

SECTION 12 32 16
LAMINATE CLAD CASEWORK
OnePointe Solutions

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Fixed modular laminate clad casework and components.
- B. Flexible rail mounted laminate clad casework and components.
- C. Countertops.
- D. Mobile storage units, tables and components.

1.02 RELATED SECTIONS

- A. Divisions 5 and 6: Behind the Wall Blocking and Studs
- B. Division 9: Base Molding
- C. Division 11: Appliances
- D. Division 15: Plumbing
- E. Division 16: Electrical Service Fixtures and Connections

1.03 DEFINITIONS

- A. Identification of casework components and related products by surface visibility.
 - 1. Exposed Exterior Surfaces – All surfaces visible when doors and drawers are closed, including knee spaces. The underside of cabinet bottoms over 42" above the finished floor. Cabinet tops under 80" above the finished floor. Front edges of stretchers, ends, divisions, tops and bottoms. Sloping tops of cabinets that are visible.
 - 2. Exposed Interior Surfaces – All interior surfaces exposed to view in open casework or behind transparent doors.
 - 3. Semi-Exposed Surfaces – Interior surfaces only exposed to view when doors or drawers are opened.
 - 4. Concealed Surfaces – Exterior or interior surfaces that are covered, or not normally exposed to view.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Minimum of 5 years experience in providing manufactured casework systems for similar types of projects, produce evidence of financial stability, bonding capacity, and adequate facilities and personnel required to perform on this project.
- B. Manufacturer: Provide products certified as meeting or exceeding ANSI A161.1-2000 testing standards.
- C. Manufacturer: Provide products meeting or exceeding SEFA 8 PL-2016 Recommended Practices for Plastic Laminate Laboratory Grade Furniture, Casework, Shelving and Tables, as established in the Scientific Equipment & Furniture Association (SEFA) 2016 Desk Reference, 5th Edition.

OPTIONAL LANGUAGE: Architectural Woodwork Quality Standards (Delete this subsection if not required.)

- D. Quality Standard: Unless otherwise indicated, comply with AWI's Architectural Woodwork Quality Standards for grades of interior architectural woodwork, construction, finishes and other requirements.
 - 1. Provide affirmation letter from AWI that manufacturer is duly certified for premium grade from the AWI Quality Certification Program for sections 400B (Laminate Cabinets), 400C (Countertops), and 1600 (Modular Cabinets).
 - 2. Provide labels indicating that manufactured casework meets AWI standards.
- 1.05 SUBMITTALS
- A. Comply with Division 1, unless otherwise indicated.
 - B. Product Data: Manufacturer's catalog with specifications and construction details.
 - C. Shop Drawings: Indicate dimensions, description of materials and finishes, general construction, specific modifications, component connections, anchorage methods, hardware, and installation procedures, plus the following specific requirements.
 - 1. Include section drawings of typical and special casework, work surfaces and accessories.
 - 2. Indicate locations of plumbing and electrical service field connection by others.
- 1.06 PRODUCT HANDLING
- A. Deliver completed laminate clad casework, countertops, and related products only after wet operations in building are completed, store in ventilated place, protected from the weather, with relative humidity range of 25 percent to 55 percent.
 - B. Protect finished surfaces from soiling and damage during handling and installation with a protective covering.
- 1.07 JOB CONDITIONS
- A. Environmental Requirements: Do not install casework until permanent HVAC systems are operating and temperature and humidity have been stabilized for at least 1 week.
 - 1. Manufacturer/Supplier shall advise Contractor of temperature and humidity requirements for architectural casework installation areas.
 - 2. After installation, control temperature and humidity to maintain relative humidity between 25 percent and 55 percent.
 - B. Conditions: Do not install casework until interior concrete work, masonry, plastering and other wet operations are complete.
- 1.08 WARRANTY
- A. All materials and workmanship covered by this section will carry a five (5) year warranty from date of acceptance.

PART 2 – PRODUCTS

- 2.01 ACCEPTABLE MANUFACTURERS:
- A. Manufacturer:
 - 1. OnePointe Solutions
 - a. Drawings and specifications are based on OnePointe Solutions laminate products for fixed modular, flexible rail mounted, and mobile casework and accessories.

- b. Other manufacturers shall comply with the minimum levels of material and detailing indicated on the drawings or as specified.

2.02 MATERIALS

- A. Core Materials:
 - 1. Particleboard: 40-50-pound density particleboard according to ANSI A208.1-2009, grade M-2 specifications.
 - 2. MR Moisture Resistant Particleboard: 40-50-pound density particleboard according to ANSI A208.1-2009, grade M-2-MR10 moisture resistant specifications.
 - 3. Medium Density Fiberboard 6mm (1/4") thick: Average 54-pound density MDF according to ANSI A208.2-2009 grade 130 specifications.
- B. Decorative Laminates: GREENGUARD Indoor Air Quality Certified
 - 1. High-pressure decorative laminate HGS (1.14mm [0.045"]), NEMA Test LD 3-2005.
 - 2. High-pressure decorative laminate VGS (0.71mm [0.025"]), NEMA Test LD 3-2005.
 - 3. High-pressure decorative laminate HGP (.091mm [0.036"]), NEMA Test LD 3-2005.
 - 4. High-pressure cabinet liner CLS (0.51mm [0.020"]), NEMA Test LD 3-2005.
 - 5. Chemical-Resistant decorative laminate, NEMA Test LD 3-2005
 - 6. High-pressure backer, NEMA Test LD 3-2005.
 - 7. Thermally fused melamine TFM laminate, NEMA Test LD 3-2005.
- C. Laminate Color Selection: Maximum 1 color per unit face and 5 colors per project. (See Color Selection in section 3.05).
- D. Edging Materials:
 - 1. 1mm PVC banding, machine applied.
 - 2. 3mm PVC banding, machine applied, and machine profiled to 3 mm radius.
- E. Glass:
 - 1. Wall unit full sliding glass doors: 6mm (1/4") thick clear acrylic.
 - 2. Glass insert doors, hinged or sliding wall cabinets: 6mm (1/4") thick clear acrylic.
 - 3. Glass insert doors, hinged or sliding tall or base cabinets. 6mm (1/4") thick clear acrylic.
 - 4. Sliding doors mounted in plastic track.
 - 5. Trim glass inserts: Extruded rigid PVC channel and self-locking insert retainer strip.

2.03 SPECIALTY ITEMS

- A. Support Members:
 - 1. Countertop support brackets: Powder coated, 12ga steel with integral cleat mount opening and wire management opening.
 - 2. Undercounter support frames: Powder coated.
 - 3. Legs: Powder coated.
- B. Tote Trays:
 - 1. Heavy-duty vacuum-formed polypropylene plastic with full top rim and pull. Trays are ivory color, equipped with label holder.
 - 2. Tote tray/supply cabinets equipped with injection molded polycarbonate, continuous side rail support glide. Each side rail support glide is adjustable with integral support pins to interface 32mm pre-drilled holes.
- C. Mobile Storage Units:

1. Tall mobile storage units, as indicated on the drawings, are structural steel framed with powder coated tubing.
 2. Casters: 108mm (4.25") overall with a 102mm (3") soft rubber wheel, double ball bearing, heavy gauge steel fork, zinc plate finish with 4 brakes per unit. Load capacity per caster to be a minimum of 200 pounds.
 3. Side panels, back, top, drawer fronts, and doors are of 19 mm (3/4") thick particleboard, laminated on the exterior with high pressure decorative laminate VGS and on the interior with high pressure CLS cabinet liner. Exposed edges are PVC banding, 1mm or 3mm thickness, to match adjacent casework.
 4. Low mobile storage units are mounted to a caster base.
- D. Computer Keyboard Tray:
1. Non-articulating, undercounter mount with positive stop drawer slides.

2.04 CABINET HARDWARE

A. Hinges:

Choose one:

1. Concealed hinge with soft close functionality, and three-dimensional door adjustment. ANSI-BHMA standard A156.9, Grade 2.
 - a. Doors 914mm (36") to 1371mm (54") in height have 3 hinges per door.
 - b. Doors 1372mm (54") to 1930mm (76") in height have 4 hinges per door.
 - c. Doors 1931mm (76") and higher in height have 5 hinges per door.

or
2. Five knuckle, brushed stainless steel, institutional grade, 70mm (2.75") overlay type with hospital tip. 2.4mm (0.095") thick. ANSI-BHMA standard A156.9, Grade 1.
 - a. Doors 1219mm (48") and over in height have 3 hinges per door.

B. Pulls

1. Door and drawer front pulls are metal wire with brushed chrome finish, 96mm spacing on fasteners. Pull design is compatible with the Americans with Disability Act (ADA).

C. Drawer Slides:

1. Regular, knee space, and pencil: Full extension 100-pound load rated cold rolled steel, under mounted with soft close functionality and four-dimensional adjustment. Featuring an easy to operate disconnect finger release system.
2. File: Full extension 150-pound load rated cold rolled steel, under mounted soft close functionality and four-dimensional adjustment. Featuring an easy lift-off drawer rail disconnect.

D. Adjustable Shelf Supports:

1. Injection molded transparent polycarbonate friction fit into cabinet end panels and vertical dividers, adjustable on 32mm centers. Each shelf support has 2 integral support pins, 5mm diameter, to interface pre-drilled holes, and to prevent accidental rotation of support. The support automatically adapts to 19mm (3/4") or 25mm (1") thick shelving and provides non-tip feature for shelving. Supports may be field fixed if desired. Structural load to 500 pounds (125 pounds per support) without failure.

E. Locks:

1. Five-pin tumbler, cam style lock with strike.
2. Automatic door bolt to secure inactive door on all locked cabinets.
- F. Sliding Door Track: Plastic single channel.
- G. Coat Rods: 25mm (1") diameter, 14ga chrome plated steel installed in captive mounting hardware.
- H. File Suspension System: Extruded molding integral with top of drawer box sides to accept standard hanging file folders.
- I. Mirrors: 3mm (1/8") thick mirrored acrylic, break and impact resistant.

2.05 FABRICATION:

- A. Fabricate casework, countertops and related products to dimensions, profiles, and details shown.
- B. All casework panel components must be precisely cut to size and squareness to ensure strict dimensional quality and structural integrity in the final fabricated product.
- C. Cabinet Body Construction:
 1. Tops and bottoms are made of particleboard core mechanically fastened to cabinet sides and internal cabinet components such as fixed horizontals, rails and verticals. Dowels shall be installed in accordance with manufacturer's specifications.
 2. Cabinet backs: 6mm (1/4") thick medium density fiberboard panel fully captured by the cabinet top, bottom and side panels. Finish to match cabinet interior. Mounting stretchers that are 19mm (3/4") thick particleboard rails are placed behind the back panel for attachment to the wall and are mechanically fastened to the sides. An additional mounting stretcher will be included on all cabinets taller than 1828mm (72") at approximately mid height of the cabinet.
 - a. Cabinets with a finished back: 19mm (3/4") thick particleboard with the exterior surface finished in VGS laminate as selected.
 3. Fixed base and tall units have an individual factory-applied base, constructed of 19mm (3/4") thick particleboard. Base is 102mm (4") high unless otherwise indicated on the drawings.
 4. Base units, except sink base units: Front and rear stretchers that are 19mm (3/4") thick particleboard, attached to the wall. Sink base units are provided with open top and a stretcher at the front, attached to the sides. Back to be removable access panel.
 5. Side panels and vertical dividers shall receive adjustable shelf hardware at 32mm line boring centers. Mount door hinges, drawer slides and pull-out shelves in the line boring for consistent alignment.
 6. Exposed and semi exposed edges.

Choose one:

 - a. Edging: 1mm PVC machine applied.
 - or
 - a. Edging: 3mm PVC machine applied and machine profiled to 3mm (1/8") radius.
 7. Adjustable Shelves in Cabinets: 19mm (3/4") particleboard core available in lengths of up to 36" to meet AWI specifications.

- Choose one:**
- c. Edge: 1mm PVC on Front Edge Only.
 - or
 - c. Edge: 1mm PVC on All Four Edges.

- or
- c. Edge: 3mm PVC on Front Edge, 1mm PVC on Side and Back Edges.
- 8. Interior finish, units with open Interiors:
 - a. Top, bottom, back, sides, horizontal and vertical members, and adjustable shelving faces with high pressure decorative VGS laminate.
 - 9. Interior finish, units with closed Interiors:
 - a. Top, bottom, back, sides, horizontal and vertical members, and adjustable shelving faces with TFM (Thermally Fused Melamine) laminate.
 - 10. Exposed ends:

Choose one:

 - 1. Faced with high-pressure decorative VGS laminate.

or

 - 1. Faced with Chemical Resistant high-pressure decorative laminate.
 - 11. Wall unit bottom:
 - a. Faced with high pressure decorative VGS laminate.
 - 12. Balanced construction of all laminated panels is mandatory. Unfinished core stock surfaces, even on concealed surfaces (excluding edges), are not permitted.
- D. Drawers:
- Choose one:**
- 1. Sides, back and sub front: Minimum 12mm (1/2") thick particleboard, laminated with thermally fused melamine mechanically fastened into sides. Top edge banded with 1mm PVC.
 - 1. Drawer bottom: Minimum 12mm (1/2") thick particleboard laminated with thermally fused melamine, assembled into a machined groove on all four sides of the box.
- or
- 2. Sides: Powder coated steel
 - 2. Back: 16mm (5/8") thick particle board with thermally fused melamine mechanically fastened into sides. Top edge banded with 1mm PVC.
 - 2. Drawer bottom: 16mm (5/8") thick particleboard laminated with thermally fused melamine, assembled into a machined groove into drawer box sides.
- E. Door/Drawer Fronts:
- 1. Core: 19mm (3/4") thick particleboard except at sink units which are 19mm (3/4") thick moisture resistant particleboard.
- Choose one:**
- 2. Exterior faced with high-pressure decorative VGS laminate, balanced with high-pressure cabinet liner.
- or
- 2. Exterior faced with Chemical Resistant high-pressure decorative laminate, balanced with high-pressure cabinet liner.
- Choose one:**
- 3. Edges: 1mm PVC, machine applied.
- or
- 3. Edges: 3mm PVC, machine applied, external edges and outside corners machine profiled to 3mm (1/8") radius.

4. Provide double doors when the opening is nominally in excess of 610mm (24") wide.

Choose one:

F. Miscellaneous Shelving (not in Cabinets):

1. Core material: 25mm (1") thick particleboard.
2. High-pressure decorative VGS laminate on both faces.

Choose one:

3. Edges: 1mm PVC, machine applied.
or
3. Edges: 3mm PVC, machine applied, external edges and outside corners machine profiled to 3mm (1/8") radius.

Or

F. Reagent and Wall Shelving:

1. Core material: 25mm (1") thick particleboard.
2. Chemical Resistant high-pressure decorative laminate on both faces.

Choose one:

3. Edges: 1mm PVC, machine applied.
or
3. Edges: 3mm PVC, machine applied, external edges and outside corners machine profiled to 3mm (1/8") radius.

2.06 DECORATIVE LAMINATE COUNTERTOPS:

A. Core:

1. All countertops except at sink elevations: 25mm (1") thick ANSI A208.1-2009, grade M-2 particleboard.
2. Countertops at sink elevations: 25mm (1") thick ANSI A208.1-2009, grade M-2-MR10 moisture resistant particleboard.

Choose one:

- B. Surface: High-pressure decorative HGS/HGP laminate with balanced backer sheeting.
or
- B. Surface: Chemical Resistant high-pressure decorative laminate with balanced backer sheeting.
- C. Edges, including applied backsplash: 3mm PVC, exposed edges and corners machine profiled to 3mm (1/8") radius. Edges are machine applied with water based low Volatile Organic Compound (VOC), non-toxic, PVA adhesive.
- D. All countertop joints must be dry fit at the factory to check for consistency in color from one panel to the other and overall finished panel thickness, resulting in a high-quality product easy to install.

2.07 HEAVY DUTY TABLES:

- A. Work tops: 25mm (1") thick particleboard core laminated top surface with HGS/HGP laminate, balanced with backer sheeting.
 1. Edges: 3mm PVC
- B. Work top support frame: Furniture grade, powder coated steel.
- C. Adjustable legs: 44mm (1-3/4") x 16ga square epoxy powder coated tubing fitted inside 51mm (2") x 16ga square tubing with height adjustment.
 1. Heavy-duty, non-marking adjustable floor glides.

PART 3- EXECUTION

3.01 INSPECTION:

- A. The casework contractor must examine the job site and the conditions under which the work under this section is to be performed and notify the building owner in writing of unsatisfactory conditions. Do not proceed with work under this Section until satisfactory conditions have been corrected in a manner acceptable to the installer.

3.02 PREPARATION:

- A. Condition casework to average prevailing humidity conditions in installation areas prior to installing.

3.03 INSTALLATION:

- A. Erect casework, plumb, level, true and straight with no distortions. Shim as required. Where laminate clad casework abuts other finished work, scribe and cut to accurate fit.
- B. Adjust casework and hardware so that doors and drawers operate smoothly without warp or bind.
- C. Repair minor damage per plastic laminate manufacturer's recommendations.

3.04 CLEANING:

- A. Remove and dispose of all packing materials and related construction debris.
- B. Clean cabinets inside and out. Wipe off fingerprints, pencil marks, and surface soil etc., in preparation for final cleaning by the building owner.

3.05 COLOR SELECTION:

- A. Laminate Color Selection:
 - 1. Laminates will be chosen from the full range of standard Wilsonart and Nevamar stock color charts or equivalent products.
 - 2. Thermally fused melamine laminate matched to White color.
- B. Hardware Color Selection:
 - 1. Hinge: Select from your choice of brushed stainless steel or epoxy powder coating stock colors matched to White, Beige, Gray, Black and Satin Chrome.
 - 2. Pulls: Select from your choice of brushed chrome finish or epoxy powder coating stock colors matched to White, Beige, Gray, Black and Chrome.
 - 3. Miscellaneous Hardware (support brackets, table frames, etc.): Select from your choice of powder coating stock colors matched to White, Beige, Gray, Black and Silver.
- C. PVC Edge Banding Color Selection:
 - 1. 1mm and 3mm PVC: Select from the full range of pattern, woodgrain and solid colors matched to Wilsonart, Nevamar, or other equivalent laminates.

*For complete and current Laminate and PVC color availability charts please contact your sales representative.

END OF SECTION

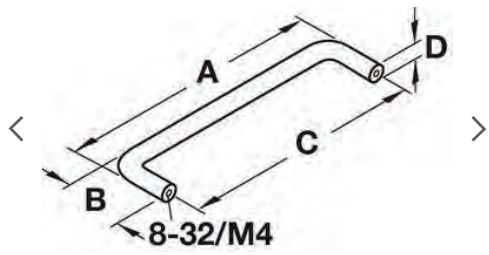
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Handle



2 of 2



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Select product features Reset selection

Material Steel

Finish Brushed nickel

A 104 mm

B 30 mm

C 96 mm

D 8 mm

Thread 8-32

Finish Code 102ST23

Selected Item (1) Show all Items (62)

Handle

Item no. 116.07.628

Item details

Optional accessories


Matching rose


Decorative Hardware Screw, 8-32, Modified Truss Head with Combi Cross/Slot Drive, Yellow Chromate

Decorative Hardware Screw, 8-32, Modified Truss Head, Combi Cross/Slot

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Blum 110° BLUMotion Full Overlay Frameless Hinge Instructions

Vertical Positioning of Hinges

Although Euro-style concealed hinges allow for some vertical adjustment, the mounting plate must line up with the hinge arm if the two are to snap together and provide the maximum possible adjustment range. The easiest way to accomplish this is to mark aligning horizontal centerlines on both the door and the cabinet. You need to consider the amount of the door's overlay or inset when calculating the centerline positions for the door.

