



Durasein

Specification Manual

CSI MasterFormat™ is a master list of numbers and titles classified by work results or construction practices, primarily used to organize project manuals, organize detailed cost information, and relate drawing notations to specifications. Construction projects use many different kinds of delivery methods, products, and installation methods, but one thing is common to all – the need for effective teamwork by the many parties involved to ensure the correct and timely completion of work. The successful completion of projects requires effective communication amongst the people involved, and that in turn requires easy access to essential project information. Efficient information retrieval is only possible when a standard filing system is used by everyone. MasterFormat™ provides such a standard filing and retrieval scheme that can be used throughout the construction industry.

This document presents examples of MasterFormat™ content for Durasein® solid surface. Solid surface has traditionally been classified in Division 06 – Wood, Plastics, and Composites, however, advances in applications of solid surface products as an engineering material have resulted in solid surface being utilized in many end products. It is possible that a project may specify solid surface as a component in Division 06, Division 07, Division 10, Division 11, Division 12, Division 13, Division 14 and Division 22. Here is a sample of subgroups where solid surface may be included:

- 06 61 00 Wood, Plastics and Composites
- 06 61 16 Solid Surfacing Fabrications
- 07 42 63 Fabricated Wall Panel Assemblies
- 07 46 63 Fabricated Panel Assemblies with Siding
- 10 11 43 Visual Display Wall Panels
- 10 14 00 Signage
- 10 21 13 Toilet Compartments
- 10 21 16 Shower and Dressing Compartments
- 10 25 13 Patient Bed Service Walls
- 11 42 16 Food Preparation Surfaces
- 11 74 00 Dental Equipment
- 12 35 00 Specialty Casework
- 12 36 61.16 Solid Surfacing Countertops
- 12 51 83 Custom Office Furniture
- 13 12 00 Fountains
- 13 21 13 Clean Rooms
- 14 27 13 Custom Elevator Cab Finishes

22 41 00 Residential Plumbing Fixtures
22 42 00 Commercial Plumbing Fixtures
22 43 00 Healthcare Plumbing Fixtures

In this document, we will present the sample specification as 06 61 16 Solid Surfacing Fabrications with annotations for information relevant to other subsections in the MasterFormat™ system.

[Note: Items appearing like this comment represent optional entry choices or general commentary not to be included in the specification document]

For assistance on specifications or any other technical details, contact the experts at Durasein® at: +1 (866) 509-6494

06 61 16 Solid Surfacing Fabrications

Part 1 - General

Definition

As defined in the ISFA Classification and Standards For Solid Surfacing Material ISFA 2-01 (2013), solid surface materials generally consist of reacted monomers and resins, mineral fillers and pigments manufactured in sheets of specific calipers. Solid surface materials are solid, non-porous, homogeneous, renewable, and, when applicable, may feature inconspicuous seams. Solid surface materials are free from conspicuous internal strengthening fibers.

Solid surface is nonporous, homogeneous (maintaining the same composition throughout the material) and is generally a composition of acrylic and/or polyester polymer, aluminum trihydrate filler and pigment.

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.

1.01 Summary of the Work

A. The work of this section is comprised of the furnishing and installing of all solid surface fabrications of monolithic solid thermoset plastic, consisting of, but not limited to, sheet work, lavatory bowls, sinks, coved splash work, color inlay work, thermoforming and accessories, all as shown on the drawings and as required to complete the work in this contract.

Work of this Section includes the following:

- Bar tops
- Chair rails
- Cold food service surfaces
- Color inlays
- Countertops with sinks
- Cove backsplashes
- Hot food service surfaces
- Kitchen countertops
- Kitchen island tops
- Laboratory countertops
- Nurses stations
- Reception area stations
- Seats
- Shower partitions
- Specialty countertops
- Table Tops
- Thermoforming
- Toilet partitions
- Tub and shower walls
- Vanity tops
- Wall cladding/wainscoting
- Windowsills

