



ARCHITECTURAL SPECIFICATION

PentalQuartz is a quartz-composite engineered stone that is suitable for virtually any interior surfacing application. PentalQuartz can be used for kitchen countertops, bathroom vanities, bar tops, wall cladding, shower and tub surrounds, and a variety of other indoor surfacing. PentalQuartz provides significant advantages over many natural stones including greater strength, stain resistance, scratch resistance, and consistency of colors and textures.

Edit this Guide Specification according to project requirements. Samples, product literature, and any other product assistance are available by contacting Pental Surfaces at 206-768-3200 or by visiting our website at www.pentalquartz.com

Section 06 61 19 – QUARTZ SURFACING FABRICATIONS

Section 12 36 61 – QUARTZ SURFACING COUNTERTOPS

Part 1 – General

1.0 Related Documents

Drawings and general provisions of the contract, including general and supplementary conditions and Division 1 Specification Sections, apply to this section.

1.1 Summary

A. Section includes quartz surfacing (engineered stone) for:

1. Countertops
2. Vanity Tops
3. Tabletops
4. Bar tops
5. Windowsills
6. Thresholds
7. Interior wainscoting and wall cladding
8. Shower and bath enclosures
9. Reception areas
10. Other interior applications as depicted in drawings.

B. Related Sections

1. Division 1 Administrative, procedural and temporary work requirements.
2. Division 5 Section Metal Fabrication for blocking
3. Division 6 Section Rough Carpentry for blocking
4. Division 6 Section Solid Surface Fabrications
5. Division 7 Section Joint Sealers
6. Division 9 Section Solid Surface Wall Cladding
7. Division 9 Section Quartz Surface Wall Cladding
8. Division 10 Section Quartz Surface Toilet Partitions
9. Division 15 Section Plumbing Fixtures
10. Division 16 Section Wiring Devices

1.2 References

A. ASTM International

1. ASTM C97 – Absorption and Bulk Specific Gravity of Dimension Stone
2. ASTM C99 – Modulus of Rupture of Dimension Stone
3. ASTM C170 – Compressive Strength of Dimension Stone
4. ASTM C370 – Moisture Expansion
5. ASTM C482 - Bond Strength of Ceramic Tile to Portland Cement
6. ASTM C484 – Thermal Shock Resistance of Glazed Ceramic Tile
7. ASTM C501 – Relative Resistance to Wear of Unglazed Ceramic Tile to Taber Abraser
8. ASTM C531 – Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes
9. ASTM C880 – Flexural Strength of Dimension Stone
10. ASTM C1026 – Resistance of Ceramic Tile to Freeze Thaw Cycling
11. ASTM C1028 – Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
12. ASTM E84 – Surface Burning Characteristics of Building Materials
13. ASTM D6329-98 – Microbial Resistance

B. American National Standards Institute (ANSI)

1. ANSI Z124.6 – Stain Resistance

C. Others

1. NSF – ANSI/NSF Standard 51
2. Greenguard – “Greenguard Gold”
3. Earth Kosher - Kosher

1.3 Submittals

A. Product Data

1. Quartz Surfacing; Submit manufacturer's product data.
2. Quartz Surfacing; Submit manufacturer's care and maintenance instructions.

B. Drawings

1. Field verified dimensions of application areas.
2. Locations and dimensions of all cutouts.
3. Locations of required support and seams.
4. Notation specified edge profiles.
5. Additional installation details and methods.

C. Samples

1. Submit two sets of manufacturer's color samples for color selection.
2. Submit two (4"x4") of each color and/or finish selected for color/finish approval.
3. Adhesive: Submit two samples of an adhesive joint for each color of quartz surfacing selected. Show color match of adhesive.