1. For the top hinge, measure down from the top of the cabinet opening to the desired mounting location (typically 2"-3") and use a combination square to mark the horizontal centerline on the inside of the cabinet. (For the bottom hinge, measure up from the bottom of the cabinet opening.)

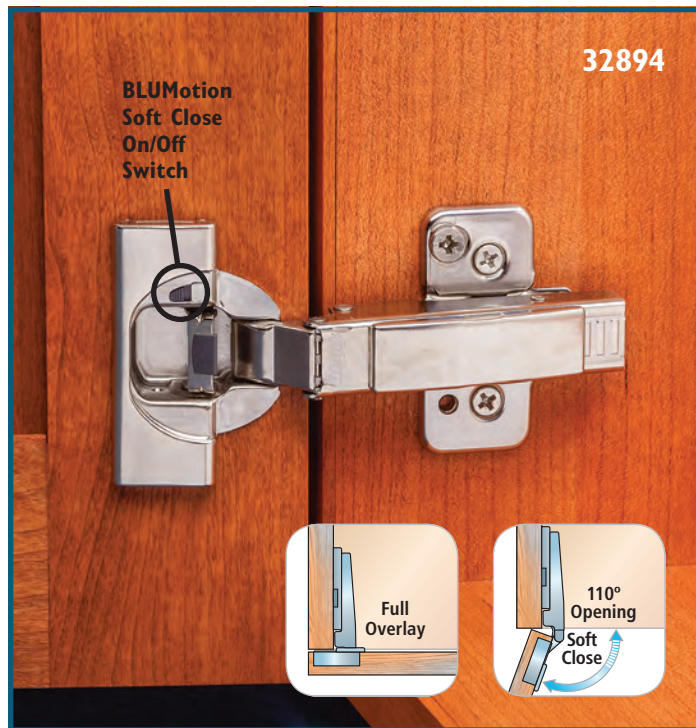
Note: Be sure your hinge positions will provide adequate clearance for any pullouts.

2. To determine the centerline location on the door, start with the distance you measured in Step 1.
 - For overlay doors, add the amount the door will overlap at that edge.
 - For inset doors, subtract the amount of the reveal at that edge.
3. Use the values calculated for the top and bottom hinge locations in Step 2 and mark the horizontal centerlines on the back of the door. Compare the distance between the lines on the cabinet with the distance between the lines on the door to verify.

Installing Hinges

1. Refer to the Door Diagram to mark drilling locations for the hinge cup holes and mounting screw holes on the door.
2. Using a 35mm Forstner bit, drill a hole 13mm deep for the hinge cup, taking care to keep the bit as square as possible to the door.

Note: For fast, easy and accurate location and drilling of hinge cup holes, we recommend using the JIG IT Deluxe Concealed Hinge Drilling System (53420, sold separately) along with a Rockler 35mm Long-Shank Forstner Bit (10117, sold separately). For those using a drill press, a dedicated JIG IT setup block is available (58488, sold separately).
3. Drill pilot holes for the screws, taking care not to drill all the way through the door.
4. Position the hinge cup in the hole and use the included screws to secure in place.
5. Repeat Steps 2-4 at other hinge location(s).



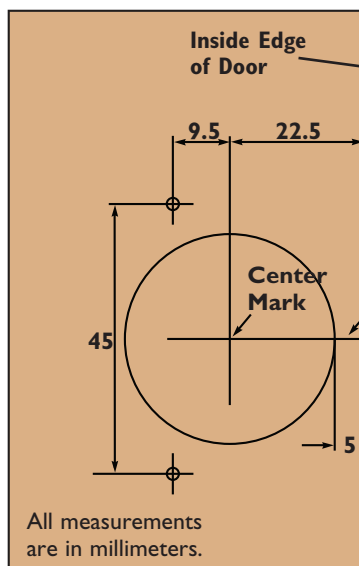
Installing Mounting Plates

1. Refer to the Cabinet Diagram to mark drilling locations for the hinge plates.
2. Drill pilot holes for the mounting screws, taking care not to drill all the way through.

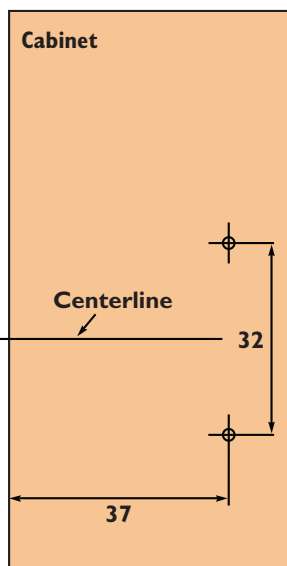
Note: For fast, easy and accurate location and drilling of mounting plate pilot holes, we recommend using the JIG IT Hinge Plate Template A (50375, sold separately) along with a Rockler/Insty-Drive #6 Self-Centering Bit (68991, sold separately).
3. Use the included screws to secure the mounting plates onto the cabinet.
4. Mount the doors by clipping the hinge arms onto the mounting plates.

Check Rockler.com for updates. If you have further questions, please contact our Technical Support Department at 1-800-260-9663 or support@rockler.com

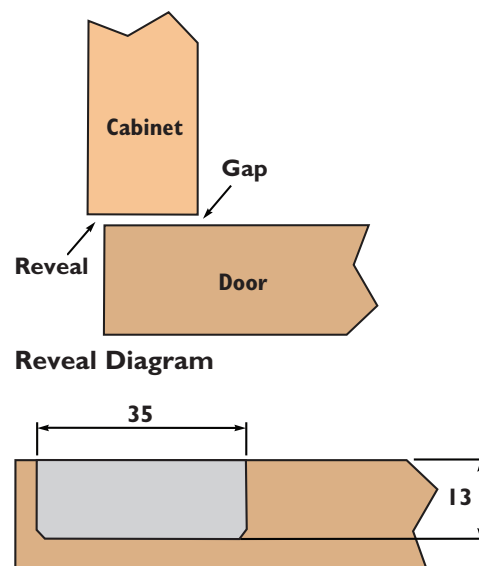
Hinge	Finish	Tab	Cup Diameter	Cup Depth	Minimum Door Thickness	Maximum Door Thickness	Adjustments	Gap	Clip-on Mounting	Minimum Reveal
Blum 110° Long Arm	Nickel	5mm	35mm	13mm	16mm (.63")	26mm (1")	3-way cam	1.5mm	Yes	1.1mm



Door Diagram

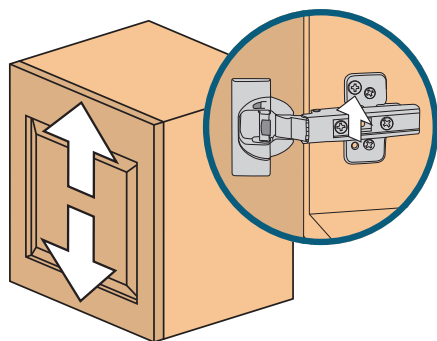


Cabinet Diagram



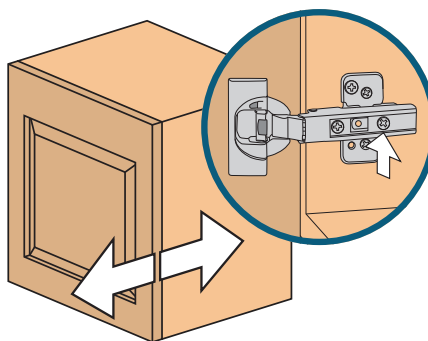
Reveal Diagram

Cup Depth Diagram



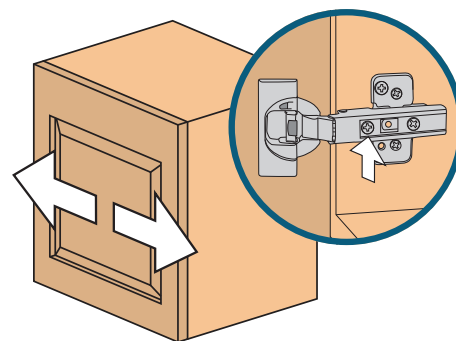
Height Adjustment

Turning this screw clockwise adjusts the door down; counterclockwise, up.



Depth Adjustment

Turning this screw clockwise adjusts the door inward; counterclockwise, outward.



Lateral Adjustment

Turning this screw clockwise adjusts the door to the right; counterclockwise, to the left.

OPTIONAL ACCESSORIES



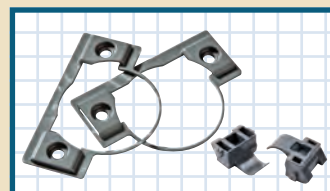
JIG IT® Deluxe Concealed Hinge Drilling Jig
53420



JIG IT® Template A Door Hinge Jig
50375



JIG IT® 5mm Hinge Cup Drill Press Drilling Jig
58488



Cup Spacers and Angle Restriction Clips
35245 and 47937

TANDEM plus BLUMOTION 569H/569. heavy duty

Application



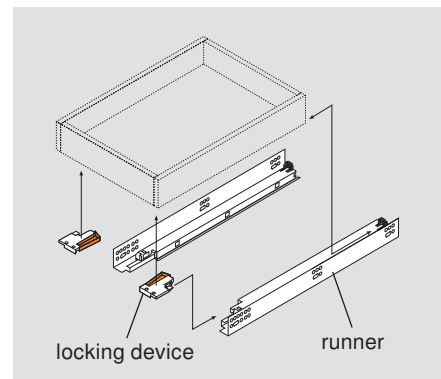
New features

- Four-dimensional adjustment
- Elongated holes for depth adjustment
- 150 lb static load capacity

Description

- Full extension concealed drawer runners
- Panel or blocked-out face frame cabinets
- BLUMOTION soft closing
- TANDEM smooth running action
- Available in 18" to 30" lengths
- 13 (1/2") to 16 (5/8") drawer thickness

Basic components



Other applications



Inset drawer pg 22



SPACE CORNER pg 30

Components

Runner set

One set required per drawer



for overall cabinet depth	drawer length	TANDEM plus BLUMOTION
838 (33")	762 (30")	569.7620B
762 (30")	686 (27")	569.6860B
686 (27")	610 (24")	569.6100B
610 (24")	533 (21")	569H5330B
533 (21")	457 (18")	569H4570B
Wood screw for installation		606N or 606P
System screw for installation		662.1150.HG

Side adjustable locking device



- One right and one left required per drawer
- With side-to-side adjustment
- Captive right and self-aligning left device
- Self-adjusting drawer length tolerance
- Steel base with synthetic, spring-loaded release levers
- Minimum inside drawer width 170 (6-11/16")
- Height adjustment +3 (1/8")
- Side adjustment ±1.5 (1/16")
- For use with 563/569 series runners only
- For other options see page 32

Part no.

Right locking device T51.1901 R

Installation Left locking device T51.1901 L

page 11 Installation screw 606N or 606P

NOTE: For heavy duty applications, rear brackets and sockets cannot be used. Cabinet sides must be blocked-out flush with the inside of the frame. See page 19.

Using TANDEM page 10

Drawer preparation page 11

Accessories page 42

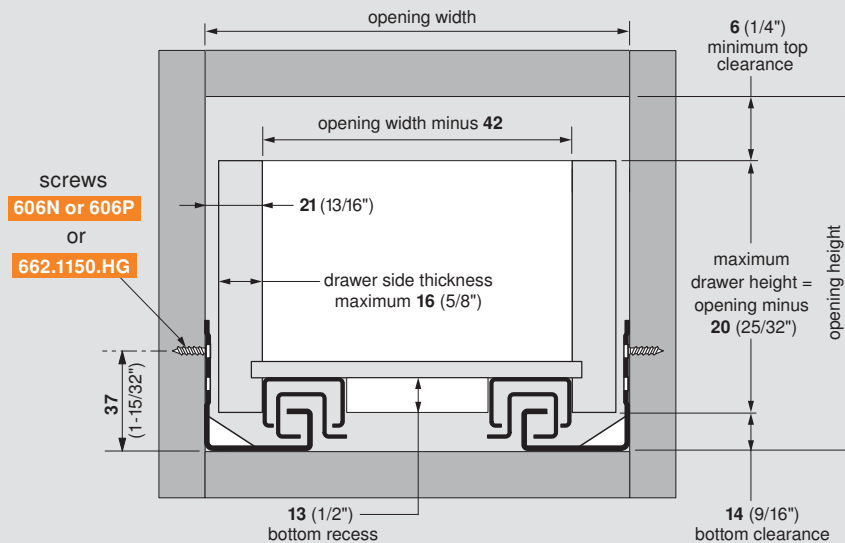
Assembly aids page 44

Maximum drawer thickness	16 (5/8")
Lengths available	18" - 30"
Static load capacity	150 lb

Drawer and cabinet specifications

Drawer box specifications

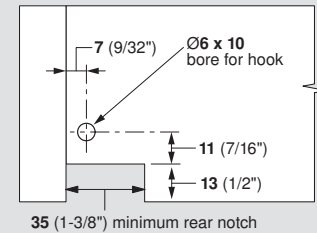
Front view



NOTE: Material thickness may vary. Inside drawer width **must** equal opening width minus 42 for TANDEM to align and function properly.

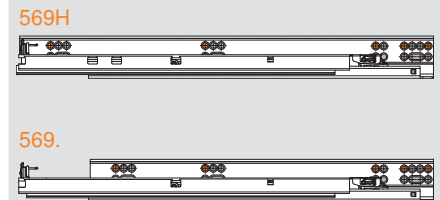
Drawer back preparation

Rear view



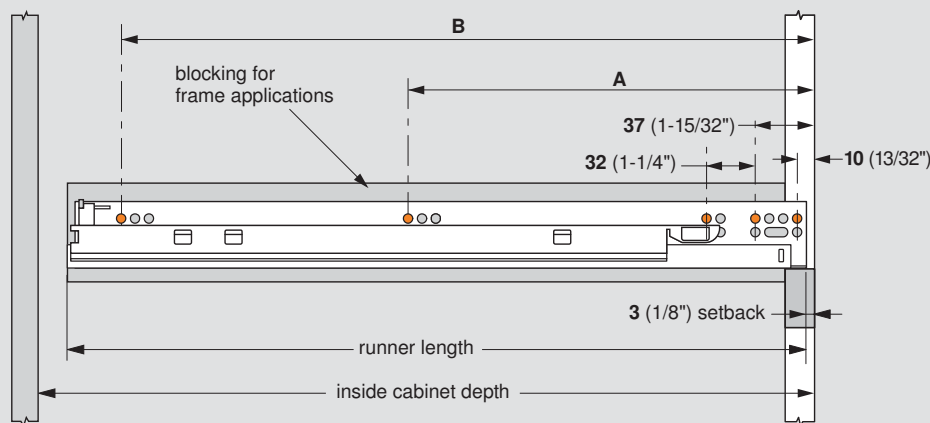
Runner comparison

Side view

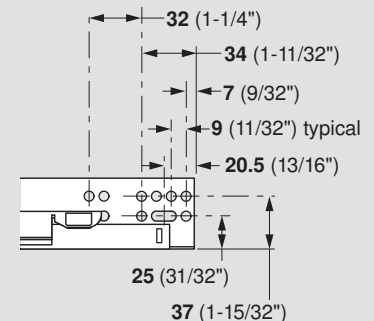


Runner mounting specifications

Side view



Runner close-up



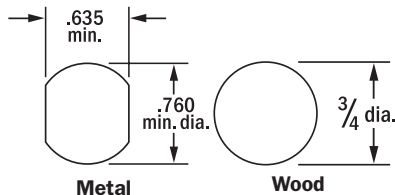
NOTE: Elongated holes are for ± 4.5 (3/16") depth adjustment only. Additional screws must be used to secure the runner to the cabinet.

NOTE: The orange dots indicate fixing screw locations required to meet specified load ratings

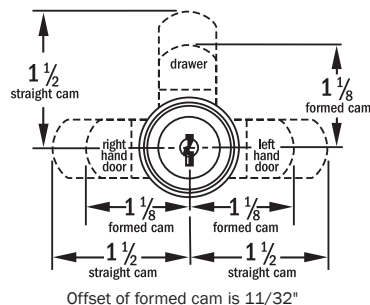
TANDEM plus BLUMOTION	drawer length	minimum inside cabinet depth	runner length	screw locations	
				A	B
569.7620B	762 (30")	786 (30-15/16")	777 (30-19/32")	261 (10-9/32")	389 (15-5/16")
569.6860B	686 (27")	709 (27-29/32")	700 (27-9/16")	261 (10-9/32")	389 (15-5/16")
569.6100B	610 (24")	634 (24-31/32")	625 (24-19/32")	261 (10-9/32")	389 (15-5/16")
569H5330B	533 (21")	557 (21-15/16")	548 (21-9/16")	261 (10-9/32")	517 (20-11/32")
569H4570B	457 (18")	480 (18-29/32")	471 (18-17/32")	261 (10-9/32")	453 (17-27/32")

disc tumbler cylinder cam locks

MOUNTING HOLES FOR ALL CAM LOCKS

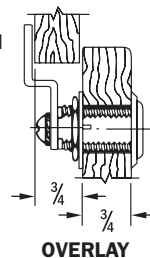


CAM DIMENSIONS

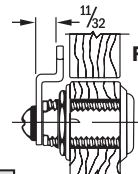


LOCK APPLICATION

LIPPED/ OVERLAY



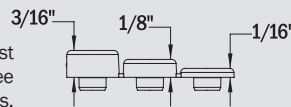
FLUSH



The C8053 lock using the C7014 cam accommodates overlay construction using a 3/4" thick front and 3/4" thick frame. See page 23 for details.

All locks feature **FlexaCam™**

U.S. Patent No. 9,512,653. Three spacers enclosed with most CompX National threaded disc tumbler cam locks offer three thicknesses – providing up to 12 different dimensional variations.



APPLICATION – For drawers, R.H. or L.H. doors with lipped/overlay construction (straight cam) or flush construction (formed cam). For overlay application, the combined thickness of front and frame cannot exceed the cylinder length. Also see overlay detail at above right.

OPERATION – 90° cam turn on all locks. Key removable in both locked and unlocked positions.

KEYING – Will key together with all other disc tumbler locks using D8785 key blank. See table for available keying. Master keying to E41A using D8783 key blank.

PACKAGING – Supplied with two keys, trim washer, spur washer (for wood), mounting nut and two cams. If flat washer (for metal) is needed, order C2015-2C separately. See page 22.