B. Related Sections include the following:

- 06 61 00 Wood, Plastics and Composites
- 06 61 16 Solid Surfacing Fabrications
- 07 42 63 Fabricated Wall Panel Assemblies
- 07 46 63 Fabricated Panel Assemblies with Siding
- 10 11 43 Visual Display Wall Panels
- 10 14 00 Signage
- 10 21 13 Toilet Compartments
- 10 21 16 Shower and Dressing Compartments
- 10 25 13 Patient Bed Service Walls
- 11 42 16 Food Preparation Surfaces
- 11 74 00 Dental Equipment
- 12 35 00 Specialty Casework
- 12 36 61.16 Solid Surfacing Countertops
- 12 51 83 Custom Office Furniture
- 13 12 00 Fountains
- 13 21 13 Clean Rooms
- 14 27 13 Custom Elevator Cab Finishes
- 22 41 00 Residential Plumbing Fixtures
- 22 42 00 Commercial Plumbing Fixtures
- 22 43 00 Healthcare Plumbing Fixtures

C. Related work specified elsewhere:

- Finish Carpentry
- Architectural Woodwork
- Tilework
- Wall Coverings
- Plumbing

1.02 Related Requirements

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification sections apply to work of this section.

1.03 Reference Standards

A. Reference Standards:

- American National Standards Institute (ANSI).
- American Society for Testing Materials (ASTM).

International Surface Fabricators Association (ISFA)
National Electrical Manufacturers Association (NEMA).
NSF International (NSF 51)
UL Environment (GREENGUARD)
Technical Association of the Pulp and Paper Industry (TAPPI)

ASTM E 228-11	Standard Test Method for Linear Thermal Expansion of Solid Materials with a Vitreous Silica Dilatometer
ASTM D 790-10	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D 2583-13a	Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor
ASTM G 21-09	Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
ASTM E84 (UL 723)	Test for Surface Burning Characteristics of Building Materials
ISFA 2-01 (2013)	Classification and Standards for Solid Surfacing Material
ISFA SST 1.1-00	Surface Preparation Procedure
ISFA SST 2.1-00	Consistency of Color
ISFA SST 3.1-00	Cleanability/Stain Resistance
ISFA SST 4.1-00	Flatness of Sheets
ISFA SST 5.1-00	Visual Defects
ISFA SST 6.1-00	Impact Resistance 226.8g (1/2 lb.) Ball
ISFA SST 7.1-00	Light Resistance
ISFA SST 8.1-00	Boiling Water Resistance
ISFA SST 9.1.00	High Temperature Resistance

[Note: All ISFA SST Test Standards are adapted from the original ISSFA SST Test Standards]

NEMA LD 3 (2005)	High Pressure Decorative Laminates
TAPPI T 564-sp 11 (2011)	Transparent Chart for the Estimation of Defect Size
UL 2818	GREENGUARD Certification Program for Chemical Emissions for Building Materials, Finishes & Furnishings

1.04 Submittals

A. Product Data

1. Submit product data sheets for each specified product.
2. Submit SDS sheets as appropriate
3. Submit Health Product Declaration for each specified product.

[Note: Include the following for projects requiring specific chemical-resistant attributes]

4. Submit product data for the following:
 - a. Resistance to specified chemicals
 - 1) [Insert chemical name]
 - 2) [Insert chemical name]

B. Shop drawings:

1. Shop drawings shall be supplied by the solid surface fabricator and shall include all necessary scale and full size details for finished, exposed, fabricated items, in triplicate for approval by Architect prior to fabrication; where field dimensions may cause fitting difficulties, same shall be field checked and ascertained by the solid surface fabricator and the general contractor.
2. Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices and other components.

- a. Show full-size details, edge details, thermoforming requirements, attachments, etc.
- b. Show locations and sizes of furring, blocking, including concealed blocking and reinforcement specified in other Sections.
- c. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, waste receptacle and other items installed in solid surface.

C. Samples:

1. Samples: shall be submitted by the solid surface fabricator for each color and type of solid surface in **[Insert any specific sample sizes as required; example: 4" x 4"]** **[Note: Durasein® standard sample size is 2 1/2" x 2 1/2"]** minimum sizes.
2. Samples shall indicate finish and the full range of color and pattern variation. Approved samples will be retained as a standard for the work.

