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SECTION 123661.19 - QUARTZ AGGLOMERATE COUNTERTOPS

TIPS:

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To read **detailed research, technical information about products and materials, and coordination checklists**, click on Masterworks/Supporting Information.

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
1. Quartz agglomerate surfacing countertops.
 2. Quartz agglomerate backsplashes.
 3. Quartz agglomerate end splashes.
 4. Quartz agglomerate apron fronts.
 5. Quartz agglomerate vanities.
 6. Quartz agglomerate window sills.
 7. Adhesives and sealants.
- B. Related Requirements:

1. Section 055000 "Metal Fabrications".
2. Section 056116 "Solid Surfacing Fabrications".
3. Section 061000 "Rough Carpentry".
4. Section 064116 "Plastic-Laminate-Faced Architectural Cabinets".
5. Section 079200 "Joint Sealants".
6. Section 123623.13 "Plastic-Laminate-Clad Countertops".
7. Section 224100 "Residential Plumbing Fixtures" for sinks and plumbing fittings.

1.3 REFERENCES

- A. ASTM C 97: Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.
- B. ASTM C 170: Standard Test Method for Compressive Strength of Dimension Stone.
- C. ASTM C 501: Standard Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by Taber Abraser.
- D. ASTM C 834: Standard Specification for Latex Sealants.
- E. ASTM C 920: Standard Specification for Elastomeric Joint Sealants.
- F. ASTM D 790: Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- G. ASTM E 84: Standard Test Method for Surface Burning Characteristics of Building Materials.
- H. ISO: International Organization of Standardization.
- I. ISO 9001: Quality Management Systems.
- J. NSF/ANSI Standard 51: Food Equipment Materials.
- K. SCAQMD Rule 1168: Adhesive and Sealant Applications.
- L. UL 2818: GREENGUARD Certification Program for Chemical Emissions for Building Materials, Finishes, and Furnishings.

1.4 ACTION SUBMITTALS

- A. Product Data: For countertop materials.
 1. Submit data for each specified product. Include manufacturer's technical data sheets and published installation instructions.
 2. Submit Safety Data Sheets (SDS) for adhesives and sealants.
- B. Sustainable Design Submittals:
 1. Product Data: For adhesives, indicating VOC content.

- C. Shop Drawings: For countertops. Submit dimensioned shop drawings showing countertop layouts, [**backsplashes,**] [**vanities,**] [**window sills,**] joinery, edge conditions, terminations, substrate construction, cutouts, and holes.
 - 1. Show locations and details of joints.
 - 2. Show direction of directional pattern, if any.
 - 3. Show plumbing installation provisions.
- D. Samples for Initial Selection: For each type of material exposed to view.
- E. Samples for Verification: For the following products:
 - 1. Countertop material, **6 inches (150 mm)** square.
 - 2. One full-size quartz agglomerate countertop, with front edge[**and backsplash**], **8 by 10 inches (200 by 250 mm)**, of construction and in configuration specified.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.
- B. Test Reports: Submit certified test reports showing compliance with specified performance characteristics and physical properties.
- C. Warranty: Submit specimen copy of specified warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For quartz agglomerate countertops to include in maintenance manuals. Submit manufacturer's published maintenance and care manual. Include Product Data for care products used or recommended by Installer and names, addresses, and telephone numbers of local sources for products.

1.7 QUALITY ASSURANCE

- A. Regulatory Requirements
 - 1. Accessibility Requirements: Comply with the U.S. Architectural & Transportation Barriers Compliance Board ADA-ABA Accessibility Guidelines for Buildings and Facilities.
 - 2. Adhesives, Sealants, and Sealant Primers.
 - a. SCAQMD (South Coast Air Quality Management District) Rule 1168.
- B. Manufacturing Facility Qualifications: Quartz surfacing materials produced in an ISO 9001 certified facility.
- C. Fabricator Qualifications: Minimum of five years documented experience in fabricating quartz surfacing countertops similar in scope and complexity to this Project, using water-cooled cutting tools. Currently certified by the manufacturer as an acceptable fabricator.

- D. Installer Qualifications: Minimum of five years documented installation experience for projects similar in scope and complexity to this Project, and currently certified by the manufacturer as an acceptable installer. **[Installer shall be the fabricator.]**
- E. Mockups: Build mockups to demonstrate aesthetic effects and to set quality standards for fabrication and execution.
 - 1. Build mockup of typical countertop as shown on Drawings.
 - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturer's recommendations for shipping and handling quartz surfacing materials to preclude breakage and damage. Brace quartz surfacing units as necessary during shipment, transporting in near-vertical position with finished face towards finished face. Do not allow finished surfaces to rub during shipping and handling.
- B. Store materials protected from exposure to harmful weather conditions, at temperature and humidity conditions recommended by the manufacturer. Store quartz surfacing sheet materials on racks in near-vertical position to preclude damage. Store with finished face turned towards finished face. Prevent warpage and breakage.