**C8052,
C8053
C8054,
C8055**



Locks furnished with
cams unassembled

Part No.	Type of Mounting	Cylinder Length	Maximum Material Thickness	KA * Codes	Key Changes		Case Quantity	Reference Number	Non MK
					KD	MKKD			Key Blank
C8051-14A	Lipped/ Overlay or Flush	7/16"	7/64"	10	200	200	25	M4-0553	D8785
C8051-3		7/16"	7/64"	3	200	—	25	M4-0553	D8785
C8052-14A		5/8"	15/64"	10	200	200	25	M4-0054	D8785
C8052-3		5/8"	15/64"	3	200	—	25	M4-0054	D8785
C8054-14A		15/16"	5/8"	10	200	200	25	M4-0054B	D8785
C8054-3		15/16"	5/8"	3	200	—	25	M4-0054B	D8785
C8054-4G		15/16"	5/8"	3	200	—	25	M4-0054B	D8785
C8053-14A		1-3/16"	7/8"	10	200	200	25	M4-0054C	D8785
C8053-3		1-3/16"	7/8"	6	200	200	25	M4-0054C	D8785
C8053-4G		1-3/16"	7/8"	6	200	200	25	M4-0054C	D8785
C8055-14A		1-7/16"	1-1/8"	10	200	200	25	M4-0054L	D8785
C8055-3		1-7/16"	1-1/8"	6	200	200	25	M4-0054L	D8785
C8055-4G		1-7/16"	1-1/8"	6	200	200	25	M4-0054L	D8785

*Key Codes used: 3 Codes – C346A, C413A and C415A.

6 Codes – C346A, C390A, C413A, C415A, C420A and C642A.

10 Codes – C205A, C267A, C346A, C361A, C390A, C413A, C415A, C420A, C441A and C642A.



The Proper Cleaning + Disinfecting of Formica® Products





Three Steps for Every Day Cleaning

1. Use a clean, damp, nonabrasive cotton cloth and a mild liquid detergent or household cleaner. Clean the soiled area using a rotating motion.
2. Next, rinse with clean water, using a clean, non-abrasive cotton cloth. Take care not to flood the laminate, especially near seams
3. Dry the surface with a soft, clean, non-abrasive cotton cloth.

Recommended Cleaners

- Liquid dish soap like Dawn®
- Fantastik® All Purpose Cleaner
- Formula 409®
- Pine-Sol® (original formula)
- Windex®



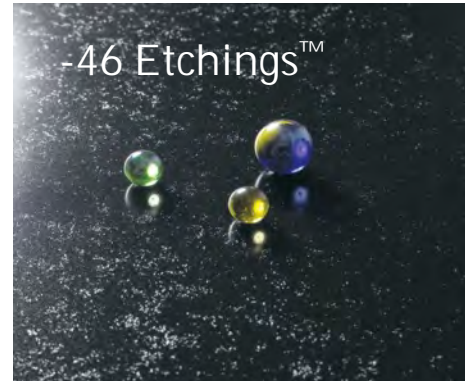
What to Avoid

- Abrasive pads - like scouring powders, steel wool, Scotch-Brite™ and sandpaper
- Abrasive cleaners like scouring powders, Ajax®, Comet®, Magic Eraser
- Acidic or Alkali based Cleansers



Deep Texture Cleaning Tips

- Use a nylon bristled hand or vegetable brush
- Mild liquid detergent and water solution
- Clean the soiled area using a rotating motion
- Finish by rinsing with water, and then dry the surface.



Formica® Products & FENIX™

The Three Step Every Day Cleaning Method applies to all Formica® Brand products

- Formica® Brand Laminate
- Formica® Writable Surfaces
- 180fx®
- Formica® Compact
- ColorCore® 2
- DecoMetal®
- Formica Infiniti®
- Formica Infiniti® ColorCore® 2
- Formica Envision™
- HardStop™
- IntenteK™
- Everform™ Solid Surface
- FENIX™



Special Cleaning Recommendations

- Markerboard & Chalkboard
- Stains
- Glue
- Paint or Varnish
- Solid Surfacing/Sinks



Formica® Writable Surfaces Gloss (-90)

- Wipe with a clean, nonabrasive cotton cloth or standard dry erase eraser.
- If residual streaks remain after normal cleaning, use a mild glass cleaner, then dry with a clean, non-abrasive cotton cloth.
- Stubborn marks may require alcohol or acetone
- Marker left on the surface for long periods of time may require a marker board cleaner and conditioner specifically designed for dry erase surfaces



Formica® Writable Surfaces Chalkboard

- Wipe clean with a sponge and water.
- Stubborn marks may require alcohol or acetone.
- Always test chalkboard pens for ghosting on a small area before using on a larger surface.



Three Steps to Remove Tough Stains

1. Apply a recommended cleanser and allow it to draw out the stain.
 - Acetone
 - Rubbing alcohol (isopropyl)
 - Ethanol
2. Clean using a rotating motion. If a cotton cloth or sponge doesn't do the trick, try using a nylon-bristle brush.
3. Rinse with water and dry the surface. Remember, it is important to remove all cleanser from the surface.

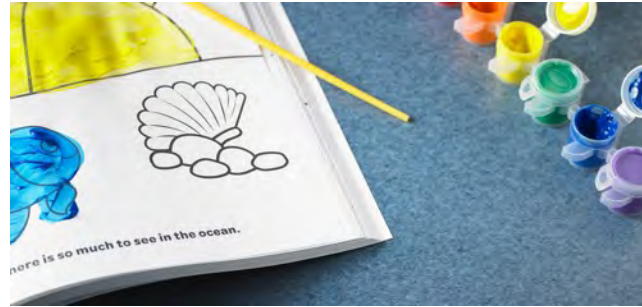


The Baking Soda Method – Tougher Stains

- Apply paste of baking soda and water
- Wipe up the paste with damp non-abrasive cotton cloth
- Rinse clean with water



Removing Glue, Paint, and Varnish



- Newly installed decorative laminate can have a streaky appearance caused by contact adhesive used during fabrication.
 - Clean with a non-abrasive cotton cloth and an adhesive solvent
- For Super Glue, acetone works well
- Most oil-based paints, varnishes and lacquers can be removed from decorative laminate surfaces with a suitable solvent

Everform™ Solid Surface

Stubborn Stains

- Soft Scrub®*
- Bleach

Sinks

- Scrub with Comet®, Ajax®, Scotch-Brite™

Everform™ Solid Surface is repairable



*may affect gloss level. See Everform™ Solid Surface technical data sheet for more details.

Disinfectant Use on Formica Products

EPA Approved List N Products

- Over 420+ Products & Growing
- Keyword Search on EPA Website by:
 - EPA Registration Number
 - Active Ingredient
 - Use
 - Contact Time

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

Formica Tested Products From Key Active Compound Categories

- Test Method: Spot Test – NEMA 3.4



Cleaning and Disinfectants (EPA Approved List N Products)

HPL*

General Cleaning:

- Fantastik®
- Formula 409®
- Windex®
- Liquid dish soap (Dawn®)

Disinfecting:

- Quaternary Ammonium
- Alcohols (Isopropanol, Ethanol)
- Sodium Hypochlorite (Bleach)
- Hydrogen Peroxides

(FENIX™ & Formica® Infiniti)**

General Cleaning:

- Fantastik®
- Formula 409®
- Windex®
- Liquid dish soap (Dawn®)

Disinfecting:

- Quaternary Ammonium
- Alcohols (Isopropanol, Ethanol)
- Sodium Hypochlorite (Bleach)
- Hydrogen Peroxides
- Phenolic

**Always follow
cleaning or
disinfectant with a
warm water rinse
and dry**

*Also applies to
Formica® Compact,
ColorCore® 2,
HardStop™, Formica
Envision™, and
IntenteK™

**Also applies to
Formica Infiniti®
ColorCore® 2



Cleaning and Disinfectants (EPA Approved List N Products)

DecoMetal (Brushed Aluminum)

General Cleaning:

- Fantastik®
- Formula 409®
- Windex®
- Liquid dish soap (Dawn®)

Disinfecting:

- Quaternary Ammonium
- Alcohols (Isopropanol, Ethanol)
- Sodium Hypochlorite (Bleach)
- Hydrogen Peroxides

Solid Surfacing

General Cleaning:

- Fantastik®
- Formula 409®
- Windex®
- Liquid dish soap (Dawn®)

Disinfecting:

- Isopropanol
- Sodium Hypochlorite (Bleach)

Always follow
cleaning or
disinfectant with a
warm water rinse
and dry

EPA COVID19 Disinfectant List & Common Brands

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

Quaternary Ammonium

(198 listed)

- Clorox® Disinfecting Wipes
- Clorox Healthcare® VersaSure® Wipes
- Clorox Commercial Solutions® Disinfecting Wipes
- Lysol® Disinfecting Wipes (All Scents)
- Lysol® Brand All Purpose Cleaner
- Sani-Cloth® Germicidal Disposable Cloth
- Super Sani-Cloth® Germicidal Disposable Wipe
- Virex™ II 256
- Fantastik® Multi-Surface Disinfectant Degreaser
- Envy® Liquid Disinfectant Cleaner
- Caviwipes™
- Cavicide™

Sodium Hypochlorite (Bleach)

(54 listed)

- Clorox Healthcare® Bleach Germicidal Wipes
- Ultra Clorox® Brand Regular Bleach (8.25%)
- Clorox Healthcare® Bleach Germicidal Cleaner Spray
- Clorox® Disinfecting Bleach2
- CloroxPro™ Clorox® Germicidal Bleach
- CPPC Ultra Bleach 2
- Sani-Cloth® Bleach Germicidal Disposable Wipe
- Caviwipes™ Bleach
- Cavicide™ Bleach
- Dispatch®
- Lysol® Brand Bleach Mold and Mildew Remover



EPA COVID19 Disinfectant List & Common Brands (cont'd)

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

Hydrogen Peroxides

(43 listed)

- Clorox Commercial Solutions® Hydrogen Peroxide Cleaner Disinfectant
- Clorox Commercial Solutions® Hydrogen Peroxide Cleaner Disinfectant Wipes
- Clorox Commercial Solutions® Clorox® Disinfecting Bleach & Odor Remover
- Oxivir™ Tb
- Oxivir™ Wipes
- Oxivir™ 1 Wipes
- Accel® Tb
- Accel® TB Wipes
- Accel® (Concentrate) Disinfectant Cleaner
- Oxy-1 Wipes
- Sani-HyPerCide™ Germicidal Spray
- Oxy-Team™ Disinfectant Cleaner

Phenolic

(9 listed)

- Steris LpH®
- Steris Vesphene® II
- Opti-Phene
- Wex-Cide 1128

Ethanol

(18 listed)

- Purell® Professional Surface Disinfectant Wipes
- Lysol Neutra Air® 2 in 1
- Wedge Disinfectant Wipes

Isopropanol

(11 listed)

- Klercide™ 70/30 IPA
- Alpet® D2
- Opti-Cide 3®





www.formica.com



CERTIFICATE OF COMPLIANCE



Formica Corporation

Formica® Brand Laminate

1769-420

Certificate Number

04/30/2007 - 10/28/2021

Certificate Period

Certified

Status

UL 2818 - 2013 Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

Wall finishes are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.2-2017 using a Classroom Environment with an air change of 0.82 hr^{-1} and a loading of 94.60 m^2 .

Product tested in accordance with UL 2821 test method to show compliance to emission limits on UL 2818. Section 7.1 and 7.2.



UL investigated representative samples of the identified Product(s) to the identified Standard(s) or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Certificate Holder (collectively "Agreement"). The Certificate Holder is authorized to use the UL Mark for the identified Product(s) manufactured at the production site(s) covered by the UL Test Report, in accordance with the terms of the Agreement. This Certificate is valid for the identified dates unless there is non-compliance with the Agreement.

GREENGUARD Gold Certification Criteria for Building Products and Interior Finishes

Criteria	CAS Number	Maximum Allowable Predicted Concentration	Units
TVOC ^(A)	-	0.22	mg/m ³
Formaldehyde	50-00-0	9 (7.3 ppb)	µg/m ³
Total Aldehydes ^(B)	-	0.043	ppm
4-Phenylcyclohexene	4994-16-5	6.5	µg/m ³
Particle Matter less than 10 µm ^(C)	-	20	µg/m ³
1-Methyl-2-pyrrolidinone ^(D)	872-50-4	160	µg/m ³
Individual VOCs ^(E)	-	1/2 CREL or 1/100th TLV	-

- (A) Defined to be the total response of measured VOCs falling within the C₆ – C₁₆ range, with responses calibrated to a toluene surrogate. Maximum allowable predicted TVOC concentrations for GREENGUARD Gold (0.22 mg/m³) fall in the range of 0.5 mg/m³ or less, as specified in CDPH Standard Method v1.2.
- (B) The sum of all measured normal aldehydes from formaldehyde through nonanal, plus benzaldehyde, individually calibrated to a compound specific standard. Heptanal through nonanal are measured via TD/GC/MS analysis and the remaining aldehydes are measured using HPLC/UV analysis.
- (C) Particle emission requirement only applicable to HVAC Duct Products with exposed surface area in air streams (a forced air test with specific test method) and for wood finishing (sanding) systems.
- (D) Based on the CA Prop 65 Maximum Allowable Dose Level for inhalation of 3,200 µg/day and an inhalation rate of 20 m³/day
- (E) Allowable levels for chemicals not listed are derived from the lower of 1/2 the California Office of Environmental Health Hazard Assessment (OEHHA) Chronic Reference Exposure Level (CREL) as required per the CDPH/EHLB/Standard Method v1.2 and BIFMA level credit 7.6.2 and 1/100th of the Threshold Limit Value (TLV) industrial work place standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, and Cincinnati, OH 45211-4438).



CERTIFICATE OF COMPLIANCE



Formica Corporation

Formica® Brand Laminate

1769-410

Certificate Number

10/28/2004 - 10/28/2021

Certificate Period

Certified

Status

UL 2818 - 2013 Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

Wall finishes are determined compliant using an Office Environment with an air change of 0.68 hr^{-1} and a loading of 33.40 m^2 .

Products tested in accordance with UL 2821 test method to show compliance to emission limits in UL 2818, Section 7.1.



UL investigated representative samples of the identified Product(s) to the identified Standard(s) or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Certificate Holder (collectively "Agreement"). The Certificate Holder is authorized to use the UL Mark for the identified Product(s) manufactured at the production site(s) covered by the UL Test Report, in accordance with the terms of the Agreement. This Certificate is valid for the identified dates unless there is non-compliance with the Agreement.

GREENGUARD Certification Criteria for Building Products and Interior Finishes

Criteria	CAS Number	Maximum Allowable Predicted Concentration	Units
TVOC ^(A)	-	0.50	mg/m ³
Formaldehyde	50-00-0	61.3 (50 ppb)	µg/m ³
Total Aldehydes ^(B)	-	0.10	ppm
Particle Matter less than 10 µm ^(C)	-	50	µg/m ³
4-Phenylcyclohexene	4994-16-5	6.5	µg/m ³
Individual VOCs ^(D)	-	1/10th TLV	-

- (A) Defined to be the total response of measured VOCs falling within the C₆ – C₁₆ range, with responses calibrated to a toluene surrogate. Maximum allowable predicted TVOC concentrations for GREENGUARD (0.50 mg/m³) fall in the range of 0.5 mg/m³ or less, as specified in CDPH Standard Method v1.2.
- (B) The sum of all measured normal aldehydes from formaldehyde through nonanal, plus benzaldehyde, individually calibrated to a compound specific standard. Heptanal through nonanal are measured via TD/GC/MS analysis and the remaining aldehydes are measured using HPLC/UV analysis.
- (C) Particle emission requirement only applicable to HVAC Duct Products with exposed surface area in air streams (a forced air test with specific test method) and for wood finishing (sanding) systems.
- (D) Allowable levels for chemicals not listed are derived from 1/10th of the Threshold Limit Value (TLV) industrial work place standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, and Cincinnati, OH 45211-4438).





Specifier General Notes:

This Formica Corporation guide specification covers the basic line of Formica Plastic Laminate Products for interior applications.

The purpose of this guide specification is to provide a laminate specification section that incorporates ALL the laminate types for any given project to be included in the project manual or sheet specification. This too could serve as text to "drop-into" laminated related specification sections.

Formica® Brand products support conservation, green design and building practices and may contribute toward many sustainability initiatives including LEED (Leadership in Energy and Environmental Design) building certifications.

Consult Formica Corporation, <http://www.formica.com/en/us> for assistance in using this guide specification for additional information not included, such as recommended laminate substrates, the latest colors, finishes, fabrication methods and project applications.

Updated: January 2019.

SECTION 06 05 13 – DECORATIVE PLASTIC LAMINATE FINISHES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes the following Laminates:

Specifier Note:

Select all that apply

1. [Solid colors.]
2. [Patterns.]
3. [Woodgrains.]
4. [Fire rated.]
5. [DecoMetal®.]
6. [ColorCore®2.]
7. [ColorCore®2 Compact.]
8. [Formica Infiniti.™]
9. [Formica Infiniti™ ColorCore®2.]
10. [Formica® Compact.]



11. [Cabinet liners.]
12. [Dry-Erase markerboard writing surfaces.]
13. [Dry-Erase chalkboard writing surfaces.]
14. [Magnetic markerboard writing surfaces.]
15. [Non-Décor Magnetic Board.]
16. [Architectural Doors Program.]
17. [HardStop™ Decorative Protection Panels.]

B. Related Requirements:

Specifier Note:
Select all that apply

1. [Division 06 Interior Finish Carpentry.]
2. [Division 06 Exterior Finish Carpentry.]
3. [Division 06 Plastic-Laminate-Faced Architectural Cabinets.]
4. [Division 06 Plastic-Laminate-Faced Wood Paneling.]
5. [Division 06 Interior Architectural Woodwork.]
6. [Division 06 Exterior Architectural Woodwork.]
7. [Division 08 Plastic-Laminate-Faced Wood Doors.]
8. [Division 08 Flush Wood Doors.]
9. [Division 10 Plastic-Laminate-Clad Toilet Compartments.]
10. [Division 10 Decorative Protection Panels.]
11. [Division 12 Manufactured Plastic-Laminate-Faced Casework.]
12. [Division 12 Residential Casework.]
13. [Division 12 Plastic-Laminate Laboratory Casework.]
14. [Division 12 Plastic-Laminate-Clad Countertops.]
15. [Division 12 Plastic-Laminate-Clad Case Goods.]

1.2 REFERENCES

- A. Reference Standards: In addition to requirements, comply with applicable provisions of following for design, materials, fabrication, and installation of component parts:



1. ANSI / NEMA LD-3: High Pressure Decorative Laminates.
2. ASTM E 84: Standard Test Method for Surface Burning Characteristics of Building Materials.