D. Product data:

1. Product data shall indicate product description, fabrication information and compliance with specific performance requirements, and shall be submitted in triplicate by the solid surface fabricator.

E. LEED submittals:

1. Provide documentation for compliance for LEED 2009 **[LEEDv4]** credit requirements.

F. Certifications:

1. Product certifications for each type of product, signed by product manufacturer.
2. Manufacturer certifications signed by manufacturers certifying that specified materials comply with requirements.

G. Maintenance data:

1. Maintenance data: shall be submitted in triplicate by the solid surface fabricator and shall include the manufacturer's care and maintenance recommendations.

1.05 Quality Assurance

- A. Source quality control: Obtain and provide materials for all solid surface fabrications from a single manufacturer of solid surface materials with not less than five (5) years of successful experience in supplying principal materials for solid surface fabrication installations. Provide secondary and/or alternate materials only as recommended by the manufacturer of the primary solid surface materials.
- B. Fabricator qualifications: All work of this section shall be fabricated and installed by a fabrication professional, trained by the manufacturer of the solid surface materials or in an approved program conducted by ISFA. The trained fabrication professional shall be skilled in the knowledge and ability required to provide work in accordance with the manufacturer's "Fabrication and Installation Manual". The fabrication professional shall have a minimum of three (3) years of solid surface fabrication experience and have completed a minimum of two (2) solid surface fabrication projects of similar scope and size to the solid surface fabrication and installation work of this project. The accredited fabrication professional shall have complete and undivided responsibility for the solid surface fabrication and installation work of this project. Written proof of training should be available upon request.

[Note: Based on project needs, the following paragraph may be included]

- C. Pre-installation conference: Approximately one week prior to the scheduled commencement of the solid surface fabrication installation, a meeting shall be held at the project site with the fabrication professional, the General Contractor and all other applicable trade representatives have adjacent work and/or work that requires coordination with the installation of the solid surface fabrications, the Architect and the Owner.

The Contractor shall record discussions of the conference together with agreements and/or disagreements between parties at the meeting. A copy of the meeting minutes shall be provided and distributed to each party attending the meeting. The meeting shall be held to review methods and procedures related to the installation of the solid surface fabrications, including but not necessarily limited to the following:

Tour the installation area and inspect the condition of the substrate and other preparatory work performed by other trades.

Review the solid surface fabrication installation requirements (drawings, specifications and other contract documents).

Review the required submittals, both completed and yet to be completed.

Review and finalize construction schedule related to the solid surface fabrication work and verify the materials, installer's personnel, equipment and facilities needed to make progress and avoid errors and/or delays.

Review coordination issues between the solid surface fabrication installer and the other trades.

[Note: Based on project needs, the following paragraph may be included]

D. Job mock-up:

1. Prior to fabrication of architectural millwork, erect sample unit to further verify selections made under sample submittals and to demonstrate the quality of materials and execution.
2. Mock-up shall be **[Note: Describe details of the mock-up including item description, size, location, finishes and other details sufficient to adequately define the mock-up scope of work].**

3. The mock-up shall comply with the contract documents.
4. Notify the architect two weeks in advance of the date of when the mock-up will be delivered.
5. Should mock-up not be approved, re-fabricate and reinstall until it is approved.
 - a. Promptly remove any rejected components from the project site.
6. Following approval, the mock-up may become a part of the project.
7. Approved mock-ups will become the standard of measure for the balance of the work.

E. Pre-installation conference:

1. Conduct conference at project site to comply with requirements in Division 01.

1.06 Delivery, Storage & Handling

- A. Deliver all solid surface fabrications to site ready for installation, site work shall be limited to field seaming and spot finishing. Shop fabricated work to the greatest extent possible, allow components to be delivered separately only to facilitate transportation and installation area access limitations. Deliver fabricated work in protective packing so as to minimize any potential damage to work prior to installation. Do not deliver any materials to site until areas are ready to receive them for installation or there is an established storage location that will ensure no damage will occur to the fabricated materials.
- B. Store all materials indoors in a dry area away from extreme temperatures. Store all materials in accordance with manufacturer's recommendations. Coordinate storage of installation materials and equipment on site with General Contractor prior to delivery.