1.9 FIELD CONDITIONS

- A. Field Measurements: Verify dimensions of countertops and openings by field measurements **[after base cabinets are installed but]** before countertop fabrication is complete. Show recorded measurements on shop drawings.
- B. Adhesives: Acclimate adhesives to occupancy room temperatures with maximum temperature not to exceed **75 deg F (24 deg C)**.

1.10 COORDINATION

- A. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.
- B. Coordinate locations of utilities that will penetrate countertops or backsplashes.

1.11 WARRANTY

- A. Manufacturer's Limited Warranty: Standard 10 Year Commercial and Residential Limited Warranty against defects in quartz surfacing sheet materials.

PART 2 - PRODUCTS

2.1 QUARTZ AGGLOMERATE COUNTERTOP MATERIALS

- A. Quartz Agglomerate: Solid sheets consisting of up to 93 percent quartz aggregate combined with polyester resin binders and proprietary pigments that are fabricated using vacuum vibrocompaction technology.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Wilsonart; Wilsonart Quartz or a comparable product by one of the following:
 - a. Cosentino USA.
 - b. LG Hausys America, inc.
 - c. <Insert manufacturer's name>.
 2. Composition: Up to 93 percent quartz aggregate combined with polyester resin binders and proprietary pigments that are fabricated into slabs using Bretonstone vacuum vibrocompaction technology.
 3. Material Thickness: [Product Type 062, 0.79 inch (2 cm)] [Product Type 063, 1.18 inch (3 cm)], nominal.
 4. Material Weight: [10 lb/sq.ft. (48.8 kg/sq. m) for 0.79 inch (2 cm) thick surfacing] [15 lb/sq.ft. (73.2 kg/sq. m) for 1.18 inch (3 cm) thick surfacing].
 5. Countertop Dimensions: [<Insert dimension> inches (<Insert dimension> mm) wide by <Insert dimension> inches (<Insert dimension> mm) deep] [As indicated on Drawings] [As specified in "Schedule" Article of this Section].
 6. Vanity Dimensions: [<Insert dimension> inches (<Insert dimension> mm) wide by <Insert dimension> inches (<Insert dimension> mm) deep] [As indicated on Drawings] [As specified in "Schedule" Article of this Section].
 7. Window Sill Dimensions: [<Insert dimension> inches (<Insert dimension> mm) wide by <Insert dimension> inches (<Insert dimension> mm) deep] [As indicated on Drawings] [As specified in "Schedule" Article of this Section].
 8. Conformance Standards:
 - a. NSF/ANSI Standard 51.
 - b. UL 2818:
 - 1) GREENGUARD, emission levels in UL 2818, Section 7.1 are applicable for furniture products.
 - 2) GREENGUARD Gold, emission levels in UL 2818, Section 7.2 are applicable for building materials, finishes, and furnishings.
 9. Physical Characteristics:
 - a. Flexural Strength: Greater than 4,500 psi (31.0 MPa); ASTM D 790.
 - b. Flexural Strain: Less than 0.375 percent; ASTM D 790.
 - c. Flexural Modulus: Greater than 3.75 MPsi; ASTM D 790.
 - d. Stain resistance (24 Hour): No effect to moderate effect; NEMA LD-3.
 - e. Abrasion Resistance: Greater than 100 in. lbs.; ASTM C 501.
 - f. Density: Greater than 2.1 g/cu. m per ASTM C 97.

- g. Compressive Strength (One Axis - Div.): Greater than **20,000 psi (138 MPa)** per ASTM C 170.
 - h. Moisture Absorption: Less than 0.03 percent per ASTM C 97.
 - i. Surface Burning Characteristics: Class I and Class A per ASTM E 84.
- 10. Quartz Finish: Polished finish with Glossometer reading greater than 45.
 - 11. Colors and Patterns: **<Insert Color and Pattern> [As indicated on Drawings] [As specified in "Schedule" Article of this Section] [As selected from manufacturer's full range of standard offerings].**
 - 12. Edge Detail: **[Straight] [1/4 inch (6 mm) Radius] [1/2 inch (13 mm) Bullnose] [Demi Bullnose] [Full Bullnose] [1/4 inch (6 mm) Round T&B] [1/4 inch (6 mm) Bevel] [1/2 inch (13 mm) Bevel] [Bevel] [Ogee] [Deep Ogee] [Waterfall] <Insert description>.**
 - 13. Edge Detail: **[As specified in "Schedule" article of this Section.] [As indicated on Drawings.] [As selected from manufacturer's standard offerings.]**