Specifier Note:

Select all that apply

3. [ASTM E 162: Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source.]
4. [FSC: Forest Stewardship Council.]
5. [IMO FTP: International Code for Application of Fire Test Procedures.]
6. [IMO FTP Code Part 2: Smoke and Density Test.]
7. [IMO FTP Code Part 5: Test for Surface Flammability.]
8. [ISO: International Organization for Standardization.]
9. [ISO 9001: Quality Management Systems.]
10. [ISO 14021: Environmental Management Systems.]
11. [ISO 4586: Specifies the methods of test for determination of the properties of High-Pressure Decorative Laminates (HPL, HPDL).]
12. [LEED: Leadership in Energy and Environmental Design.]
13. [NFPA 101: Life Safety Code.]
14. [NSF 35: High Pressure Decorative Laminates for Surfacing Food Service Equipment.]
15. [Architectural Woodwork Quality Standards.]
16. [SEFA 8.1 Approved.]
17. [ASTM G 21 Approved.]
18. [JIS Z 2801 Approved.]
19. [ASTM D 4250 Water holding (Anti-fingerprint).]

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

Specifier Note:

Retain following article / paragraphs if required for any sustainable requirements. Add additional sustainable requirements not listed. Check also manufacturer's website for current information.

1.4 ACTION SUBMITTALS

- A. Product Data:

1. Product data for each specified product. Include manufacturer's technical data sheets and published instruction instructions.



- B. Shop Drawings: Each installation.
 - 1. Anchorages to other construction, including requirements for concealed supports.
 - 2. Use same unit designations used on Drawings.
- C. Samples for Selection:
 - 1. Available standard framing finish colors.
- D. Verification Samples: 12-inch length of typical framing member in specified finish.
 - 1. Plastic-laminate-clad panels, not less than 8 by 10 inches (200 by 250 mm), for each type, color, pattern, and surface finish[, **with separate samples of unfaced panel product used for core**].
 - 2. Thermoset decorative-overlay-surfaced panels, not less than 8 by 10 inches (200 by 250 mm), for each type, color, pattern, and surface finish.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator and installer.
- B. Product Certificates: For the following:
 - 1. Thermoset decorative panels.
 - 2. High-pressure decorative laminate.
 - 3. Adhesives.
- C. Evaluation Reports: For fire-retardant-treated materials, from ICC-ES.

Specifier Note:
Retain following article / paragraphs if required for any sustainable requirements. Add additional sustainable requirements not listed. Check also manufacturer's website for current information.

1.6 SUSTAINABLE DESIGN SUBMITTALS

- A. **General:** Products in this section may also be required to comply with sustainability requirements described in Division 01 General Requirements including, but not limited to, the following:
 - 1. **GREENGUARD Certification.**
 - 2. **Recycled Content.**
 - 3. **Carbon Reduction.**
 - 4. **FSC Chain of Custody Certification.**
 - 5. **TVOC (Total Volatile Organic Compounds).**



6. **Total Aldehydes.**
 7. **Formaldehyde.**
 8. **Life Cycle Analysis (LCA) or Durability.**
 9. **Waste Management.**
- B. [Building Product Disclosure and Optimization – Environmental product declarations - environmental product declaration (EPD).]**
- C. [Building Product Disclosure and Optimization – Material Ingredients - Health Product Declaration (HPD).]**
- D. [LEED Rating System Requirements:**
1. **Potential Credits for Plastic Laminates:**
 - a. **MR Credit 4, Recycled Content.**
 - b. **MR Credit 5, Regional Materials.**
 - c. **MR Credit 7, Certified Wood.**
 - d. **IEQ Credit 4.5, Low-Emitting Materials.]**
 2. **[Potential Credits for Adhesives:**
 - a. **IEQ Credit 3.2, Construction Indoor Air Quality.**
 - b. **IEQ Credit 4.1, Low Emitting Materials, Adhesives.**
 - c. **IEQ Credit 4.4, Low Emitting Materials, Adhesives, Composite wood and Agrifiber products.**
 - d. **IEQ Credit 4.5 Low Emitting Materials.]**
- E. [Enterprise Green Communities criteria for building certification.]**
- F. [Green Globes Sustainable Interiors criteria for building certification.]**
- G. Product Data: For recycled content, indicating postconsumer and preconsumer recycled content and cost.**
- H. Product Certificates: For materials manufactured within 500 miles (800 km) of Project, indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include distance to Project and cost for each raw material.**
- I. Chain-of-Custody Certificates: For certified wood products. Include statement of costs.**
- J. Chain-of-Custody Qualification Data: For manufacturer and vendor.**
- K. Laboratory Test Reports: For adhesives, indicating compliance with requirements for low-emitting materials.**



- L. Laboratory test reports for IEQ 4.1 that indicate compliance with testing and product requirements of California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Manufacturer's written maintenance instructions.
- B. Manufacturer warranties transferrable to Owner.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in fabricating and installing decorative plastic laminate finished work with a minimum 3 years experience.
- B. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance with a minimum 3 years experience.

Specifier Note:

If project size or complexity justifies cost for Mock-up(s) they can be specified here. Sample text below is for general projects that have full room mockups, such as hospital and hospitality projects.

- C. Mock-Ups:
 - 1. Build mockups to verify selections made under submittals and to demonstrate aesthetic effects, set quality for materials and construction, set quality standard for fabrication and installation.
 - 2. Acceptable mock-ups may remain as part of the Work if undamaged at time of Substantial Completion.
 - 3. Acceptable mock-ups shall be comparison standard for remaining Work.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Package and ready materials according to manufacturer's instructions.
- B. Do not deliver components until Project is fully enclosed.
- C. Store products inside building protected from light, heat and moisture and never store in contact with floor or outside wall surfaces. Do not expose to continuous direct sunlight.



- D. Store horizontally, face-to-face and back-to-back with the top sheet turned face down.
- E. Sheets must be handled by sliding when possible.
- F. Stored at a temperature not less than 60 degrees F (16 degrees C) and a relative humidity not less than 40 percent.
- G. Provide protective coverings of suitable material. Take special precautions at corners.

1.10 PROJECT CONDITIONS

- A. Coordinate sizes and locations of cut-outs and other related Work specified in other Sections to ensure that interior laminate construction can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: Provide decorative plastic laminate with the following surface burning characteristics as determined by testing identical products per ASTM E 84 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:
 - 1. Flame-Spread Index: 25 or less.
 - 2. Smoke-Developed Index: 450 or less.
- B. Source Limitations: Obtain decorative plastic laminate materials through one source from a single manufacturer.

2.2 MANUFACTURER

- A. Manufacturer:
 - 1. Basis of Design: Formica Corporation.
 - a. Contact: <http://www.formica.com/en/us>

2.3 PLASTIC LAMINATE PRODUCTS

- A. Formica® Brand
 - 1. Description:
 - a. General purpose laminate - Solid Colors.
 - 2. Laminate Grade:



Specifier Note:

Select grade(s) for the project. Some grades may come in certain specific colors and sizes.

- a. [Grade 10, HGS - 0.044 Inches (1.1 mm).]
- b. [Grade 12, HGP - 0.035 Inches (0.9 mm).]
- c. [Grade 20, VGP or CLS - 0.027 Inches (0.7 mm).]

3. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]

4. Laminate Finish:

Specifier Note:

Select location of finish information or Select finish selection(s) for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available finishes.]
- d. [Laminate Finish (include here if not indicated on Drawings).]
- e. [Laminate Finish (include here if not indicated on Drawings).]
- f. [-58 Matte, 12.]
- g. [-58 Matte, 20.]
- h. [-90 Gloss, 12.]
- i. [-90 Gloss, 20.]
- j. [-NG Natural Grain, 12.]
- k. [-NG Natural Grain, 20.]
- l. [-PA Paper, V4.]
- m. [-PA Paper, V5.]
- n. [-PX Plex, 12.]
- o. [-PX Plex, 20.]
- p. [-PX Plex, V4.]
- q. [-90 Gloss, V4.]
- r. [-PX Plex, V5.]
- s. [-90 Gloss, V5.]
- t. [-PG Pure Grain, 12.]
- u. [-PG Pure Grain, 20.]
- v. [-WR Woodbrush, 12.]



w. [-WR Woodbrush, 20.]

5. Laminate Application(s):

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Plastic-Laminate-Faced Wood Paneling.]
- d. [Interior Architectural Woodwork.]
- e. [Plastic-Laminate-Clad Toilet Compartments.]
- f. [Manufactured Plastic-Laminate-Faced Casework.]
- g. [Residential Casework.]
- h. [Plastic-Laminate Laboratory Casework.]
- i. [Plastic-Laminate-Clad Countertops.]
- j. [Plastic-Laminate-Clad Case Goods.]

B. Patterns

- 1. Description:
 - a. General purpose laminate - Patterns.
- 2. Laminate Grade:

Specifier Note:

Select grade(s) for the project. Some grades may come in certain specific colors and sizes.

- a. [Grade 10, HGS - 0.044 Inches (1.1 mm).]
- b. [Grade 12, HGP - 0.035 Inches (0.9 mm).]
- c. [Grade 20, VGP or CLS - 0.027 Inches (0.7 mm).]

3. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]

4. Laminate Finishes:



Specifier Note:

Select location of finish information or Select finish selection(s) for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available finishes.]
- d. [Laminate Finish (include here if not indicated on Drawings).]
- e. [Laminate Finish (include here if not indicated on Drawings).]
- f. [-58 Matte, 12.]
- g. [-58 Matte, 20.]
- h. [-58 Matte, V4.]
- i. [-58 Matte, V5.]
- j. [-90 Gloss, 12.]
- k. [-90 Gloss, V4.]
- l. [-90 Gloss, V5.]
- m. [-34 Scovato, 12.]
- n. [-43 Artisan, 12.]
- o. [-46 Etchings, 12.]
- p. [-BH Brush, 12.]
- q. [-BH Brush, 20.]
- r. [-NG Natural, Grain 12.]
- s. [-NG Natural, Grain 20.]
- t. [-NT Naturelle, 12.]
- u. [-NT Naturelle, 20.]
- v. [-PX Plex, 12.]
- w. [-PX Plex, 20.]
- x. [-RD Radiance, 12.]

5. Laminate Application(s):

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Plastic-Laminate-Faced Wood Paneling.]
- d. [Interior Architectural Woodwork.]
- e. [Plastic-Laminate-Clad Toilet Compartments.]
- f. [Manufactured Plastic-Laminate-Faced Casework.]
- g. [Residential Casework.]
- h. [Plastic-Laminate Laboratory Casework.]
- i. [Plastic-Laminate-Clad Countertops.]
- j. [Plastic-Laminate-Clad Case Goods.]



C. Woodgrains

1. Description:
 - a. General purpose laminate - Woodgrains.
2. Laminate Grade(s):

Specifier Note:

Select grade(s) for the project. Some grades may come in certain specific colors and sizes.

- a. [Grade 12, HGP - 0.035 Inches (0.9 mm).]
 - b. [Grade 20, VGP or CLS - 0.027 Inches (0.7 mm).]
3. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
 - b. [Match Architect's samples.]
 - c. [As selected by Architect from manufacturer's line of available colors.]
 - d. [Laminate Color (include here if not on Drawings).]
 - e. [Laminate Color (include here if not on Drawings).]
4. Laminate Finishes:

Specifier Note:

Select location of finish information or Select finish selection(s) for the project.

- a. [As indicated on Drawings.]
 - b. [Match Architect's samples.]
 - c. [As selected by Architect from manufacturer's line of available finishes.]
 - d. [Laminate Finish (include here if not indicated on Drawings).]
 - e. [Laminate Finish (include here if not indicated on Drawings).]
 - f. [-58 Matte, 12.]
 - g. [-58 Matte, 20.]
 - h. [-43 Artisan, 12.]
 - i. [-43 Artisan, 20.]
 - j. [-NG Natural Grain, 12.]
 - k. [-NG Natural Grain, 20.]
 - l. [-NT Naturelle, 12.]
 - m. [-NT Naturelle, 20.]
 - n. [-WR Woodbrush, 12.]
 - o. [-WR Woodbrush, 20.]
 - p. [-PG Pure Grain, 12.]
 - q. [-PG Pure Grain, 20.]



5. Laminate Application(s):

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Plastic-Laminate-Faced Wood Paneling.]
- d. [Interior Architectural Woodwork.]
- e. [Plastic-Laminate-Clad Toilet Compartments.]
- f. [Manufactured Plastic-Laminate-Faced Casework.]
- g. [Residential Casework.]
- h. [Plastic-Laminate Laboratory Casework.]
- i. [Plastic-Laminate-Clad Countertops.]
- j. [Plastic-Laminate-Clad Case Goods.]

D. Fire-Rated

1. Description:

- a. Formica Brand fire-rated laminate. Melamine-impregnated decorative surface papers combined with special fire retardant phenolic-treated kraft paper.
- b. Laminate Limitations:
 - 1) Shall not be used in areas where temperatures exceed 275 degrees F (135 degrees C) for prolonged periods of time, or for exterior applications.
 - 2) Finished panel width for Grade 32/VGF should not exceed 24-inches maximum or 16-inches maximum in areas of prolonged exposed to dry conditions.
 - 3) Contact adhesives are not recommended for use with Grade 32/VGF.
- c. Laminate Substrate: Fire-Rated Particleboard (FRPB) or Inorganic Reinforced Cement Board (IRCB), bearing the Classification mark I(A) of Underwriters' Laboratories, Inc. for flame spread and smoke development.

2. Laminate Grade(s):

Specifier Note:

Select grade(s) for the project. Some grades may come in certain specific colors and sizes.

- a. [Grade 32, VGF - 0.029 Inches (0.7 mm).]
- b. [Grade 50, HGF - 0.045 Inches (1.1 mm).]
- c. [Grade 87, BLF (Backing sheet) - 0.026 Inches (0.8 mm).]
- d. [Grade 89, BGF (Backing sheet) - 0.051 Inches (1.2 mm).]

3. Laminate Color(s):



Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]

4. Laminate Finishes:

Specifier Note:

Select location of finish information or Select finish selection(s) for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available finishes.]
- d. [Laminate Finish (include here if not indicated on Drawings).]
- e. [Laminate Finish (include here if not indicated on Drawings).]
- f. [-58 Matte, 32.]
- g. [-58 Matte, 50.]
- h. [-00 Natural, 87.]
- i. [-00 Natural, 89.]
- j. [Backer sheet- Natural.]

5. Laminate Application(s):

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Plastic-Laminate-Faced Wood Paneling.]
- d. [Interior Architectural Woodwork.]
- e. [Plastic-Laminate-Clad Toilet Compartments.]
- f. [Manufactured Plastic-Laminate-Faced Casework.]
- g. [Residential Casework.]
- h. [Plastic-Laminate Laboratory Casework.]
- i. [Plastic-Laminate-Clad Countertops.]
- j. [Plastic-Laminate-Clad Case Goods.]

E. DecoMetal®

1. Description:

- a. Metal foil and solid metal high pressure laminate.
- b. Laminate Limitations:



- 1) Shall not be used in areas exposed to water, excessive moisture, constant high humidity, temperatures exceeding 140 degrees F (60 degrees C) for prolonged periods of time or for exterior applications.
- 2) Shall not be used for heavy-duty horizontal applications such as countertops or for use in high heat or moist areas such as backsplashes, behind cooktops or range hoods.

2. Laminate Grade:

Specifier Note:

Select grade(s) for the project. Some grades may come in certain specific colors and sizes.

- a. [Grade 83, (solid metal) 0.025 Inches (0.7 mm).]
- b. [Grade 84, 0.030 Inches (0.8 mm).]
- c. [Grade 85, 0.040 Inches (1.0 mm).]
- d. [Grade 86, 0.050 Inches (1.3 mm).]

3. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]

4. Laminate Finish: 99.

5. Laminate Application(s): Light Duty Horizontal and Vertical.

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Plastic-Laminate-Faced Wood Paneling.]
- d. [Interior Architectural Woodwork.]
- e. [Plastic-Laminate-Clad Toilet Compartments.]
- f. [Manufactured Plastic-Laminate-Faced Casework.]
- g. [Residential Casework.]
- h. [Plastic-Laminate Laboratory Casework.]
- i. [Plastic-Laminate-Clad Countertops.]
- j. [Plastic-Laminate-Clad Case Goods.]

F. ColorCore®2



1. Description:
 - a. Solid color through high pressure laminate. Melamine-impregnated decorative surface papers combined with specially formulated resin-treated kraft paper.
 - b. Laminate Limitations:
 - 1) Not postformable.
 - 2) Shall not be used in areas exposed to temperatures exceeding 275 degrees F (135 degrees C) or for exterior applications.
 - c. Laminate Substrate: 45# density, industrial grade particleboard (CS 236-66; Type 1, Grade B, Class 2) or Medium Density Fiberboard (MDF).
 - 1) Plywood substrate not acceptable.

2. Laminate Grade:

Specifier Note:

Select grade(s) for the project. Some grades may come in certain specific colors.

- a. [Grade CC (HCS), 0.034 Inches (0.86 mm).]
- b. [Grade CD (HCS), 0.034 Inches (0.86 mm).]

3. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]

4. Laminate Finishes:

Specifier Note:

Select location of finish information or Select finish selection(s) for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's sample(s).]
- c. [As selected by Architect from manufacturer's line of available finishes.]
- d. [Laminate Finish (include here if not indicated on Drawings).]
- e. [Laminate Finish (include here if not indicated on Drawings).]
- f. [-58 Matte, CC.]
- g. [-58 Matte, CD.]
- h. [-90 Gloss, CC.]
- i. [-NG Natural Grain, CC.]
- j. [-PX Plex, CC.]



5. Laminate Application(s): Horizontal and Vertical.

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Plastic-Laminate-Faced Wood Paneling.]
- d. [Interior Architectural Woodwork.]
- e. [Plastic-Laminate-Clad Toilet Compartments.]
- f. [Manufactured Plastic-Laminate-Faced Casework.]
- g. [Residential Casework.]
- h. [Plastic-Laminate Laboratory Casework.]
- i. [Plastic-Laminate-Clad Countertops.]
- j. [Plastic-Laminate-Clad Case Goods.]

- G. ColorCore®2 Compact

1. Description:

- a. Solid color through structural high pressure laminate. Melamine-impregnated decorative surface papers combined with specially formulated resin-treated kraft paper.

2. Laminate Grade:

Specifier Note:

Select grade(s) for the project. Some grades may come in certain specific colors and sizes.

- a. [Grade C6 (HCS), 0.500 Inches (12.7 mm).]
- b. [Grade C7 (HCS), 0.75 Inches (19.0 mm).]

3. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]

4. Laminate Finishes: Matte.

5. Laminate Application(s): Horizontal and Vertical.



Specifier Note:

Select application(s) for the project.