- C. Handle all solid surface materials in such a way as to prevent damage to finished surfaces. Protect edges and corners from damage by using bubble pack, cardboard, carpeting, foam board or similar padding. Individual flat sheet work shall be handled with care, transporting only on edge, in vertical position. Provide protective coverings to prevent physical damage or staining following installation and for the duration of the project.
- D. Upon delivery of solid surface fabrications to the site, all containers shall be opened by the General Contractor and inspected for damage. Damaged materials shall be removed from the site and replaced with undamaged materials by the solid surface fabricator, at no cost to the Owner.

1.07 Warranty

- A. Provide manufacturer's standard ten (10) year limited warranty. The manufacturer shall warrant that the materials provided under this Section shall not develop visible defects or otherwise fail due to manufacturing defects for a minimum period of ten (10) years from the date of acceptance by the Owner.
- B. Conditions not covered by manufacturer's warranty:
 - 1. Failure of joints, seams or of any adhesive, caulk or other accessory, failure or degradation of decorative edge treatments.
 - 2. Failure of solid surface fabricator and installer to comply with manufacturer's fabrication and installation instructions or use and maintenance instructions.
 - 3. Any products moved from their original place of installation.

Part 2 — Products

2.01 Manufacturer

- A. Acceptable products: Durasein® by Relang International LLC, 7030 Quad Avenue, Suite 3, Rosedale, MD 21237.
Phone: +1 866 509 6494
Fax: +1 443 545 8500
Email: info@duraseinusa.com
Website: www.duraseinusa.com

2.02 Materials

- A. Acceptable products: Durasein® by Relang International LLC, Rosedale, Maryland.
- B. Material: Cast, mineral-filled, homogeneous, non-porous, decorative surface alloy, comprised of 100% acrylic resin components.
- C. Physical Performance: Manufacturer shall certify that the solid surface material meets or exceeds the following properties in accordance with ISFA 2-01 (2013):

PERFORMANCE PROPERTIES OF SOLID SURFACE	ALL TYPES	TEST METHOD
Fungal Resistance*	No Growth	ASTM G 21-09
Consistency of Color*	Pass	ISFA SST 2.1-00
Cleanability/Stain Resistance*	≤ 52	ISFA SST 3.1-00
Visual Defects*	Pass	ISFA SST 5.1-00
Light Resistance*	No Effect	ISFA SST 7.1-00
Boiling Water Resistance**	No Effect	ISFA SST 8.1-00
High Temperature Resistance**	No Effect	ISFA SST 9.1-00

ENGINEERING PROPERTIES	STANDARD TYPE	TEST METHOD
Radiant Heat Resistance	600+ Seconds	NEMA LD 3-3.10
Linear Thermal Expansion mm./mm./°C	≤ 5.40 x 10 ⁻⁵ mm./mm. °C (3.00 x 10 ⁻⁵ in./in.°F)	ASTM E 228-11 am -30 to 60 °C (-22 to 140 °F)
Flexural Strength	≥27.58 Mpa (4000 psi)	ASTM D 790-10
Flexural Modulus	≥ 6895 Mpa (1.00 Mpsi)	ASTM D 790-10
Hardness, Barcol	50-70	ASTM D 2583-13a
Flatness of Sheets	≤1.6 mm (0.063 in.)	ISFA SST 4.1-00
Impact Resistance	Pass at 1525 mm. (60 in.)	ISFA SST 6.1-00

[Note: The ISFA industry standard is provided here as a basis for minimum performance and engineering properties for solid surface materials. Consult the technical team at Durasein® should your project need more stringent engineering parameters. Durasein® solid surface exceeds the minimum requirements in virtually all categories and our team can help you write a strong specification, while emphasizing both performance and cost.]

D. Repairability: The solid surface material shall be able to be repaired after incidental damage from cigarette burns, scratches, minor cuts and other similar damage, restoring the surface to its original appearance.

E. Surface Burning Characteristics: Flame spread and smoke developed shall be classified according to ASTM E84 (UL 723), Test for Surface Burning Characteristics of Building Materials, as Class I rated.

