cycles
   - ❑ UNI 12720:2013 Chemical Resistance
   - ❑ ASTM 4752 Resistance to solvent (Rub test)

C. Adhesive

1. Decorative color-coated glass may only be mounted using specified adhesive approved by the ColorKote CT to be noted on all quotes and sales orders. A - fabricator / supplier.

2. Seams, when needed) are to be sealed with approved silicone neutral adhesive.

D. Metal

1. If utilized, Metal Z-clip MFTape section shall be securely fastened to the glass by either the installer or ColorKote CT. Corresponding metal bracket to be fastened securely to studs by installer.

   Any other installation hardware must be provided and utilized by installer.

PART 3

3 - EXECUTION

3.1 EXAMINATION

A. Examine decorative glass, framing and support systems for compliance with the installation requirements.

B. Verify glass is not cracked, chipped, broken or damaged.

C. Examine coated surface through the FRONT side of the glass (non coated side) and ensure there are no visible defects. Small surface defects on the coated

side are permitted, so long as they are not visible from the non-coated side of the glass.

D. Verify substrate is properly prepared for installation. If the decorative glass is light in color with some translucence, the substrate should be painted a similar color with no high-contrast patterns. Oversized cutouts or holes in the substrate should be filled or covered to prevent shadowing. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

E. Verify conditions are adequate for proper application of adhesives (if any).

F. Do not proceed until any unsatisfactory condition has been corrected. Application of material shall constitute acceptance.

3.2 PREPARATION

A. Clean coated side of glass of any dust, dirt, paint, oil, grease, mildew, mold or other contaminants that would inhibit adhesion. Use a dry cloth, soap & water or an alcohol based cleaner and a soft cloth for this purpose. Verify compatibility of cleaner with glass coating prior to use.

3.3 INSTALLATION GUIDELINES

A. Substrates / surfaces to receive glass panels shall be sufficiently smooth and flat to allow for normal installation, and thoroughly dry.

B. Test (dry) fit glass to ensure proper sizing and manufacture.

C. Install glazing blocks if necessary, to even gaps on top and bottom edge of glass sheets.

D. If safety backing is required, apply safety film to coated side of glass. Holes must be punched in safety backing to allow adhesive to be applied directly to glass. The adhesive should never be applied to the safety backing itself and then adhered to substrate.

E. If mechanical support is required, install “T” or “L” section to substrate with mechanical fasteners.

F. If glass is to be installed using adhesive, apply balls of adhesive approximately 1” in diameter every 18” on the rear (coated) surface of the glass. Press glass into place to flatten adhesive against substrate. Position glass for proper placement and reflection.

G. If mechanical support will be used to install glass (e.g. standoffs), place protective pad on mechanical fastener (felt, rubber or other protection to prevent abrasion of coating), position glass, and tighten fasteners. Be careful not to over-tighten so as to not crack the glass sheet.

H. Apply continuous bead of clear, neutral-cure silicone at all joints for weather seal, where required. Use of acrylic caulking is permitted on exposed edges if caulking must be painted to match other surfaces.

I. All installations must be weather sealed so that the coated side of the decorative glass panels are not exposed to atmospheric conditions or moisture.

3.4 CLEANING

A. Glazing Contractor. Upon completion of glazing, clean glazing materials (sealants) from glass and surrounding work and remove all labels. Installation shall be free of scratches.

B. General Contractor. Clean glass using mild, non-abrasive cleaners such as water, Windex, vinegar or alcohol-based cleaners, by applying cleaning compound to a dry soft cloth and wiping glass. Never apply cleaning compounds directly to the glass. Sealants must be cured prior to cleaning.

END OF SECTION