- a. **[Interior Finish Carpentry.]**
- b. **[Plastic-Laminate-Faced Architectural Cabinets.]**
- c. **[Plastic-Laminate-Faced Wood Paneling.]**
- d. **[Interior Architectural Woodwork.]**
- e. **[Plastic-Laminate-Clad Toilet Compartments.]**
- f. **[Manufactured Plastic-Laminate-Faced Casework.]**
- g. **[Residential Casework.]**
- h. **[Plastic-Laminate Laboratory Casework.]**
- i. **[Plastic-Laminate-Clad Countertops.]**
- j. **[Plastic-Laminate-Clad Case Goods.]**

H. Formica Infiniti™

- 1. Description:
 - a. Surface laminate with chemical resistance, thermal healing capabilities and built-in antimicrobial surface protection.
 - b. Laminate Limitations:
 - 1) Shall not be used in areas exposed to temperatures exceeding 275 degrees F (135 degrees C) or for exterior applications.
 - c. Laminate Substrate: 45# density, industrial grade particleboard (CS 236-66; Type 1, Grade B, Class 2) or Medium Density Fiberboard (MDF).
 - 1) Plywood, underlayment and solid lumber substrate not acceptable.
- 2. Laminate Grade:
 - a. Grade A7 (HGP), 0.037 Inches (0.9 mm).
- 3. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. **[As indicated on Drawings.]**
- b. **[Match Architect's samples.]**
- c. **[As selected by Architect from manufacturer's line of available colors.]**
- d. **[Laminate Color (include here if not on Drawings).]**
- e. **[Laminate Color (include here if not on Drawings).]**
- 4. Laminate Finish: AN.
- 5. Laminate Application(s): Horizontal and Vertical.

Specifier Note:

Select application(s) for the project.

- a. **[Interior Finish Carpentry.]**



- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Plastic-Laminate-Faced Wood Paneling.]
- d. [Interior Architectural Woodwork.]
- e. [Plastic-Laminate-Clad Toilet Compartments.]
- f. [Manufactured Plastic-Laminate-Faced Casework.]
- g. [Residential Casework.]
- h. [Plastic-Laminate Laboratory Casework.]
- i. [Plastic-Laminate-Clad Countertops.]
- j. [Plastic-Laminate-Clad Case Goods.]

I. Formica Infiniti™ ColorCore®2

- 1. Description:
 - a. Surface laminate with chemical resistance, thermal healing capabilities and built-in antimicrobial surface protection and solid color through
 - b. Laminate Limitations:
 - 1) Shall not be used in areas exposed to temperatures exceeding 275 degrees F (135 degrees C) or for exterior applications.
 - c. Laminate Substrate: 45# density, industrial grade particleboard (CS 236-66; Type 1, Grade B, Class 2) or Medium Density Fiberboard (MDF).
 - 1) Plywood, underlayment and solid lumber substrate not acceptable.
- 2. Laminate Grade: Grade CC (HCS), 0.034 Inches (0.86 mm).
- 3. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]
- 4. Laminate Finish: AN.
- 5. Laminate Application(s): Horizontal and Vertical.

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Plastic-Laminate-Faced Wood Paneling.]
- d. [Interior Architectural Woodwork.]
- e. [Plastic-Laminate-Clad Toilet Compartments.]
- f. [Manufactured Plastic-Laminate-Faced Casework.]



- g. [Residential Casework.]
- h. [Plastic-Laminate Laboratory Casework.]
- i. [Plastic-Laminate-Clad Countertops.]
- j. [Plastic-Laminate-Clad Case Goods.]

J. Formica® Compact.

- 1. Description:
 - a. Structural Laminate.
- 2. Laminate Grade(s):

Specifier Note:

Select grade(s) for the project. Some grades may come in certain specific colors and sizes.

- a. [Grade S2, 0.125 Inches (3.18 mm).]
- b. [Grade P7, 0.250 Inches (6.4 mm).]
- c. [Grade P9, 0.313 Inches (7.94 mm).]
- d. [Grade S8, 0.375 Inches (9.5 mm).]
- e. [Grade S6, 0.500 Inches (12.7 mm).]
- f. [Grade P8, 0.625 Inches (15.9 mm).]
- g. [Grade S7, 0.750 Inches (19.00 mm).]
- h. [Grade R3, 1.000 Inches (25.4 mm).]

- 3. Laminate Fire-Rated Grade(s):

Specifier Note:

Select fire-rated grade(s) for the project.

- a. [Grade FM, 0.250 Inches (6.4 mm).]
- b. [Grade FL, 0.313 Inches (7.94 mm).]
- c. [Grade FK, 0.375 Inches (9.5 mm).]
- d. [Grade F1, 0.500 Inches (12.7 mm).]
- e. [Grade F5, 0.750 Inches (19.00 mm).]
- f. [Grade F8, 1.000 Inches (25.4 mm).]

- 4. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]

- 5. Laminate Finishes:



Specifier Note:

Select location of finish information or Select finish selection(s) for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available finishes.]
- d. [Laminate Finish (include here if not indicated on Drawings).]
- e. [Laminate Finish (include here if not indicated on Drawings).]
- f. [-00 Natural.]
- g. [-42 Crystal.]
- h. [-58 Matte.]
- i. [Backer sheet- Natural.]

6. Laminate Application(s): Horizontal and Vertical.

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Plastic-Laminate-Faced Wood Paneling.]
- d. [Interior Architectural Woodwork.]
- e. [Plastic-Laminate-Clad Toilet Compartments.]
- f. [Manufactured Plastic-Laminate-Faced Casework.]
- g. [Residential Casework.]
- h. [Plastic-Laminate Laboratory Casework.]
- i. [Plastic-Laminate-Clad Countertops.]
- j. [Plastic-Laminate-Clad Case Goods.]

K. Cabinet Liners

- 1. Description:
 - a. Cabinet liner, melamine-impregnated decorative surface papers are combined with phenolic-treated kraft paper.
 - b. Laminate Limitations:
 - 1) Interior use only. Do not use in areas exposed to temperatures exceeding 275 degrees F or for exterior applications. Finished panel width should not exceed 24-inches maximum for Cabinet Liner if using a contact adhesive gluing system.
 - c. Laminate Substrate: 45# density, industrial grade particleboard (CS 236-66; Type 1, Grade B, Class 2) or Medium Density Fiberboard (MDF).
 - 1) Plywood substrate not acceptable.
- 2. Laminate Grade: C9.
- 3. Laminate Color(s):



Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
 - b. [Match Architect's samples.]
 - c. [As selected by Architect from manufacturer's line of available colors.]
 - d. [Laminate Color (include here if not on Drawings).]
 - e. [Laminate Color (include here if not on Drawings).]
4. Laminate Finish: -58 Matte.
 5. Laminate Application(s): Light Duty Interior Use Cabinets.

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Interior Architectural Woodwork.]
- d. [Manufactured Plastic-Laminate-Faced Casework.]
- e. [Residential Casework.]
- f. [Plastic-Laminate Laboratory Casework.]
- g. [Plastic-Laminate-Clad Case Goods.]

L. Dry-Erase Markerboard Writing Surfaces

1. Description:
 - a. Dry-Erase Markerboard, high gloss melamine impregnated decorative surface papers are combined with phenolic treated kraft paper with the sheet back sanded to maintain a uniform thickness and facilitate bonding.
 - b. Laminate Limitations: Do not use in areas exposed to temperatures exceeding 275 degrees F (135 degrees C).
 - c. Finished panel width should not exceed 24-inches maximum for Grade 20/VGP when using contact adhesive.
 - d. Laminate Substrate: 45# density, industrial grade particleboard (CS 236-66; Type 1, Grade B, Class 2) or Medium Density Fiberboard (MDF).
 - 1) Plywood substrate not acceptable.
2. Laminate Grade:

Specifier Note:

Select grade(s) for the project. Some grades may come in certain specific colors and sizes.

- a. [Grade 12 HGP, 0.035 Inches (0.9 mm).]
 - b. [Grade 20 VGP, 0.027 Inches (0.7 mm).]
3. Laminate Color(s):



Specifier Note:

Select location of color information or list the color selections for the project.

- a. [As indicated on Drawings.]
 - b. [Match Architect's samples.]
 - c. [As selected by Architect from manufacturer's line of available colors.]
 - d. [Laminate Color (include here if not on Drawings).]
 - e. [Laminate Color (include here if not on Drawings).]
4. Laminate Finish: -90 Gloss.
 5. Laminate Application(s): Horizontal and Vertical.

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Plastic-Laminate-Faced Wood Paneling.]
- d. [Interior Architectural Woodwork.]
- e. [Plastic-Laminate-Clad Toilet Compartments.]
- f. [Manufactured Plastic-Laminate-Faced Casework.]
- g. [Residential Casework.]
- h. [Plastic-Laminate Laboratory Casework.]
- i. [Plastic-Laminate-Clad Countertops.]
- j. [Plastic-Laminate-Clad Case Goods.]

M. Dry-Erase Chalkboard Writing Surfaces

1. Description:
 - a. Dry-Erase Chalkboard.
 - b. Laminate Limitations:
 - 1) Shall not be used in areas exposed to water, excessive moisture, constant high humidity, temperatures exceeding 140 degrees F (60 degrees C) for prolonged periods of time or for exterior applications.
 - 2) This laminate is not fire retardant.
2. Laminate Grade: T9.
3. Laminate Color(s):

Specifier Note:

Select location of color information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]



- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]
- 4. Laminate Finish: -CK Chalkboard.
- 5. Laminate Application(s): Horizontal and Vertical.

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Interior Architectural Woodwork.]
- d. [Manufactured Plastic-Laminate-Faced Casework.]
- e. [Residential Casework.]
- f. [Plastic-Laminate Laboratory Casework.]
- g. [Plastic-Laminate-Clad Countertops.]

N. Magnetic Markerboard Writing Surfaces

- 1. Description:
 - a. Magnetic Markerboard, high pressure decorative laminate with an iron foil incorporated under the surface décor.
- 2. Laminate Grade: M8.
- 3. Laminate Color(s):

Specifier Note:

Select location of color information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]
- 4. Laminate Finish:

Specifier Note:

Select location of information or list the finish selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available finishes.]
- d. [Laminate Finish (include here if not indicated on Drawings).]
- e. [Laminate Finish (include here if not indicated on Drawings).]
- f. [-00 Natural.]



- g. [-58 Matte.]
- h. [-90 Gloss.]

5. Laminate Application(s): Horizontal and Vertical.

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Interior Architectural Woodwork.]
- d. [Manufactured Plastic-Laminate-Faced Casework.]
- e. [Residential Casework.]
- f. [Plastic-Laminate Laboratory Casework.]
- g. [Plastic-Laminate-Clad Countertops.]

O. Non-Décor Magnetic Markerboard Writing Surfaces

1. Description:

- a. Non-magnetic markerboard to be used behind any laminate to make it a magnetic surface.
- b. Laminate Limitations: Do not use in areas exposed to temperatures exceeding 275 degrees F (135 degrees C) or for exterior applications.
- c. Finished panel width should not exceed 24-inches maximum for Grade 20/VGP when using contact adhesive.
- d. Laminate Substrate: 45# density, industrial grade particleboard (CS 236-66; Type 1, Grade B, Class 2) or Medium Density Fiberboard (MDF).
 - 1) Plywood substrate not acceptable.

2. Laminate Grade: M8.

3. Laminate Colors: Non-Décor Magnetic Board.

4. Laminate Finish: 00 Natural.

5. Laminate Application(s): Horizontal and Vertical.

Specifier Note:

Select application(s) for the project.

- a. [Interior Finish Carpentry.]
- b. [Plastic-Laminate-Faced Architectural Cabinets.]
- c. [Interior Architectural Woodwork.]
- d. [Manufactured Plastic-Laminate-Faced Casework.]
- e. [Residential Casework.]
- f. [Plastic-Laminate Laboratory Casework.]
- g. [Plastic-Laminate-Clad Countertops.]

P. Architectural Doors Program



1. Description:
 - a. Architectural door laminates.
2. Laminate Grade:
 - a. Grade 10, HGS - 0.044 Inches (1.1 mm).
3. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]

4. Laminate Finish:

Specifier Note:

Select location of finish information or Select finish selection(s) for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available finishes.]
- d. [Laminate Finish (include here if not indicated on Drawings).]
- e. [Laminate Finish (include here if not indicated on Drawings).]

Q. HardStop™ Panels

1. Description: Decorative protection panels.
 - a. Impact resistant panels.
2. Panel Core Material: Treated fiberglass core. Class A Fire-rated.
3. Laminate Grade:
 - a. Grade H1, 0.0677 Inches - 0.0827 Inches (1.72mm-2.1mm).
4. Laminate Color(s):

Specifier Note:

Select location of information or list the color selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [As selected by Architect from manufacturer's line of available colors.]
- d. [Laminate Color (include here if not on Drawings).]
- e. [Laminate Color (include here if not on Drawings).]

5. Laminate Finish:



Specifier Note: Select location of finish information or Select finish selection(s) for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]
- c. [-58 Matte.]
- d. [-43 Artisan.]

6. Laminate Application(s):

Specifier Note: Select application(s) for the project.

- a. [Wall panels.]
- b. [Wainscots.]
- c. [Laminated to gypsum board.]
- d. [Countertops.]
- e. [Cabinet fronts.]
- f. [Doors.]
- g. [Backsplashes.]
- h. [Bar fronts.]
- i. [Desk fronts.]
- j. [Elevator cab(s).]
- k. [Columns.]
- l. [Room dividers.]

7. Decorative Protection Panels Accessory Materials

- a. Aluminum Trim Profiles for Seam Treatments:
 - 1) Thicknesses:
 - a) All trims 0.055-inch.
 - b) Corner guard trim 0.065-inch.

***Specifier Note:
Select profile(s) for the project.***

- 2) Profile Types:
 - a) [Inside corners.]
 - b) [Outside corners.]
 - c) [Division bars.]
 - d) [Corner guards.]
 - e) [End caps.]
- 3) Colors, Finish and Patterns:



Specifier Note:

Select location of information or list the color selections for the project.

- a) [As indicated on Drawings.]
 - b) [Match Architect's samples.]
 - c) [Clear anodized.]
 - d) [Champagne.]
 - e) [Light bronze.]
 - f) [Dark bronze.]
 - g) [Black.]
- b. Adhesives:
- 1) Bonding Laminate: Franklin Advanced Polymer adhesive recommended.
See Formica technical guide for recommended adhesive by substrate type.
- c. Sealant:
- 1) Color Coordinated Sealant: 100% siliconecaulk material by Color-Rite Incorporated as recommended by Formica Corporation.

2.4 LAMINATE ACCESSORY MATERIALS

A. IdeaEdge® Decorative Edging:

- 1. Grade: 12, HGP.
- 2. Profile thickness: 1.25-inch Ogee and Bullnose.
- 3. Size/Profile:

Specifier Note:

Select a Size/Profile(S) for the project.

- a. [A12, Ogee.]
 - b. [B12, Bullnose.]
 - c. [C12, Ogee.]
 - d. [D12, Bullnose.]
 - e. [E12, Double Radius.]
 - f. [F12, Waterfall.]
4. Colors, Finish and Patterns:

Specifier Note:

Select location of information or list the color, finish and pattern selections for the project.

- a. [As indicated on Drawings.]
- b. [Match Architect's samples.]



- c. [As selected by Architect from manufacturer's available range.]
- d. [Include here if not indicated on Drawings.]
- e. [Include here if not indicated on Drawings.]

B. Edge Banding:

- 1. Laminate Grade:

Specifier Note:

Select grade or type(s) for the project.

- a. [Grade HGS.]
- b. [PVC tape, 0.018-inch (0.460 mm) minimum thickness, matching laminate in color, pattern, and finish.]
- c. [PVC T-mold matching laminate in color, pattern, and finish.]
- d. [PVC edge banding, 0.12-inch (3 mm) thick, matching laminate in color, pattern, and finish.]

C. Backing sheets:

- 1. Provide where recommended by manufacturer to minimize lamination warpage.

D. Adhesives:

- 1. Bonding Laminate: Provide type recommended by manufacturer.
- 2. Bonding Edge Molding: Provide type recommended by manufacturer.

2.5 LAMINATE FABRICATION

- A. Conform to Formica Corporation standard practices, procedures, conditions including preconditioning, panel balancing, material recommendations, machining, equipment and workmanship.
- B. Formica Brand Laminate with low sheen surfaces are subject to marring. Fabricating with peel coat on surface (if applicable) is recommended. Router base should be clean and free of burrs and debris. Table saws should be clean, flat, and free of burrs.
- C. Do not adhere laminates directly to plaster, gypsum board or concrete construction.



PART 3 - EXECUTION

3.1 INSTALLATION

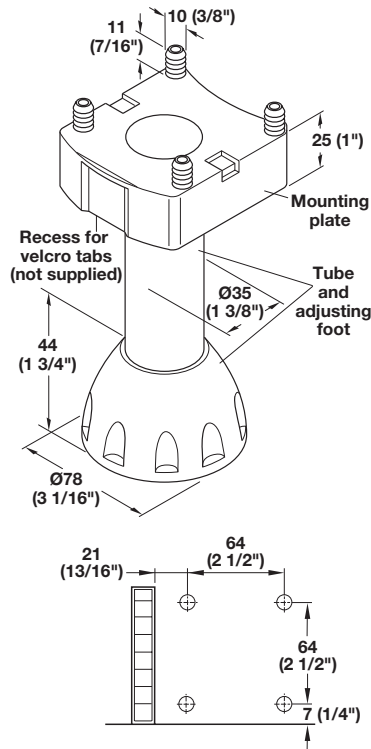
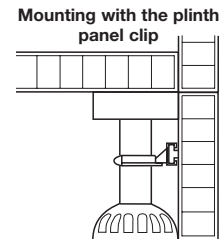
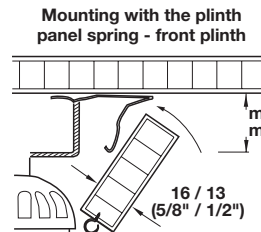
- A. General: Install decorative plastic laminate in accordance with manufacturer's installation instructions, approved submittals and requirements of:
- B. Provide templates and rough-in measurements.
- C. Accessory Materials: Install in accordance with manufacturer's written installation instructions.

3.2 CLEANING AND PROTECTING

- A. Cleaning:
 - 1. Clean decorative plastic laminate surfaces and edge moldings or aluminum trims in accordance with manufacturer's instructions.
- B. Disinfect:
 - 1. Disinfect decorative plastic laminate surfaces in accordance with manufacturer's instructions.
- C. Protection:
 - 1. Do not permit construction near unprotected surfaces.