F. Stain Resistance: The solid surface material shall exhibit no lasting effect (except as noted), when tested by NEMA LD3-3.09, from the following:

Solvents: Methanol, Carbon Tetrachloride, Ethanol, Gasoline.
Acids: Acetic (99.5%), Hydrochloric (37%)¹, Phosphoric (85%),
Sulfuric (77%)²
Alkalies: Sodium Hydroxide (40%), Ammonium Hydroxide.

Other: Ammonia (1%), Lye (1%), Urea (5%), Vinegar, Lipstick,
Coffee, Nail Polish Remover.

¹May cause slight lightening.

² May cause slight darkening.

G. Finish: Surface finish shall be **[manufacturer's standard matte finish gloss level 5-18 for solid colors and 15-20 for patterns when measured in accordance with NEMA LD3-3.15 (60 degree Gardner).] [custom high gloss finish. Fabricator shall sand and buff solid surface according to the manufacturer's instructions to achieve a high gloss finish of approximately 85 - 90 gloss level, free of swirls, buffing marks and other surface imperfections.]**

[Note: Finishing is a highly subjective characteristic. It is recommended that samples of the fabricator's standard finishes be provided for approval and for comparison. Consult the Durasein® technical team at 1 (866) 509-6494 for assistance in defining the appropriate finish for your project.]

2.03 Accessory Products

A. Adhesives:

1. Flexible adhesive shall be 100% silicone and shall be matched to DURASEIN® sheet color.
2. Solid surface seam adhesive shall be matched to DURASEIN® sheet color and shall be specified by the fabricator.

B. Sink/Bowl mounting hardware: Provide hardware for mounting sinks and bowls as approved by manufacturer. Provide bowl clips, panel inserts and fasteners for attachment of sinks and bowls as required and as recommended by the primary solid surface manufacturer.

C. Hot melt glue for temporarily adhering solid surface fabrications to substrate shall be as approved by primary solid surface manufacturer.

2.04 SOLID SURFACE SINKS

A. Acceptable Product: Standard [Custom] 100% acrylic sinks from Durasein®.

[Note: The product line of Durasein® contains a wide variety of sink and vanity items. For assistance in defining the content of this section of the specification, please consult the Durasein® technical team at 1 (866) 509-6494.]

2.05 Factory Fabrication

[Note: The following are examples of specifications for typical applications of solid surface. As technology advances in the industry, new and better methods are developed. To assure accuracy and relevance in specifications, consult the Durasein® technical team at 1 (866) 509-6494.]

A. Horizontal Fabrications:

1. Specialty countertops: 1/2" (12 mm) thick, Durasein® by Relang International LLC, to size and shape, and with edge details as indicated on the drawings. **[Provide countertops complete with specified sinks.]** Provide countertops with inconspicuous joints using appropriate seam adhesive. Surfaces shall not be affected by Class I reagents.

Color:

2. Reception area stations: Horizontal surfaces 1/2" (12 mm) thick, Durasein® by Relang International LLC, with edge details as indicated on the drawings. **[Provide countertops complete with specified bowls.]** Provide countertops with inconspicuous joints using appropriate seam adhesive. Vertical surfaces shall be of **[1/4" (6 mm)] [1/2" (12 mm)]** thick DURASEIN® with edge details as indicated on the drawings. Provide vertical facing with **[inconspicuous joints using seam adhesive approved by Durasein®] [butt joints, sealed with silicone sealant matching color of Durasein®, unless otherwise indicated] [joint size and type as indicated on the drawings, sealed with silicone sealant matching color of Durasein®, unless otherwise indicated].**

Color:

3. Table Tops: Horizontal surfaces of 1/2" (12 mm) thick, Durasein® by Relang International LLC, with edge details as indicated on the drawings. Provide tabletops with inconspicuous joints using appropriate seam adhesive.

Color:

4. Bar Tops: Horizontal surfaces of 1/2" (12 mm) thick, Durasein® by Relang International LLC, with edge details as indicated on the drawings. Provide bar top complete with **[bar/utility sink.] [under mount bar/utility sink.] [seam mount bar/utility sink.] [flush mount bar/utility sink.]** Provide bar tops with inconspicuous joints using appropriate seam adhesive.

