



Specification Manual for Welnest™ Furnishings



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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.

While casework has traditionally been classified in Division 06 – Wood, Plastics, and Composites, advances in applications of solid surface products as an engineering material have resulted in solid surface being utilized in many end products. This Welnest™ document presents examples of MasterFormat™ content for Welnest™ furnishings using the 06 61 16 division to clarify the intended use of solid surface material for various applications. 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 and Division 14. 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

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.

For assistance on specifications or any other technical details, contact:

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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. Basis of design is Welnest™ healthcare furnishings.

Work of this Section includes the following:

- Casework
- Nurses stations
- Reception area stations

Shower partitions
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
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 may include the following trades:

Finish Carpentry
Architectural Woodwork
Tilework
Wall Coverings
Plumbing
Electric

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)
 Architectural Woodwork Institute (AWI)

- 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 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
- 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 and Furnishings

1.04 SUBMITTALS

A. Product data:

1. Submit product data sheets for each specified product.
2. Submit SDS sheets as appropriate

B. Shop drawings:

1. Shop drawings shall be supplied by the subcontractor and shall include all necessary scale and full-size details for finished, exposed, fabricated items.
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. (In wall or concealed blocking is not the responsibility of solid surface fabrications subcontractor)
 - c. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, waste receptacle and other items abutting solid surface furnishings but supplied by others. GC to coordinate traces.

C. Samples:

1. Samples: shall be submitted by subcontractor for each color and type of material and product used.
2. Samples shall indicate finish and the full range of color and pattern variation.
3. Sample cabinet shall be submitted and if approved can be incorporated into installed scope of work.

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.
- B. Fabricator qualifications: All work of this section shall be fabricated and installed by a fabrication professional, trained by a member in good standing of ISFA and shall be participating in ISFA quality certification program.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver all solid surface fabrications to site ready for installation, site work shall be limited. 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.
- C. Handle all solid surface materials in such a way as to prevent damage to finished surfaces.

1.06 WARRANTY

- A. Subcontractor to provide 1 year warranty of all work.

PART 2 — PRODUCTS

2.01 MANUFACTURER

- A. Basis of Design: WelnestTM healthcare furnishings
 - a. Contact: Russ Berry
350 South Street; McSherrystown, PA 17344.
Phone: +1 717 495 4460

2.02 MATERIALS

- A. Acceptable products: WelnestTM
- 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:

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:

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 α _m -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 Welnest™ should your project need more stringent engineering parameters. Welnest™ exceeds the minimum requirements in virtually all categories and our team can help you write a strong specification, while emphasizing both performance and value.]

- 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: Acetone, Methanol, Carbon Tetrachloride, Ethanol, Gasoline.

Acids: Acetic (99.5%), Hydrochloric (37%)¹, Phosphoric (85%), Sulfuric (77%)².

Alkalis: Sodium Hydroxide (40%)¹, Ammonium Hydroxide.

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

¹ May 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). For a 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 Welnest™ technical team at 1 717.630.1251 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 WelnestTM sheet color.
 2. Solid surface seam adhesive shall be matched to WelnestTM sheet color. Basis of Design is Join It adhesive.
- 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.

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 (65°) degrees

3.02 INSTALLATION

- A. Inspect work or predecessor trades to ensure that no work of others will negatively impact subcontractors work.
- 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 during curing of adhesives.

F. Form field joints using manufacturer's recommended adhesive, with inconspicuous joints in finished work.

G. Keep components and hands clean during installation.

H. During installation, protect surfaces of solid surface fabrications from damage.

3.03 REPAIRS

A. Repair or replace damaged work.

B. Promptly remove from the job site unusable work.

3.04 CLEANING AND PROTECTION

A. After installation, all surfaces shall be cleaned.

B. After cleaning, all work shall be protected against damage. It shall be the responsibility of the General Contractor to maintain protection and provide final cleaning.

END OF SECTION