END OF SECTION 06 05 13

- Base heights listed are total including mounting plate, tube, and adjusting foot
- Bayonet locking of the tube in the mounting plate prevents the tube from pulling out during tilting, especially on tall cabinets
- Plinth panel attaches with the clips shown, or with Velcro applied to the mounting plate recess



Square Mounting Plate

- For Ø78 mm foot

Material: Plastic; Color: black

Mounting	Item No.
press-fit	637.79.300
screw-mount	637.79.301

Supplied With
4 Plates

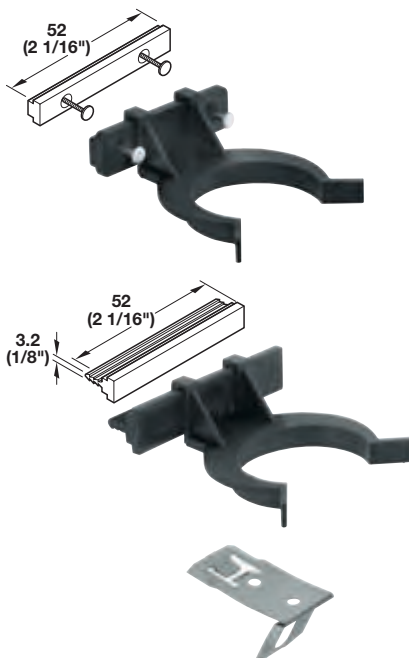
Adjustment Foot/Tube

- For Ø78 mm round mounting plate
- Easily adjusts weights up to 150 kg (330 lbs.) per leg
- Heights listed are total, including mounting plate
- Adjustment range = -10/+18 mm

Material: Plastic; Color: black

Base Height	Item No.
80 (3 1/8")	637.80.350
100 (4")	637.80.351
120 (4 3/4")	637.80.352
150 (6")	637.80.353

Supplied With
4 Feet
4 Tubes
Pre-mounted nails



Plinth Panel Clip

- For rectangular glide

Material: Plastic

Color	Item No.
black	637.81.588

Supplied With
4 Panel holders
Pre-mounted nails

Plinth Panel Clip

- Groove-mounted
- For rectangular glide

Material: Plastic

Color	Item No.
black	637.81.590

Supplied With
4 Panel holders

Plinth Panel Spring

- For front plinth mounting
- Plinth panel is removable with disassembly ring

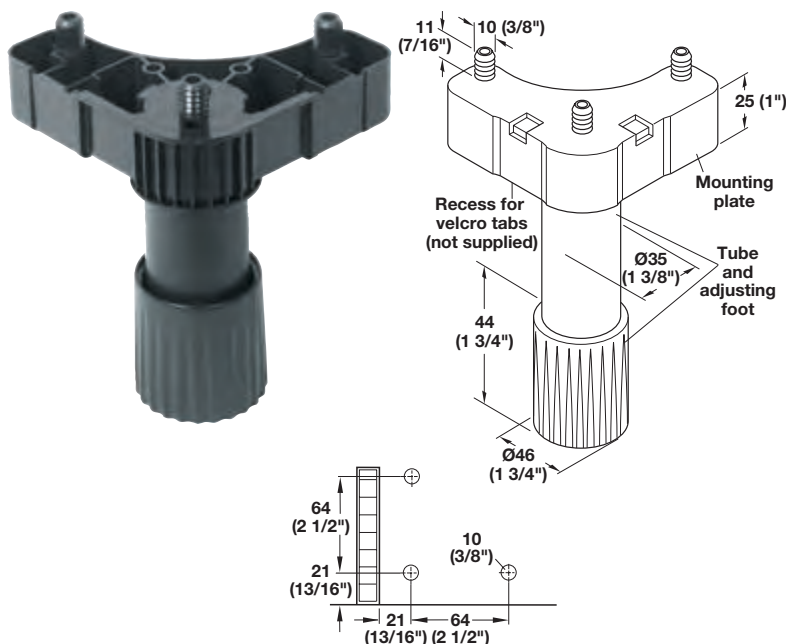
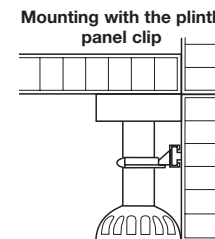
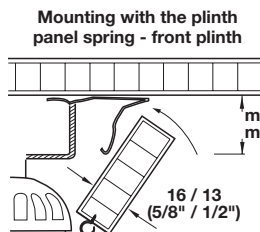
Material: Stainless Steel

Item No.
637.81.330

Supplied With
20 pcs.

Dimensions in mm
Inches are approximate

- Base heights listed are total including mounting plate, tube, and adjusting foot
- Bayonet locking of the tube in the mounting plate prevents the tube from pulling out during tilting, especially on tall cabinets
- Plinth panel attaches with the clips shown, or with Velcro applied to the mounting plate recess



Triangle Mounting Plate

- For Ø46 mm foot

Material: Plastic; Color: black

Mounting	Item No.
press-fit	637.79.310
screw-mount	637.79.311

Supplied With

4 Plates

Adjustment Foot/Tube

- For Ø46 mm triangle mounting plate
- Heights listed are total, including mounting plate
- Adjustment range = -10/+18 mm
- Weight capacity: 150 kg (330 lbs.) each leg

Material: Plastic; Color: black

Base Height	Item No.
80 (3 1/8")	637.80.360
100 (4")	637.80.361
120 (4 3/4")	637.80.362
150 (6")	637.80.363

Supplied With

4 Feet
4 Tubes

Plinth Panel Clip

- For triangular glide

Material: Plastic

Color	Item No.
black	637.81.589

Supplied With

4 Panel holders
Pre-mounted nails

Plinth Panel Clip

- Groove-mounted
- For triangular glide

Material: Plastic

Color	Item No.
black	637.81.591

Supplied With

4 Panel holders

Plinth Panel Spring

- For front plinth mounting
- Plinth panel is removable with disassembly ring

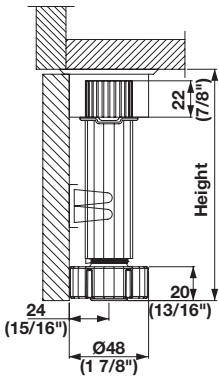
Material: Stainless Steel

Item No.
637.81.330

Supplied With

20 pcs.

Dimensions in mm
Inches are approximate



Adjustment Feet

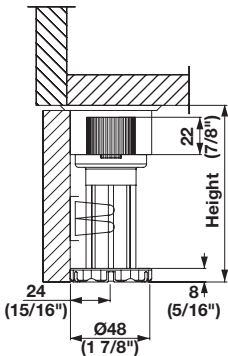
- Slots in base allow for easy adjustment with flat blade driver
- Shaft: Ø28 mm
- Adjustment Range: -5/+20
- Weight capacity: 114 kg (250 lbs. per foot)

Material: Plastic; Color: black

Height	Item No.
80 mm (3 3/16")	637.19.380
100 mm (4")	637.19.360

Note
Height listed is total, including mounting socket.
See page 6.24B for plinth clips and M10 attachment screw.

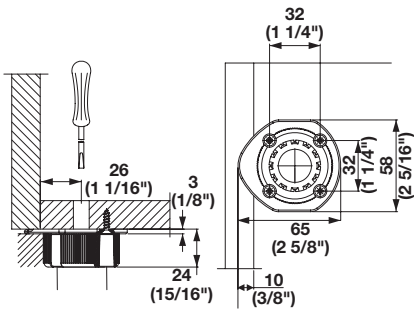
6



Adjustment Feet - Short Applications

Height	Item No.
50 mm (2")	637.86.331
70 mm (2 3/4")	637.86.335

Note
50 mm (2") version will not accept plinth clips.

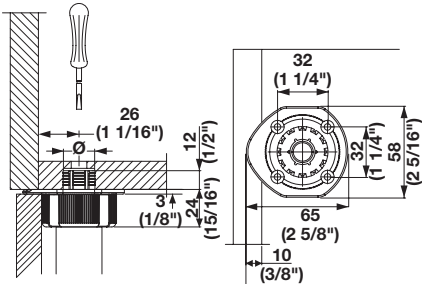
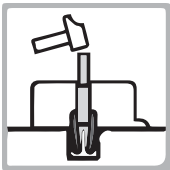


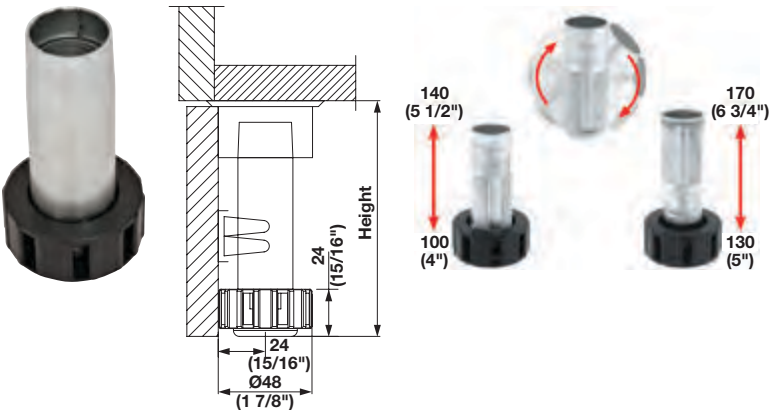
Mounting Sockets

- 2 versions to choose from: Screw or through-mounted using M10 attachment screw, see page 6.24B
- Press-fit versions with expanding pound in dowel to secure

Material: Plastic; Color: black

Mounting	Item No.
screw-mount	637.19.964
pound in dowel-mount - Ø10 mm	637.19.952
pound in dowel-mount - Ø15 mm	637.19.954





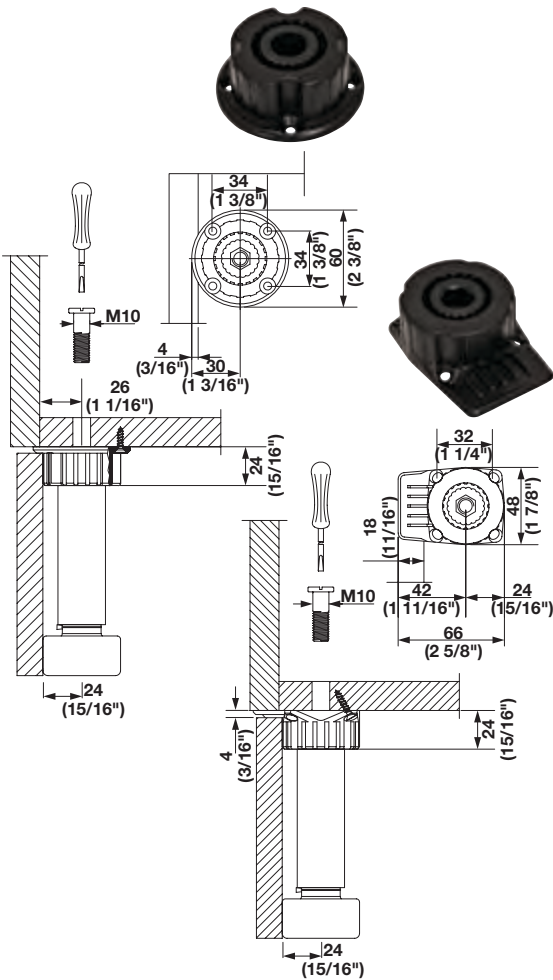
Adjustment Foot - XT

- With reversible inner threaded tube to create 2 height ranges: 100 mm - 140 mm (4" - 5 1/2") 130 mm - 170 mm (5" - 6 3/4")
 - Choose between plastic or metal mounting sockets below
- Shaft Ø28 mm
Weight capacity: 150 kg (330 lbs. per foot)

Material: Shaft: Steel; Foot: Plastic; Color: black

Item No.
637.59.932

Note
Height ranges include mounting socket.
See page 6.24B for plinth clips and M10 attachment screw.



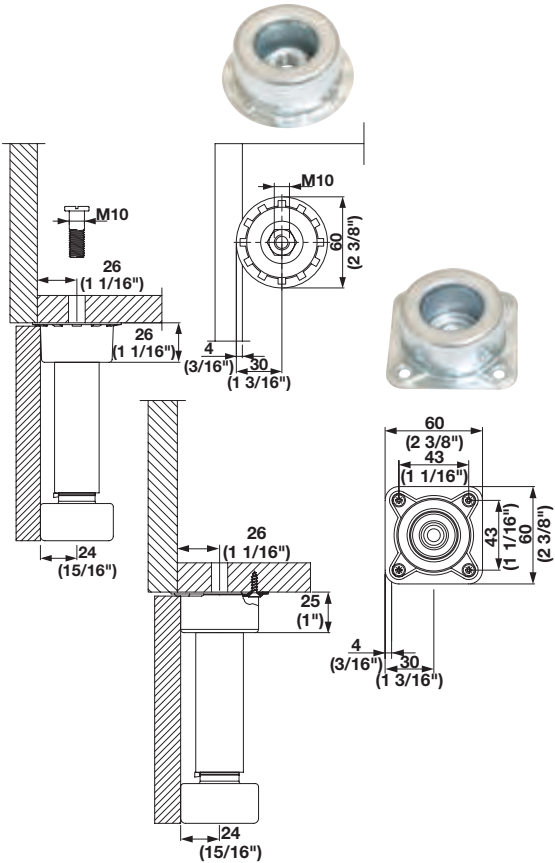
Mounting Sockets – XT Plastic

- Both versions can be screw-mounted, or through-mounted using M10 attachment screw, see page 6.24B

Material: Plastic; Color: black

Version	Item No.
round	637.59.980
with additional support tab	637.59.992

Note
Height ranges include mounting socket.



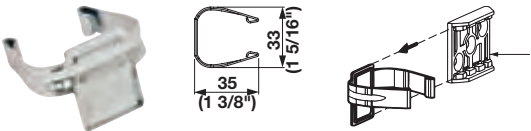
Mounting Sockets - XT Metal

- 2 versions to choose from
- Square is screw-mounted
- Round is for through-mounting only using M10 attachment screw, see page 6.24B

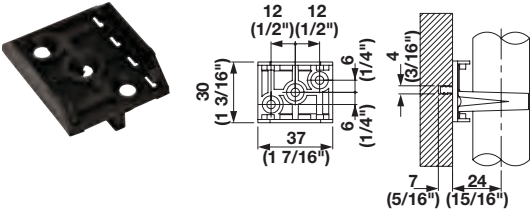
Material: Steel

Version	Item No.
round	637.19.020
square	637.19.060

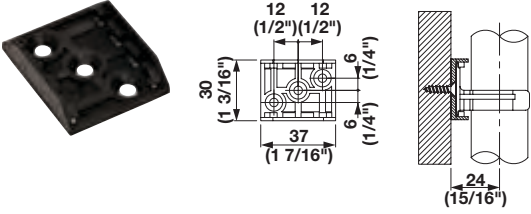
Dimensional data not binding. We reserve the right to alter specifications without notice.



Spring clip



Groove-mount



Screw-mount

Plinth Clips for Ø28 mm Shafts

Material: Spring Clip: Steel; Adapter: Plastic; Color: black

Description	Item No.
spring clip	637.19.941
groove-mount adapter	637.19.942
screw-mount adapter	637.42.020

Note

Order Spring Clip and choose between screw-mounted or groove-mounted adapters

6



Cap

Material: Plastic

Color	Item No.
white	637.45.791



Attachment Screw - M10

Material: Steel

Finish	Item No.
zinc-plated	637.45.997



Cap

Material: Plastic

Color	Item No.
white	637.45.791



Attachment Screw - M10

Material: Steel

Finish	Item No.
zinc-plated	637.45.997

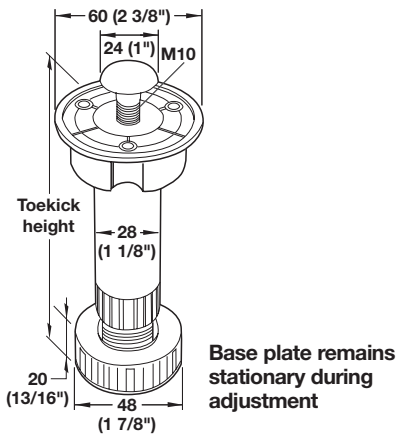


Leveler

- 2-part
 - 3 flat head screws can be used in place of M10 screw
 - Adjustment Range: -5 + 10 mm
- Weight rating: 150 kg (330 lbs.) per leg

Material: Plastic; Color: black

Toekick height	Item No.
80 (3 1/8")	637.45.308
100 (4")	637.45.326
120 (4 3/4")	637.45.344
150 (6")	637.45.371

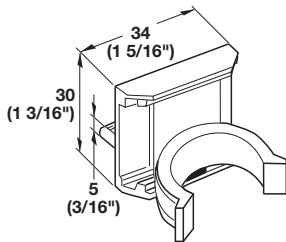


Panel Clip

- 2-part
- Groove-mounted to toekick panel

Material: Plastic

Color	Item No.
black	637.45.915

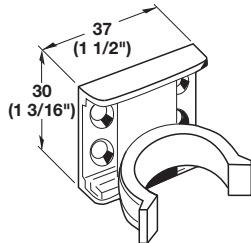


Panel Clip

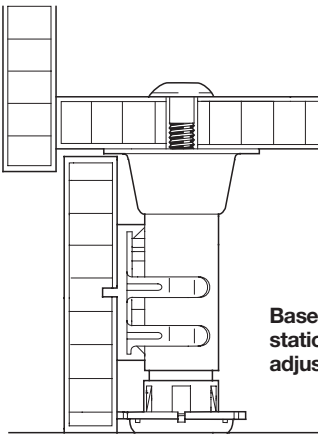
- 2-part
- Screw-mounted to toekick panel

Material: Plastic

Color	Item No.
black	637.45.906



Dimensional data not binding. We reserve the right to alter specifications without notice.



Base plate remains stationary during adjustment

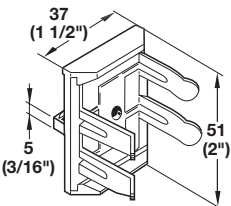
Adjuster

- 2-part
- M10 attachment screw with cap
- Shaft: Ø28 mm (1 1/8")

Material: Steel; Finish: zinc

Toekick Height	Item No.
100 - 120 (4" - 4 3/4")	637.19.219
120 - 140 (4 3/4" - 5 1/2")	637.19.228
150 - 170 (6" - 6 3/4")	637.19.237

6

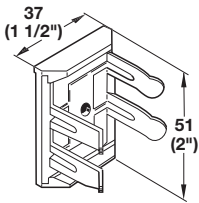


Panel Clip

- 2-part
- Groove-mounted to toekick panel

Material: Plastic, Steel

Color	Item No.
black	637.19.915



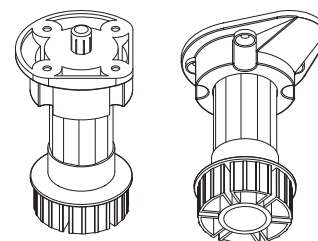
Panel Clip

- 2-part
- Screw-mounted to toekick panel

Material: Plastic, Steel

Color	Item No.
black	637.19.906

- Offers a wider range of adjustment with fewer items
- Allows for greater flexibility at installation
- Components ordered separately

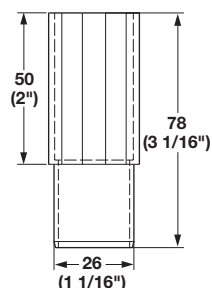
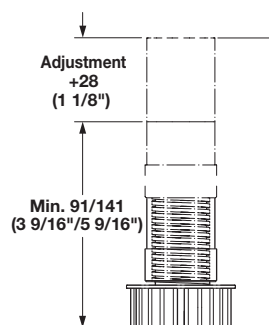


Adjustment Foot

Shaft Ø30 mm (1 3/16")
Weight rating: 250 lbs.