Color:

5. Kitchen countertops: Horizontal surfaces of 1/2" (12 mm) thick, Durasein® by Relang International LLC, with edge details as indicated on the drawings. Provide kitchen countertops with inconspicuous joints using appropriate seam adhesive.

Color:

6. Kitchen countertops with sinks: Horizontal surfaces of 1/2" (12 mm) thick, Durasein® by Relang International LLC, with edge details as indicated on the drawings, complete with **[under mount] [seam mount] [flush mount]** sink. Provide **[single bowl] [double bowl]** kitchen sink. Provide kitchen countertops with inconspicuous joints using appropriate seam adhesive.

Countertop Color:

Sink Model Number:

Sink Color:

7. Kitchen island tops: Horizontal surfaces of 1/2" (12 mm) thick, Durasein® by Relang International LLC, with edge details as indicated on the drawings. Provide kitchen island countertops with inconspicuous joints using appropriate seam adhesive.

Color:

8. Kitchen island tops with sinks: Horizontal surfaces of 1/2" (12 mm) thick, Durasein® by Relang International LLC, with edge details as indicated on the drawings, complete with **[under mount] [seam mount] [flush mount]** sink. Provide **[single bowl] [double bowl]** kitchen sink. Provide kitchen island countertops with inconspicuous joints using appropriate seam adhesive.

Countertop Color:

Sink Model Number:

Sink Color:

9. Vanity tops: Horizontal surfaces of 1/2" (12 mm) thick, Durasein® by Relang International LLC, with edge details as indicated on the drawings. Provide vanity tops with inconspicuous joints using appropriate seam adhesive.

Color:

10. Vanity tops with bowls: Horizontal surfaces of 1/2" (12 mm) thick, Durasein® by Relang International LLC, with edge details as indicated on the drawings, complete with **[under mount]** **[seam mount]** vanity bowl. Provide vanity tops with inconspicuous joints using appropriate seam adhesive.

Countertop Color:

Bowl Model Number:

Bowl Color:

11. Window sills: **[1/2" (13 mm)] [3/4" (19 mm)]** thick, Durasein® by Relang International LLC, **[Note: 3/4" thick Durasein® is a special order item]** to size, shape and tolerances, and with edge details as indicated on the drawings. Provide window sills with inconspicuous joints using appropriate seam adhesive. Window sills are to be applied on interior surfaces only.

Color:

B. Vertical Fabrications:

[Note: Shower and toilet partitions require specific details, hardware and experience for proper execution. Consult the technical team at Durasein® at 1 (866) 509-6494 for assistance in developing design details for partition systems.]

1. Shower partitions: 3/4" (19 mm) thick, standard panels of Durasein® by Relang International LLC, **[Note: 3/4" thick Durasein® is a special order item]**, with solid 3/4" (19 mm) thick pilasters attached at floor and ceiling. Provide panels with two sides good. Provide hardware and attachment as indicated on the drawings. Provide panels to full ceiling height as indicated on the drawings or in schedules. Provide tooled silicone sealant joint top and bottom of panels and wherever panels adjoin adjacent materials; provide **[clear] [color to match color of Durasein® for]** silicone sealant for joints unless otherwise noted.

Color:

2. Toilet partitions: 3/4" (19 mm) thick, standard panels of Durasein® by Relang International LLC, **[Note: 3/4" thick Durasein® is a special order item]**, with solid pilasters attached to floor and ceiling or top cross bar. Provide panels with two sides finished. Provide hardware and attachment as indicated on the drawings. Provide panels to height as indicated on the drawings or in schedules. Provide panel braces and attachment to pilasters as indicated on the drawings.