D. Fabricator Qualifications

1. Work of this section shall be performed by a fabricator and/or installer approved by the manufacturer.

1.4 Quality Assurance

A. Delivery, Storage, and Handling

1. Observe manufacturer's recommendations and handle accordingly in order to prevent damage or breakage.
2. Brace parts as necessary.
3. Transport in a near vertical position with finished face positioned towards finished face.
4. Do not allow finished faces to rub during transportation or handling.

B. Storage and Protection

1. Store in racks in near vertical position.
2. Prevent warping and breakage.
3. Store indoors and away from direct sun exposure.
4. Store between 25°F and 130°F.
5. Store with finished face towards finished face.

1.5 Warranty

A. Commercial: Provide manufacturer's Commercial 10 year Limited Warranty. Warranty against manufacturer defects when fabricated and installed by a manufacturer certified fabricator/installer.

B. Residential: Provide manufacturer's Residential 15 year Limited Warranty. Warranty against manufacturer defects when fabricated and installed by a manufacturer certified fabricator/installer.

Part 2 – Products

2.1 Manufacturer

A. Acceptable Manufacturer: Vicostone distributed by Pental Surfaces Inc. (PentalQuartz).

www.pentalquartz.com

B. Qualifications: Manufacturer shall be ISO 9001:2008 and ISO 14001 certified.

C. Substitutions: None accepted

2.2 Materials

A. Quartz Surfacing

1. Material must be homogenous in nature containing approx. 90-93% crushed quartz combined with high quality polymer resin and pigments to form slabs using Bretonstone® technology.

B. Thickness:

1. 1.2 cm
2. 2 cm
3. 3 cm

C. Material Identification

1. All slabs shall be identifiable by manufacturer's markings on the back side of the slab including slab item number, material finish, production batch, and serial numbers.

D. Color and Finish

1. Color: [_____] selected from Pental Surfaces stocked standard colors.
2. Finish: [_____] selected from Pental Surfaces stocked finishes for each applicable color.

**All colors available in polished finish. Please consult PentalQuartz literature or website for availability of alternate finishes.

E. Exposed Edges (Corners)

1. Countertop edge detail: [_____]
2. Backsplash edge detail: [_____]
3. Other application edge detail(s): [_____]

F. Material Performance Characteristics

1. Water Absorption: ASTM C97 $\leq 0.03\%$
2. Flexural Strength: ASTM C880 - 6,200-11,000 psi
3. Compressive Strength: ASTM C170 - 22,000-28,000 psi
4. Abrasion Resistance: ASTM C1243 - Volume of chord: $V=89\ 194\text{mm}^2$
5. Freeze Thaw resistance: ASTM C1026 - No detects after 15 cycles
6. Microbial resistance: ASTM D6329-98(2003) : Resistant to mold growth
7. Resistance to chemical acids: ASTM C560 : Not affected
8. Resistance to staining: AS2924.2-15:1998 - 5 No visible change
9. Mohs hardness: EN101 6.0-7.0

2.3 Accessories

A. Mounting Adhesives

1. Provide structural grade silicone or epoxy adhesive.
2. Acceptable silicone manufacturers.
 - a. As specified [_____].
3. Acceptable Epoxy manufacturers.
 - a. Tenax U.S.A
 - b. Akemi North America
 - c. Bonstone Material Corp.
 - d. As specified [_____]

B. Quartz Surface Adhesive

1. Provide epoxy or polyester adhesive as recommended by manufacturer for application and conditions of use.
2. Acceptable manufacturers
 - a. Tenax U.S.A.
 - b. Akemi North America
 - c. Bonstone Materials Corp.
3. Color: Adhesives shall be tinted to match quartz surfacing for all visible finished work.

C. [Fasteners] [Grout] [Hardware]: [_____].

D. Joint Sealant:

1. Clear silicone sealant as recommended by manufacturer for application and for conditions of use.
2. Provide anti-bacterial type in toilet, bath, food preparation areas, and [_____].

E. Solvent: Product as recommended by adhesive manufacturer to clean surface of quartz surfacing to assure adhesion and not damage surface finish of quartz material.