Material: Plastic; Color: black

Base Height	Item No.
91 (3 9/16") - 119 (4 11/16")	637.54.311
141 (5 9/16") - 169 (6 11/16")	637.54.313

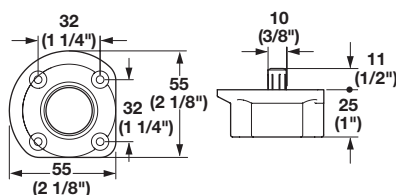


Extension Tube

- Offers 50 mm (2") of additional height
- Press-fits into adjustable foot tube

Material: Plastic

Color	Item No.
black	637.54.320

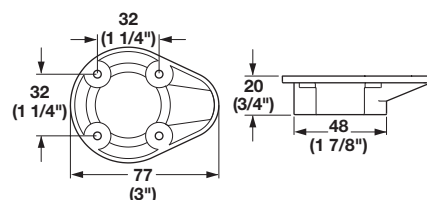


Mounting Socket

- Dowel-mounted

Material: Plastic

Color	Item No.
black	637.54.330

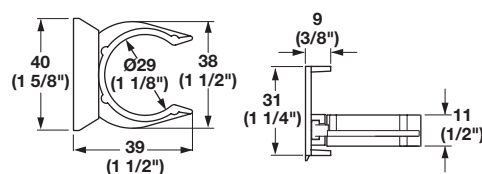


Mounting Socket

- Screw-mounted

Material: Plastic

Color	Item No.
black	637.54.335



Plinth Clip

- Screw-mounted to base panel

Material: Plastic

Color	Item No.
black	637.54.340

Dimensional data not binding. We reserve the right to alter specifications without notice.

Dimensions in mm
Inches are approximate

HEWI

- The wardrobe tube is non-returnable if cut
- Certain items are special ordered and are non-returnable



Wardrobe Tube

- Available in 4 stock lengths, cuttable on-site
- Complete with rosettes and fastening hardware for wood
- Rosette Ø70 mm (2 3/4")
- Ø33 mm (1 5/16")

Material: Polyamide, with steel core

Cutable Range	Standard Length	Item No.
140 (5 1/2") to 500 (19 11/16")	500 (19 11/16")	988.50.1..
501 (19 3/4") to 1000 (39 3/8")	1000 (39 3/8")	988.50.2..
1001 (39 7/16") to 1500 (59 1/16")	1500 (59 1/16")	988.50.3..
1501 (59 1/8") to 2000 (78 3/4")	2000 (78 3/4")	988.50.4..

Theft-proof Clothes Hanger

- Slides onto wardrobe tubes up to Ø40 mm (1 9/16")
- Ø15 mm (5/8")
- Length: 450 mm (18")

Material: Polyamide

Item No.
804.57.1..

Clothes Hanger

- Hangs onto wardrobe tubes up to Ø40 mm (1 9/16")
- Ø15 mm (5/8")
- Length: 450 mm (18")

Material: Polyamide

Item No.
804.56.1..

Coat/Trouser Hanger

- With swivel feature
- Hangs onto wardrobe tubes up to Ø33 mm (1 5/16")
- Ø15 mm (5/8")
- Length: 440 mm (17 5/16")

Material: Polyamide

Item No.
804.58.2..

Color specification: replace the decimals (. .) at the end of the stated item number with the color number of your choice.

13 buttercup yellow	18 mustard yellow	24 orange	30 burgundy	33 ruby red	36 coral	50 steel blue	53 ultramarine blue
55 aqua blue	72 may green	74 apple green	80 coffee brown	84 umber	86 sand	89 biscuit/linen	90 jet black
92 anthracite gray	95 stone gray	97 light gray	98 signal white	99 pure white			

Dimensions in mm
Inches are approximate

CLASSIFICATION: 06 05 13

created via: HPDC Online Builder

PRODUCT DESCRIPTION: High pressure decorative laminates in Grades 10, 12, 20 and A-7 consist of multiple ply's of kraft paper saturated with phenolic resin solids to form the core base Laminate surfaces consist of papers saturated with melamine resin solids. Formica laminate can fabricated as an applied surface to countertops, table tops, casework, wall panels and other decorative surfaces where design, ease of maintenance and lasting durability are required.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format <input type="radio"/> Nested Materials Method <input checked="" type="radio"/> Basic Method	Threshold level <input checked="" type="radio"/> 100 ppm <input type="radio"/> 1,000 ppm <input type="radio"/> Per GHS SDS <input type="radio"/> Per OSHA MSDS <input type="radio"/> Other	Residuals/Impurities <input checked="" type="radio"/> Considered <input type="radio"/> Partially Considered <input type="radio"/> Not Considered Explanation(s) provided for Residuals/Impurities? <input checked="" type="radio"/> Yes <input type="radio"/> No	<i>Are All Substances Above the Threshold Indicated:</i> Characterized <i>Percent Weight and Role Provided?</i> <input checked="" type="radio"/> Yes <input type="radio"/> No Screened <i>Using Priority Hazard Lists with Results Disclosed?</i> <input checked="" type="radio"/> Yes <input type="radio"/> No Identified <i>Name and Identifier Provided?</i> <input checked="" type="radio"/> Yes <input type="radio"/> No
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CONTENT IN DESCENDING ORDER OF QUANTITY
Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE

HIGH PRESSURE LAMINATE | KRAFT PAPER **NoGS** **PHENOLIC RESIN** **LT-P1** | **RES MELAMINE RESIN** **LT-UNK** **UNDISCLOSED (DECORATIVE SURFACE LAYER)** **NoGS**]

Number of Greenscreen BM-4/BM3 contents..... 0
Contents highest concern GreenScreen
Benchmark or List translator Score..... LT-P1
Nanomaterial..... No

INVENTORY AND SCREENING NOTES:
Ranges for substances' percent weight are provided.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT
VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE *See Section 3 for additional listings.*
Formaldehyde emissions: GreenGuard - Gold (previously Children & Schools)
Sustainable forestry: FSC Certification - Chain of Custody (COC)
Other: NSF 35

CONSISTENCY WITH OTHER PROGRAMS
Pre-checked for LEED v4 Material Ingredients, Option 1

Third Party Verified? <input type="radio"/> Yes <input checked="" type="radio"/> No	PREPARER: Self-Prepared VERIFIER: VERIFICATION #:	SCREENING DATE: 2018-02-07 PUBLISHED DATE: 2018-02-07 EXPIRY DATE: 2021-02-07
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Section 2: Content in Descending Order of Quantity

This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- Basic Inventory method with Product-level threshold.
- Nested Material Inventory method with Product-level threshold
- Nested Material Inventory method with individual Material-level thresholds

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.1, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-1-standard

HIGH PRESSURE LAMINATE

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: Residuals are tested by UL environment on a quarterly basis and Greenguard Gold certificate is achieved for Total VOC on all Formica Grades 10, 12, 20 and A-7.

OTHER PRODUCT NOTES: Formica HPL are layers of paper saturated with phenolic resins for the core and melamine resins for the surface décor sheets. They are pressed under high pressure and 300 deg F temperatures. The monomers and polymers react under these conditions thus polymerizing into a thermoset hard resin system. The residuals are a very small fraction of the unreacted monomers and are less than 7.3 parts per billion under the Greenguard test protocol.mentioned in this HPD.

KRAFT PAPER

ID: 65996-61-4

#: 56.0000 - 63.0000 GS: NoGS RC: PostC NANO: No ROLE: Core structural layer

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES: Post consumer content 8-14%

PHENOLIC RESIN

ID: 9003-35-4

#: 14.0000 - 19.0000 GS: LT-P1 RC: None NANO: No ROLE: Polymeric core sheet binder

HAZARDS:

AGENCY(IES) WITH WARNINGS:

RESPIRATORY

AOEC - Asthmagens

Asthmagen (Rs) - sensitizer-induced

SUBSTANCE NOTES: Used to saturate kraft paper prior to pressing and curing operation.

MELAMINE RESIN

ID: 9003-08-1

#: 8.0000 - 12.0000 GS: LT-UNK RC: None NANO: No ROLE: Polymeric surface sheet binder

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES: Used to saturate decorative and protective surface sheets prior to pressing and curing operation.

#: 6.0000 - 11.0000 GS: NoGS RC: None NANO: No ROLE: Decorative Surface Layer

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES: Used to impart design and protective surface to HPDL.

Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

FORMALDEHYDE EMISSIONS

GreenGuard - Gold (previously Children & Schools)

CERTIFYING PARTY: Third Party

ISSUE DATE: 2007-04-

EXPIRY DATE: 2018-

CERTIFIER OR LAB: UL

APPLICABLE FACILITIES: Evendale, Ohio and St. Jean,
Canada

30

10-28

Environment-Greenguard

CERTIFICATE URL:

[http://www.formica.com/en/us/landing-
pages/sustainability-
2017/sustainability17/emissions-and-greenguard](http://www.formica.com/en/us/landing-pages/sustainability-2017/sustainability17/emissions-and-greenguard)

CERTIFICATION AND COMPLIANCE NOTES: Certification is renewed on an annual basis. The renew cycle date is October 28th. Formica laminates have been evaluated under the GREENGUARD certification program since 2007 UL 2818-2013 Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings. Building products and interior finishes are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.2-2007 using a Classroom Environment

SUSTAINABLE FORESTRY

FSC Certification - Chain of Custody (COC)

CERTIFYING PARTY: Third Party

ISSUE DATE: 2015-06-

EXPIRY DATE: 2020-

CERTIFIER OR LAB: SCS

APPLICABLE FACILITIES: Evendale, Ohio and St. Jean,
Canada

04

06-04

CERTIFICATE URL:

[http://www.formica.com/en/us/landing-
pages/sustainability-2017/sustainability17/fsc-
certified-wood](http://www.formica.com/en/us/landing-pages/sustainability-2017/sustainability17/fsc-certified-wood)

CERTIFICATION AND COMPLIANCE NOTES: FSC is an independent, non-government, not-for-profit organization established to promote responsible forest management practices worldwide. It was created out of concern for the loss of the world's forests and failure to address deforestation. FSC forest management certification is awarded to forest managers who adopt practices that provide environmental, social and economic benefits. FSC Principles and Criteria provide a foundation for all forest management standards globally.

OTHER

NSF 35

CERTIFYING PARTY: Third Party

ISSUE DATE: 2007-01-

EXPIRY DATE: 2020-

CERTIFIER OR LAB: NSF

High Pressure Laminate
hpdepository.hpd-collaborative.org

Canada
CERTIFICATE URL:
<http://info.nsf.org/Certified/Food/Listings.asp?Company=17720&Standard=035>

CERTIFICATION AND COMPLIANCE NOTES: The requirements of NSF/ANSI 35 are applicable to HPDL for use as work and nonwork surfaces of food service equipment on which direct contact during normal preparation or holding operations is not intended, expected, or reasonable. Applications of HPDL covered by this Standard include wait stations, service counters, and other counters used in conjunction with cutting boards or other means of preventing direct food contact with the laminate

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

FORMICA BRAND CONTACT ADHESIVES HPD URL: <http://www.formica.com/en/us/products/adhesives>

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Contact Adhesives are used to bond HPDL to various substrates including Particleboard, Medium Density Fiberboard and Hardwood Faced Plywood.

FORMICA IDEAL EDGE HPD URL: <http://www.formica.com/en/us/products/idealedge-real>

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
.Eliminate the flat edges and brown seams traditionally associated with laminate surfaces with IdealEdge® Decorative Edging. Available in two stunning profiles, Ogee and Bullnose, IdealEdge® mimics the contemporary look often found on more expensive stones, granites and quartzes

Section 5: General Notes

Formica brand laminates have been evaluated under the GREENGUARD certification program since 2007 UL 2818-2013 Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings. Building products and interior finishes are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.2-2007 using a Classroom Environment. A generic EPD is available at <http://www.formica.com/en/us/landing-pages/sustainability-2017/sustainability17/leed>.

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: Formica	CONTACT NAME: Dave Swenson
ADDRESS: 10155 Reading Road	TITLE: Sales Tech Services
Cincinnati Ohio 45241, USA	PHONE: 513 786 3536

KEY

OSHA MSDS	Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS	Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Hazard Types

AQU Aquatic toxicity	GLO Global warming	PHY Physical Hazard (reactive)
CAN Cancer	MAM Mammalian/systemic/organ toxicity	REP Reproductive toxicity
DEV Developmental toxicity	MUL Multiple hazards	RES Respiratory sensitization
END Endocrine activity	NEU Neurotoxicity	SKI Skin sensitization/irritation/corrosivity
EYE Eye irritation/corrosivity	OZO Ozone depletion	LAN Land Toxicity
GEN Gene mutation	PBT Persistent Bioaccumulative Toxic	NF Not found on Priority Hazard Lists

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)	LT-P1 List Translator Possible Benchmark 1
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-1 List Translator Likely Benchmark 1
BM-2 Benchmark 2 (use but search for safer substitutes)	LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
BM-1 Benchmark 1 (avoid - chemical of high concern)	NoGS Unknown (no data on List Translator Lists)
BM-U Benchmark Unspecified (insufficient data to benchmark)	

Recycled Types

PreC Preconsumer (Post-Industrial)
PostC Postconsumer
Both Both Preconsumer and Postconsumer
Unk Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms

Inventory Methods:

Nested Method / Material Threshold	Substances listed within each material per threshold indicated per material
Nested Method / Product Threshold	Substances listed within each material per threshold indicated per product
Basic Method / Product Threshold	Substances listed individually per threshold indicated per product

Nano	Composed of nano scale particles or nanotechnology
Third Party Verified	Verification by independent certifier approved by HPDC
Preparer	Third party preparer, if not self-prepared by manufacturer
Applicable facilities	Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- a method for the assessment of exposure or risk associated with product handling or use,
- a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.

FORMICA® LAMINATE BY FORMICA GROUP



SAFETY DATA SHEET

PRODUCT NAME: Formica® Brand Laminates

MSDS ISSUE DATE: 11/17/12 **SDS REVISION DATE:** 3/23/17

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Formica® Brand Laminates (All Grades and Thicknesses, including Backers, DecoMetal®, Basic Metal, ColorCore®2, Compact Color Thru Compact, Access Floor Tiles, Chemtop®2, Fire rated & High Pressure Laminate, Formica Infinity®, Magnetic Markerboard, Chalkable)

MANUFACTURER: Formica Corporation
10155 Reading Road Cincinnati OH 45241, USA
INFORMATION PHONE: 800-367-6422 (USA)

TRADE NAME: High-Pressure Decorative Laminate (HPDL)

MATERIAL USES: Decorative Laminate

MANUFACTURER'S EMERGENCY PHONE NUMBER (CHEMTREC): (800)-424-9300 (USA) (703)-527-3887 (International)

SECTION 2: HAZARD IDENTIFICATION

GHS CLASSIFICATION: Not classified. Material is non-hazardous

GHS SIGNAL WORDS WITH HAZARD AND PRECAUTIONARY STATEMENTS: Not Applicable

GHS PICTOGRAMS: Not applicable

PRECAUTIONARY STATEMENTS: No known hazards for material as supplied. During fabrication operations such as sawing, sanding, drilling, routing, cutting etc. dust consisting of cured resin, paper fiber and minute amounts of formaldehyde are generated at the point of operation. Formaldehyde may be released in minute but detectable amounts when material is shipped or stored in bulk quantities.

APPEARANCE/ODOR: Thin to thick, rigid laminate sheets, various thicknesses/colors. No significant odor.

WARNING: Sanding, sawing, drilling, routing, etc. of this material may generate airborne nuisance dust. This dust may cause eye, nose, skin, and upper respiratory tract irritation. Use of appropriate personal protection and/or engineering controls (such as local exhaust ventilation) should be employed whenever sanding, sawing, drilling, routing, etc. of this material.

POTENTIAL HEALTH EFFECTS: Dust generated during fabrication of this material may cause irritation of the eyes, nose skin and upper respiratory tract. Asthmatic conditions may be aggravated by the dust generated.

LIKELY ROUTES OF EXPOSURE: Eye contact, skin contact and inhalation

EYES: Dust generated during installation or fabricating could cause eye irritation (tears, blurred vision and redness). In case of eye contact with dusts, rinse affected eye for at least 15 minutes with clean water. If irritation persists, seek medical attention.

SKIN: The dust generated during installation or fabrication may cause moderate skin irritation. Avoid prolonged skin exposure to dust. Rinse skin with mild soap if contact occurs. If irritation persists, seek medical attention.

INGESTION: Not likely to occur and not expected to cause a significant toxic response. However, ingestion of dust could cause irritation of the mouth, throat and stomach. If this occurs, rinse mouth with clean water. If irritation persists, seek medical attention.

INHALATION: Sanding, sawing, drilling, routing or cutting of this material may generate airborne dust that may cause eye, nose and upper respiratory tract irritation. Use appropriate personal protection and/or engineering controls (such as local exhaust ventilation whenever sanding, routing, sawing, drilling, and cutting, etc. on this material.

MEDICAL CONDITIONS: Dust may cause skin irritation to people with pre-existing skin conditions.

AGGRAVATED BY EXPOSURE: Asthmatic conditions may be aggravated by additional dust exposure.

TARGET ORGANS: Lungs (From dust generated during fabrication only)

SECTION 3: COMPOSITION/ INFORMATION ON HAZARDOUS INGREDIENTS

This product does not contain regulated levels of NTP, IARC, or OSHA listed carcinogens

Component	CAS #	% by Wt.
Paper/Fiber	NA	40-70
Resins	NA	30-50

SECTION 4: FIRST AID AND MEASURES

EYE CONTACT: If dust gets into the eyes, immediately rinse affected eye for at least 15 minutes with clean water. If irritation persists, seek medical attention.

SKIN CONTACT: If excess dust gets onto the skin, remove contaminated clothing and wash before reuse. Wash skin with soap and water. Seek medical attention if irritation occurs.

INGESTION: If dust gets into mouth, rinse mouth with clean water. Seek medical attention if necessary.

INHALATION: If excess dust is inhaled, move to fresh air. Seek medical attention if symptoms such as wheezing and/or shortness of breath occur.

SECTION 5: FIRE FIGHTING MEASURES

This material is a Class A combustible material. Use water spray, carbon dioxide or dry chemical foam to extinguish flames. Use water to keep cool and prevent rekindling of material.

UNUSUAL FIRE OR DUST: Sanding, sawing, drilling, routing, cutting, etc. of this material may generate a Class ST-1.

EXPLOSION HAZARDS: Safety precautions and proper ventilation as recommended by NFPA-68 for Class ST-1 dusts should be followed to prevent this or any Class ST-1 dust from presenting a explosion hazard.

FORMICA® LAMINATE BY FORMICA GROUP



SAFETY DATA SHEET

SUITABLE EXTINGUISHING MEDIA: CO₂, water, foam.

POSSIBLE PRODUCTS COMBUSTION: Various oxides of carbon and nitrogen, ammonia and formaldehyde.

FIREFIGHTERS: Combustion products may be irritating to eyes, skin and the respiratory tract. Self-contained breathing apparatus and full fire-fighting turnout gear should be worn.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Material is non-hazardous as supplied. Review personal protection measures in Section 8.