Color:

3. Tub and shower walls: **[1/4" (6 mm)] [1/2" (12 mm)]** thick, standard panels of Durasein® by Relang International LLC, applied to **[existing, sound ceramic tile] [moisture-resistant, gypsum wallboard] [cementitious board]** with **[butt joints] [reveal joints], [joint size and type as indicated on the drawings]**, sealed with silicone sealant matching color of Durasein® unless otherwise indicated. **[Note: hard seam and batten options can be used between panel joints. Consult the technical team at Durasein® at 1 (866) 509-6494 for assistance in developing design details]** Use silicone sealant to adhere panels to substrate. Provide panels to height as indicated on the drawings or in schedules. Provide sloped or coved top edge where panels stop short of ceiling. Provide tooled silicone sealant joint top and bottom of panels and wherever panels adjoin adjacent materials; provide **[clear] [colored to match color of Durasein® for]** silicone sealant for joints unless otherwise noted.

Color:

4. Wall cladding/wainscoting: **[1/4" (6 mm)] [1/2" (12 mm)]** thick, standard panels of Durasein® by Relang International LLC, applied to **[existing, sound plaster] [gypsum wallboard] [other solid substrates]**, with **[butt joints] [reveal joints], [joint size and type as indicated on the drawings]**, sealed with silicone sealant matching color of Durasein® unless otherwise indicated. **[Note: hard seam and batten options can be used between panel joints. Consult the technical team at Durasein® at 1 (866) 509-6494 for assistance in developing design details]**, Provide tooled silicone sealant joint top and bottom of panels and wherever panels adjoin adjacent materials. Use silicone sealant to adhere panels to substrate.

Color:

5. Wall base: 1/2" (12 mm) thick, Durasein® by Relang International LLC, to size and shape, and with edge details as indicated on the drawings. Provide wall base with inconspicuous joints using appropriate seam adhesive.

Color:

6. Chair rails: 1/2" (13 mm) thick, Durasein® by Relang International LLC, to size and shape, and with edge details as indicated on the drawings. Provide chair rails with inconspicuous joints using appropriate seam adhesive.

Color:

C. Commercial Food Service Countertops:

1. Cold cafeteria surfaces: Horizontal surfaces of 1/2" (12 mm) Durasein® by Relang International LLC, with edge details as indicated on the drawings. Provide cold cafeteria surfaces with inconspicuous joints using appropriate seam adhesive.

Color:

- a. Provide expansion joints: in countertop as detailed on the drawings. **[Note: See the Durasein® "Fabrication and Installation Manual" for specific recommendations on expansion requirements].**

- b. Make cutouts: to templates furnished by item manufacturer. Radius corners of cutouts as recommended by solid surface manufacturer.
- c. Reinforce edges and cutouts: as recommended by manufacturer.

[Note: See the Durasein® "Fabrication and Installation Manual" for specific recommendations on edge and reinforcement requirements].

- d. Thermally isolate hot applications from cold following manufacturer's methods and recommendations.
2. Hot cafeteria surfaces: Horizontal surfaces of 1/2" (12 mm) Durasein® by Relang International LLC, with edge details as indicated on the drawings. Provide hot cafeteria surfaces with inconspicuous joints using appropriate seam adhesive.

Color:

- a. Provide expansion joints: in countertop as detailed on the drawings.

[Note: See the Durasein® "Fabrication and Installation Manual" for specific recommendations on expansion requirements].

- b. Make cutouts: to templates furnished by item manufacturer. Radius corners of cutouts as recommended by manufacturer.
- c. Reinforce edges and cutouts: as recommended by manufacturer.

[Note: See the Durasein® "Fabrication and Installation Manual" for specific recommendations on edge and reinforcement requirements].

- d. Provide insulation: between Durasein® and adjacent hot water pans, food warmers and other hot surfaces as specified by Durasein®.
- e. Thermally isolate hot applications from cold following manufacturer's methods and recommendations.

- f. Provide venting of cabinets as indicated on the drawings. **[Consult the technical team at Durasein® at 1 (866) 509-6494 for assistance in developing design details].**

D. Specialty Fabrications:

1. Coved splashes: Vertical backsplash or side splash surfaces of 1/2" (12 mm) thick Durasein® with edge details as indicated on the drawings, complete with integral cove at base of splash. Provide fabricator's standard radius cove at base of splash. Provide coved splashes with inconspicuous joints using appropriate seam adhesive, including all edges that adjoin other solid surface fabrications.