2.2 COUNTERTOP FABRICATION

- A. General: Fabricate components in shop, to greatest extent practicable, in sizes and shapes indicated according to approved shop drawings and Wilsonart Quartz Fabrication manual.
- B. Joint Seams: Form joint seams between quartz surfacing components with specified seam adhesive. Completed joints inconspicuous in appearance and without voids. Provide joint reinforced if required by manufacturer for particular installation conditions.
- C. Cutouts and Holes: Provide holes and cutouts for service fixtures and similar countertop-mounted items as indicated. Form cutouts to required template or pattern, with smooth, even curves and eased edges.
- D. Countertops: **[0.78-inch- (2-cm-)] [1.18-inch- (3-cm-)]** thick, quartz agglomerate with integral edge.
- E. Backsplashes: **[0.78-inch- (2-cm-)] [1.18-inch- (3-cm-)]** thick, quartz agglomerate.
- F. End Splash: **[Matching backsplash] [None].**
- G. Fabricate tops with shop-applied edges **[and backsplashes]** unless otherwise indicated. Comply with quartz agglomerate manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.
 - 1. Fabricate with loose backsplashes for field assembly.
- H. Joints: Fabricate countertops without joints.
- I. Joints: Fabricate countertops in sections for joining in field, **[with joints at locations indicated].**
 - 1. Joint Locations: Not within **18 inches (450 mm)** of a sink or cooktop and not where a countertop section less than **36 inches (900 mm)** long would result, unless unavoidable.

2.3 INSTALLATION MATERIALS

- A. Joint Adhesive: Methacrylate-based adhesive for chemically bonding quartz surfacing seams. Color complementary to quartz surfacing sheet material. UL 2818 GREENGUARD Gold certified and complying with SCAQMD Rule 1168.
1. Basis-of-Design Product: Wilsonart Hard Surface Adhesive.
 2. Adhesives shall have a VOC content of [70] <Insert value> g/L or less.
- B. Elastomeric Sealant: Mildew-resistant silicone sealant for filling gaps between countertops and terminating substrates in wet environment applications. Complies with ASTM C920, Type S (single component), Grade NS (nonsag).
1. Basis-of-Design Product: Wilsonart; Color Matched Caulk.
 2. Color: [Complementary to quartz surfacing color] [Selected from sealant manufacturer's standard offerings].
- C. Siliconized Acrylic Sealant: Siliconized acrylic latex sealant. For general applications to fill gaps between countertops and at terminating substrates. Complies with ASTM C 384, Type OP, Grade NF, and SCAQMD Rule 1168.
1. Basis-of-Design Product: Wilsonart; Color Matched Caulk.
 2. Color: [Complementary to quartz surfacing color] [Selected from sealant manufacturer's standard offerings].
- D. Construction Adhesive: Countertop manufacturer's recommended silicone-based construction adhesive for backsplashes, endsplashes, and other applications according to manufacturer's published fabrication instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates to receive quartz agglomerate countertops and conditions under which countertops will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of countertops. Substrates must be sound, flat, smooth, and free from dust or other surface contaminants.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 COUNTERTOP [AND VANITY] INSTALLATION

- A. Install quartz surfacing components plumb, level, and true according to approved shop drawings and manufacturer's published installation instructions. Use woodworking and specialized fabrication tools acceptable to the manufacturer.

1. Fasten quartz surfacing components to base cabinets or other supporting substrates with suitable adhesives acceptable to manufacturer.
- B. Form joint seams with specified seam adhesive. Seams to be inconspicuous in completed work. Seams in locations shown on approved shop drawings and acceptable to manufacturer. Promptly remove excess adhesive.
 1. Clamp or brace quartz surfaces in position until adhesive sets.
- C. Fill gaps between countertop and terminating substrates with specified silicone sealant.
- D. Install backsplashes and endsplashes where indicated on Drawings. Adhere to countertops with specified construction adhesive.
- E. Vanities: Secure front panels to solid substrate with specified construction adhesive.
 1. ADA Vanities: Angled front to permit wheelchair access to comply with referenced accessibility standard.

3.3 WINDOW SILL INSTALLATION

- A. Install window sills for full length of each window unit, securing to substrates with concealed fasteners and specified adhesives.
- B. Provide minimum **1/8 inch (3.2 mm)** expansion gap on both sides of window sills. Fill gap with specified joint sealant.
- C. Completed work to be plumb, level, and true, with edges eased and smooth.

3.4 REPAIRS

- A. If permissible to Architect, minor surface marring for quartz surfacing components may be repaired according to manufacturer's published installation instructions.
- B. Remove and replace quartz surfacing components that are damaged and cannot be satisfactorily repaired.

3.5 CLEANING AND PROTECTION

- A. Clean quartz surfacing components according to manufacturer's published maintenance instructions.
- B. Completely remove excess adhesives and sealants from finished surfaces.
- C. Protect completed work from damage during remainder of construction period.

3.6 SCHEDULE

END OF SECTION 123661.19