F. Cleaning Agents: Non Abrasive, low pH cleanser or mild soap and water.

2.4 Fabrication

- A. Fabricator: Firm shall be certified by Pental Surfaces and have the ability to present written proof of such certification upon request.
- B. Layout: Layout surfaces (as shown in drawings) to minimize joints and avoid L-shaped pieces of quartz surfacing.
- C. Inspection of Material:
 - 1. Inspect material for any defects prior to fabrication.
 - 2. Visually inspect material to be used in adjacent pieces to ensure acceptable color match.
 - 3. Material to be used in adjacent pieces shall be from the same batch and identified accordingly.
- D. Tools: All cutting and polishing shall be done using water cooled power tools.
- E. Cutouts:
 - 1. Cutouts shall have a minimum 3/8 inch (10mm) inside radius.
 - 2. All exposed edges of cutouts shall be polished to match surface finish or per drawings.
- F. Laminations:
 - 1. Laminate layers of quartz surfacing as required to create buildup of edges following procedures recommended by manufacturer.

Part 3 – Execution

3.1 Acceptable Installer

- A. Firm shall be certified by Pental Surfaces and have the ability to present written proof of such certification upon request.

3.2 Examination

- A. Site Verification
 - 1. Verify dimensions by field measurements prior to fabrication and installation.
 - 2. Verify that substrate(s) supporting quartz surfaces are plumb, level, and flat to within 1/16 inch in 10 feet, and that all necessary supports and blocking are in place and secure.
 - 3. [Base Cabinets: Shall be securely fixed to all adjoining units and back wall].
- B. Material Inspection Review
 - 1. Verify all materials are free of damage.
 - 2. Do not install any damaged material until such pieces have been repaired or replaced.

3.3 Preparation

- A. General
 - 1. Protect finished surfaces against scratches, dirt, and debris.
 - 2. Apply masking where necessary.
 - 3. Take necessary precautions to prevent other trades from contacting the finished surface.

3.4 Installation

- A. General Information:
 - 1. Install materials in accordance with manufacturer's recommendations.

B. Preliminary Installation:

1. Position materials to verify correct size and position.
2. Make any necessary size or finish adjustments using methods recommended by manufacturer using water cooled power tools.
3. Perform work away from installation area if possible to protect the jobsite and surface area from dust and water.
4. Allow gaps for expansion of not less than 1/8 inch for 10 feet when installing between walls or other fixed structures.

C. Permanent Installation:

1. After verification of fit and finish:
 - a. Remove material from preliminary positions.
 - b. Clean substrates of any dust or debris.
 - c. Clean the back side of all quartz surfaces and joint surfaces with denatured alcohol.
2. Apply sufficient amount of mounting adhesive in accordance with manufacturer's recommendations to provide a permanent and secure installation.
3. Verify installation of quartz surface is plumb, level, square and flat within 1/16 inch in feet.
4. [Fasteners] [Grout] [Hardware]: [_____].
5. Position adjacent pieces of quartz surfaces in the same plane.

D. Joints

1. Joints between adjacent pieces of quartz surfacing
 - a. Joints shall be flush, tight fitting, level, and neat.
 - b. Securely join pieces with manufacturer's recommended stone adhesive.
 - c. Fill joints level to quartz surfacing.
 - d. Clamp or brace quartz surfacing pieces in position until adhesive sets.
2. Joints between quartz surfacing and [backsplash] [wall] [tub] [shower] [other]
 - a. Seal joint with silicone sealant as recommended by manufacturer.

3.5 Repair

- A. Repair or replace damaged material in a satisfactory manner.

3.6 Cleaning

- A. Remove masking, excess adhesive and/or sealant. Clean all exposed surfaces.

3.7 Protection

- A. Protect installed surfaces from damage by other trades.

3.8 Schedules

- A. [Site and job specific].

END OF SECTION