Color:

2. Thermoforming: Custom formed vertical or horizontal surfaces of **[1/4" (6 mm)] [1/2" (12 mm)]** thick Durasein®, with edge details, radii and connections to other solid surface fabrications as indicated on the drawings. Comply with product data and technical instructions from the manufacturer. Comply with the following:
 - a. Construct molds of plywood, or other material approved by manufacturer. Construct molds matching complete component shape.
 - b. Form pieces to shape prior to seaming and joining.
 - c. Cut pieces to oversized dimensions as recommended by the manufacturer. Sand edges. Remove nicks and scratches.
 - d. Heat entire component of Durasein® slowly, constantly and uniformly.
 - e. Prevent blistering, whitening and cracking of Durasein® during forming.

Thermoformed Solid Surface Color:

3. Color inlay: Custom inlaid vertical or horizontal surfaces of Durasein® with design details, patterns and color combinations as indicated on the drawings. Follow manufacturer's specific instructions for inlay procedures. Allow appropriate minimum curing time for inlay work before machining. Comply with the following:
 - a. Rout groove for inlay to straight edge or pattern indicated on drawings.
 - b. Inlay groove depth shall not be more than 3/16" (5 mm) for 1/2" (12 mm) thick Durasein®.
 - c. Completely fill groove with inlay material without air bubbles, voids or separation at the inlay edge.
 - d. Machine and sand cured inlay, finish and touch-up to uniform appearance.
 - e. Finish inlay work flush with adjacent surfaces.

Base Sheet Color:

Inlay Color One:

[Inlay Color Two:]

Part 3 - Execution

3.01 Preparation

- A. Observe all recommended and required safety precautions including, but not limited to, hard hat, safety shoes, eye protection, hearing protection, skin protection and adequate ventilation.
- B. Maintain clean work surfaces during seaming and other joint work. Clean sheet edges to be seamed with denatured alcohol prior to seaming.
- C. Fabricate and install work at temperatures above sixty-five (65o) degrees F.
- D. Examine site conditions & substrates to assure that they comply with manufacturer's recommendations

3.02 Installation

- A. Prepare substrate plane, plumb and level, secure in place with all fasteners set flush. Shim supporting structure as required to provide an acceptable surface for attaching finish materials.
- B. Follow all manufacturer's recommendations for fabrication and installation of solid surface.
- C. Install components plane, plumb and level, in accordance with approved shop drawings and product data.
- D. Pre-fit finish material in place. Scribe material as required to provide proper fit with adjacent materials.
- E. Provide additional support for material seams in both horizontal and vertical locations.
- F. Form field joints using manufacturer's recommended adhesive, with inconspicuous joints in finished work.
- G. Prior to installing solid surface fabrication, make sure that substrate is clean and dry. Place silicone "dabs" on substrate in accordance with manufacturer's recommendations.
- H. Sink and bowl installation:
 - a. Adhere **[under mount] [seam mount] [flush mount]** sinks/bowls to countertops using manufacturer's recommended structural adhesive and mounting hardware.
 - b. Adhere top mount sinks/bowls to countertops using manufacturer's recommended **[color matched] [clear]** flexible adhesive.
- I. Provide backsplashes and sidesplashes as indicated on the drawings. Adhere backsplashes and sidesplashes to countertops using manufacturer's recommended **[color matched] [clear]** flexible adhesive.
- J. Keep components and hands clean during installation. Remove adhesives, sealants and other stains from the work as they occur.
- K. During installation, protect surfaces of solid surface fabrications from damage until all components have been installed.

3.03 Repairs

- A. Repair or replace damaged work which cannot be repaired to architect's satisfaction.
- B. Promptly remove from the job site damaged work which cannot be repaired to architect's satisfaction.

3.04 Cleaning & Protection

- A. After installation, all surfaces shall be cleaned to remove adhesives, sealants, paint and other contaminants.
- B. After cleaning, all work shall be protected against damage until it is accepted by the General Contractor **[or until the Date of Substantial Completion]**. Thereafter, it shall be the responsibility of the General Contractor to maintain protection and provide final cleaning.

3.05 Schedule

[Note: Schedule of colors and finishes may be inserted here if appropriate]