METHODS FOR CLEAN-UP: Recover undamaged materials for reuse or reclamation. Sweep or pick up scrap material and place in disposal containers.

SECTION 7: HANDLING AND STORAGE

HANDLING: Prevent dust from entering eyes. Do not breathe dust. Avoid prolonged skin contact with dust and/or filings. Cut, drill, saw, sand and finish, etc. in well-ventilated areas.

STORAGE: Keep away from strong chemicals, solvents and excessive heat. Prolonged or extreme heat can cause damage to the surface.

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA PEL	ACGIH TLV
15mg/m ³ Total Dust	10mg/m ³ Inhalable
5mg/m ³ Respirable Dust	3 mg/m ³ Respirable

ENGINEERING CONTROLS: Provide adequate ventilation to maintain exposure levels below applicable limits. The use of local exhaust ventilation is recommended during fabrication work. Dust generated is a Class ST-1 dust and precautions recommended by NFPA-68 should be followed.

EYE/FACE PROTECTION: Wear safety glasses when sawing, sanding, drilling or routing.

SKIN PROTECTION: Wear appropriate gloves when installing, transporting, sawing, cutting, drilling, routing or handling uninstalled pieces.

FOOT PROTECTION: No special protection required.

RESPIRATORY PROTECTION: Where airborne concentrations of dust are expected to exceed the allowable exposures, a NIOSH-approved respirator should be worn, chosen based on the form and concentration of the contaminant. Respirator usage must be in accordance with the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

GENERAL HYGIENE CONSIDERATIONS: Wash thoroughly after sawing, cutting, drilling, or routing. Have eyewash facilities immediately available.

Additional information is available in ASTM E1132-99a

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Various

ODOR: None

PHYSICAL STATE: Solid sheet product

PH: Not applicable

FREEZING POINT: Not applicable

BOILING POINT: Not applicable

FLASH POINT: Not applicable

EVAPORATION RATE: Not applicable

FLAMMABILITY: Not applicable

UPPER FLAMMABILITY LIMIT: Not applicable

LOWER FLAMMABILITY LIMIT: Not applicable

VAPOR PRESSURE: Not applicable

VAPOR DENSITY: Not applicable

SPECIFIC GRAVITY: 1.45

SOLUBILITY (WATER): Not applicable

AUTO-IGNITION TEMPERATURE: Not applicable

PERCENT VOLATILE, WT %: Zero

VOLATILE ORGANIC COMPOUND (VOC) CONTENT, WT. %: Zero. Product as supplied is fully cured and chemically inert, VOC release is extremely low.

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Avoid exposing to oxidizers, strong chemicals, alkaline solutions and solvents.

INCOMPATIBLE MATERIALS: Avoid strong acids and alkaline solutions which will damage the surface appearance of the material. If spills occur, remove immediately from the material.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition product may include various oxides of carbon and nitrogen may be released.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11: TOXICOLOGY INFORMATION

ACUTE EFFECTS

ORAL LD50: Not known

DERMAL LD50: Not known

INHALATION: See Section 2

EYE IRRITATION: See Section 2

SKIN IRRITATION: See Section 2

SENSITIZATION: No data for product.

FORMICA® LAMINATE BY FORMICA GROUP



SAFETY DATA SHEET

CHRONIC EFFECTS

CARCINOGENICITY: This product may contain trace amounts of formaldehyde which is listed by IARC as carcinogenic. The ACGIH lists formaldehyde as a suspect human carcinogen. NTP lists formaldehyde as carcinogenic.

WARNING-Substance contained in this product known to the State of California to cause cancer, birth defects or other reproductive harm – formaldehyde.

MUTAGENICITY: No data for product.

REPRODUCTIVE EFFECTS: No data for product.

DEVELOPMENTAL EFFECTS: No data for product.

SECTION 12: ECOLOGICAL INFORMATION

ECO TOXICITY: No data for product

PERSISTENCE/DEGRADABILITY: No data for product.

BIOACCUMULATION/ACCUMULATION: No data for product

MOBILITY IN ENVIRONMENT: No data for product

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: Material is non-hazardous and no special treatment is required for disposal. Disposal in landfill must be in accordance with federal, state and local regulations.

SECTION 14: TRANSPORTATION INFORMATION

DOT: Not Regulated

SECTION 15: REGULATORY INFORMATION

WARNING-Substance contained in this product known to the State of California to cause cancer, birth defects or other reproductive harm - Formaldehyde.

SECTION 16: OTHER INFORMATION

NFPA Labeling

Health – 1 Fire – 0 Reactivity – 0

0 = minimal hazard

1= slight hazard

2 = moderate hazard,

3 = severe hazard

4 = extreme hazard

SECTION 16: OTHER INFORMATION(CONTINUED)

ACRONYMS:

ACGIH: American Conference of Governmental Industrial Hygienists

ASTM: American Society for Testing and Materials

DOT: Department of Transportation

IARC: International Agency for Research on Cancer

NFPA: National Fire Protection Agency

NIOSH: National Institute of Occupational Safety and Health

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

TWA: Time Weighted Average

MG/M³: Milligrams per Cubic Meter of Air

PREPARED BY: Formica Corporation,

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his own particular use.

FORMICA® LAMINATE BY FORMICA GROUP



SAFETY DATA SHEET

LIMITED WARRANTY

Formica Corporation expressly warrants that, for a period of one (1) year from the date of first sale, these products will be reasonably free of defects in materials and workmanship, and that when properly handled and fabricated, will conform, within accepted tolerance, to applicable manufacturing specifications. Colors subject to dye lot variations. This limited warranty only applies to Formica® Brand Laminate which is stored, handled, fabricated and installed in the manner recommended by Formica Corporation. Due to the variety of uses and applications to which Formica® Brand Laminate may be put, FORMICA CORPORATION CAN MAKE NO WARRANTY THAT THIS PRODUCT IS SUITABLE FOR ANY PARTICULAR PURPOSE AND CAN MAKE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OTHER THAN THOSE SET FORTH ABOVE.

DISCLAIMER OF WARRANTIES

THE WARRANTIES SET FORTH HEREIN OR IN FORMICA CORPORATION'S WARRANTY DOCUMENTS WITH RESPECT TO A PRODUCT ARE THE ONLY WARRANTIES MADE BY FORMICA CORPORATION IN CONNECTION WITH THESE PRODUCTS, AND ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. PRODUCTS SOLD BY FORMICA CORPORATION ARE SOLD ONLY TO THE SPECIFICATIONS SPECIFICALLY SET FORTH BY FORMICA CORPORATION IN WRITING. FORMICA CORPORATION'S SOLE OBLIGATION FOR A REMEDY TO BUYER SHALL BE REPAIR OR REPLACEMENT OF NON-CONFORMING PRODUCTS, OR AT THE OPTION OF FORMICA CORPORATION, RETURN OF THE PRODUCT AND REFUND OF THE PURCHASE PRICE. BUYER ASSUMES ALL RISK WHATSOEVER AS TO THE RESULT OF THE USE OF THE PRODUCTS PURCHASED, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES.

LIMITATION OF LIABILITY

No claim by buyer of any kind, including claims for indemnification, whether as to quality or amount of products delivered or for non-delivery of products, shall be greater in amount than the purchase price of the products in respect of which damages are claimed. IN NO EVENT SHALL FORMICA CORPORATION BE LIABLE TO BUYER FOR ANY SPECIAL, INDIRECT, INCIDENTAL, RELIANCE, EXEMPLARY, OR CONSEQUENTIAL DAMAGES OR COVER, OR LOSS OF PROFIT, REVENUE OR USE, IN CONNECTION WITH, ARISING OUT OF, OR AS A RESULT OF, THE SALE, DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS SOLD HEREUNDER, OR FOR ANY LIABILITY OF BUYER TO ANY THIRD PARTY WITH RESPECT THERETO. BUYER SHALL INSPECT FOR NONCONFORMITY PROMPTLY UPON RECEIPT. Failure by buyer to give Formica Corporation written notice of claim within 30 days from date of delivery or, in the case of non-delivery from the date fixed for delivery, shall constitute a waiver by buyer of all claims in respect of such products.

This limited warranty gives purchaser of Formica® Brand Laminate specific legal rights. Other rights may be available and vary from state to state.

Any information or suggestion concerning application, specifications or compliances with codes and standards is provided solely for your convenient reference and without any representation as to accuracy or suitability. Formica Corporation disclaims any legal responsibility. The user must verify and test the suitability of any information or products for their own particular purpose of specific application.

MANUFACTURER

Formica® Brand Laminate sheets are manufactured by Formica Corporation.

TECHNICAL SERVICES

Technical assistance may be obtained through your local Formica® Brand Products Distributor or from Formica Corporation trained representatives in sales offices throughout the country. To assist these representatives, Formica Corporation maintains a sales and technical services staff in Cincinnati, Ohio. For technical assistance, contact your distributor or sales representative; write the company directly at Formica Corporation Technical Services Department, 10155 Reading Road, Cincinnati, OH, 45241; call (513) 786-3578 or 1-800-FORMICA™; or fax (513) 786-3195. In Canada, call 1-800-363-1405. In Mexico, call (525) 530-3135.

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For warranty information, please visit www.formica.com or call 1-800 -FORMICA™.

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Cincinnati, Ohio 45241

Heavy-Duty

BHMA Grade 1 Compliant
Adjustable in 1/2" increments



233™/255™ Pilaster Standards and Supports

- Applications** For use on walls, in closets, between studs, within window frames and in bookcases, entertainment centers, kitchen cabinets and medicine cabinets. Color coordinated shelf clips add a finished look to custom projects.
- Load Rating** Varies per size*, BHMA grade 1 compliant
- Mounting** Wall
- Material** Steel or aluminum
- Finishes** Almond (ALM), Brass-look (BR), Brown (BRN), White (WH), Zinc (ZC), Economy Zinc (E): Attractive, long-lasting, corrosion resistant finishes
- Features** Clips are adjustable on 1/2" centers and provide stable support for a variety of shelf options, including wood, plywood, particle board, glass, wire or metal. Pilaster nail holes are pre-drilled. A variety of shelf support accessories are available.
- KV's built-in shelving hardware creates a custom look, while also providing sturdy, discreet support and outstanding versatility. Available in surface- or mortise-mount styles.

233 Series Surface-Mount Pilaster Standards

- For surface-mounted applications
- Dimensions: 13/16" wide x 3/16" deep x selected length
- 23-gauge high strength steel
- Vertically adjustable in 1/2" increments
- Stamped numbers make installation easier
- Pre-drilled screw/nail holes
- Pre-punched staple holes
- Made in the USA
- Available from open stock

255 Series Mortise-Mount Pilaster Standards

- For surface- or flush-mounted applications
- Dimensions: 5/8" wide x 3/16" deep x selected length
- Aluminum standards: 17-gauge aluminum
- Galvanized steel (E) standards: 20-gauge galvanized steel
- Steel standards: 23-gauge high strength steel
- Vertically adjustable in 1/2" increments
- Stamped numbers make installation easier
- Pre-drilled screw/nail holes
- Pre-punched staple holes
- Made in the USA
- Available from open stock

*Contact KV Customer Service for more information.

233™/255™ Pilaster Standards and Supports

233 Series Steel Pilaster Standards (surface-mount)

Steel (23-gauge)



Brass-look
(BR)



Zinc
(ZC)

Standard Pack (12"-60" packed 100 pieces; 72"-96" packed 50 pieces. Not packed with nails.)

Size	Brass-look (BR)	Zinc (ZC)	Steel (STL)
12"	233 BR 12	233 ZC 12	233 STL 12
18"	–	233 ZC 18	–
24"	–	233 ZC 24	233 STL 24
30"	–	233 ZC 30	–
36"	233 BR 36	233 ZC 36	233 STL 36
42"	–	233 ZC 42	–
48"	233 BR 48	233 ZC 48	233 STL 48
60"	233 BR 60	233 ZC 60	233 STL 60
72"	233 BR 72	233 ZC 72	233 STL 72
84"	–	233 ZC 84	233 STL 84
96"	233 BR 96	233 ZC 96	233 STL 96

Nails & Supports

Nails (For use with 233 and 255 standards.)

Standard Pack (Approx. 650 nails/bag. 5 bags/carton)

Finish:	Almond (ALM)	Brass-look (BR)	Bronzed (STB)*	White (WH)	Zinc (ZC)
Part #:	255-81N ALM	255-81N BR	255-81N STB	255-81N WH	255-81N ZC
Use with:	255 ALM	255 BR, 233 BR, 255AL BR	255 BRN, 255AL WAL	255 WH	255 ZC, 233 ZC, 255 E, 255AL

*For use with Brown (BRN) or Walnut (WAL) standards.



256
Patented



255-81N

256 Steel Shelving Supports (For use with 255 standards.)

Almond (ALM)	Brass-look (BR)	Walnut (WAL)**	White (WH)	Zinc (ZC)
Standard Pack (100 pieces/pack)				
256S ALM	256 BR	256 WAL	256S WH	256 ZC, 256R ZC***
Bulk Pack (B) (1000 pieces/pack)				
–	256B BR	256B WAL	–	256B ZC
Barrel Pack (BBL) (9000 pieces/fiber barrel)				
–	256BBL BR	256BBL WAL	–	256BBL ZC
Poly Pack (P) (12 supports + 28 nails/bag. 10 bags/carton.)				
256S P ALM	256P BR	256P WAL	256S P WH	256P ZC
Warehouse Pack (WP) (12 supports + 28 nails/bag. 50 bags/carton.)				
–	–	–	256S WP WH	256WP ZC

For use with 255 BRN standards. *256R includes a rubber cushion.



237



256R



239



238

Miscellaneous Supports

	Anochrome (ANO)	Zinc (ZC)
Description	Standard Pack (100 pieces/carton)	
Shelf Support (Use with 233 standards only.)	–	237 ZC
Shelf Support with Locator Tab (Use with 233 standards only.)	238 ANO	–
Shelf Support	–	239 ZC
Shelf Support for Wire Shelves (Use with 233 standards only.)	242 ANO	–
3" Shelf Bracket (Non-handed.)	–	243 ZC
Shelf Support for Wire Shelves	244 ANO	–
Shelf Support with Screw Holes	–	24276 ZC
Flange for 1-1/16" OD Closet Rod	757 ANO	–



244



242



757



243

256 Aluminum Shelving Supports

(For use with 255 standards.)

Natural Aluminum (AL NAT)
Standard Pack (100 pieces/pack)
256 AL NAT

229 Support Bracket

Standard Pack (25/box)

Size	Anochrome (ANO)
4"	229 ANO 4
6"	229 ANO 6
8"	229 ANO 8
10"	229 ANO 10



229

□ Non-stock item – minimum order quantities and additional lead time may apply.

NOTE: Slight variations in color/finish may occur when using different product materials, such as steel and aluminum shown here.

233™/255™ Pilaster Standards and Supports

255 Series Steel Pilaster Standards (surface or flush mount)

Standard Pack (12"-60" packed 100 pieces; 72"-96" packed 50 pieces. Not packed with nails.)						
Size	Almond (ALM)	Brass-look (BR)	Brown (BRN)	Economy Zinc (E)	White (WH)	Zinc (ZC)
12"	255 ALM 12	255 BR 12	255 BRN 12	255 E 12	255 WH 12	255 ZC 12
18"	255 ALM 18	255 BR 18	255 BRN 18	—	255 WH 18	255 ZC 18
24"	255 ALM 24	255 BR 24	255 BRN 24	255 E 24	255 WH 24	255 ZC 24
30"	255 ALM 30	—	255 BRN 30	—	255 WH 30	255 ZC 30
36"	255 ALM 36	255 BR 36	255 BRN 36	255 E 36	255 WH 36	255 ZC 36
42"	—	—	—	—	—	255 ZC 42
48"	255 ALM 48	255 BR 48	255 BRN 48	255 E 48	255 WH 48	255 ZC 48
60"	255 ALM 60	255 BR 60	255 BRN 60	255 E 60	255 WH 60	255 ZC 60
72"	255 ALM 72	255 BR 72	255 BRN 72	255 E 72	255 WH 72	255 ZC 72
84"	255 ALM 84	255 BR 84	255 BRN 84	255 E 84	255 WH 84	255 ZC 84
96"	255 ALM 96	255 BR 96	255 BRN 96	255 E 96	255 WH 96	255 ZC 96



Almond (ALM)
(steel shown)



Brass-look (BR)
(steel shown)



Brown (BRN)
(steel shown)



White (WH)
(steel shown)



Zinc (ZC)
(steel shown)



Economy Zinc (E)
(steel shown)

255 Series Aluminum Pilaster Standards

Standard Pack (12"-60" packed 100 pieces; 72"-96" packed 50 pieces. Not packed with nails.)				
Size	Natural Aluminum (AL)	Brass-look (BR)	Brown (BRN)	Walnut (WAL)
12"	255AL 12	255AL BR 12	255AL BRN 12	255AL WAL 12
18"	255AL 18	255AL BR 18	—	255AL WAL 18
24"	255AL 24	255AL BR 24	255AL BRN 24	255AL WAL 24
30"	255AL 30	255AL BR 30	—	255AL WAL 30
36"	255AL 36	255AL BR 36	255AL BRN 36	255AL WAL 36
42"	255AL 42			
48"	255AL 48	255AL BR 48	255AL BRN 48	255AL WAL 48
60"	255AL 60	255AL BR 60	255AL BRN 60	255AL WAL 60
72"	255AL 72	255AL BR 72	255AL BRN 72	255AL WAL 72
84"	255AL 84	255AL BR 84	255AL BRN 84	255AL WAL 84
96"	255AL 96	255AL BR 96	255AL BRN 96	255AL WAL 96



Natural Aluminum (AL)
(aluminum shown)



Brass-look (BR)
(aluminum shown)



Brown (BRN)
(aluminum shown)



Walnut (WAL)
(aluminum shown)

NOTE: Slight variations in color/finish may occur when using different product materials, such as steel and aluminum shown here.

233™/255™ Pilaster Standards and Supports



233
Pilaster Standard



255
Pilaster Standard

1. Product Name

233 and 255 Pilaster Standards. For built-in shelving and bookcase applications.

2. Manufacturer

Knap & Vogt® Manufacturing Company
2700 Oak Industrial Dr. NE, Grand Rapids, MI USA 49505-6026
616.459.3311 | www.kv.com

3. Product Description

Basic Use: 233 and 255 Pilaster Standards are designed for built-in shelving on walls, in closets, between studs and within window frames and bookcase applications.

233 and 255 Pilaster Standards are available in steel or aluminum. They mount to most wall types and in wood bookcases and cabinets. They accommodate KV steel or aluminum supports, and are available in various styles/configurations. 233 and 255 Pilaster Standards are adjustable on 1/2" centers.

Composition and Materials:

233 Steel Standards: 23-gauge high strength steel.

255 Steel Standards: 23-gauge high strength steel.

255 Galvanized Steel (E) Standards: 20-gauge galvanized steel.

255 Aluminum Standards: 17-gauge aluminum.

Sizes:

233 Steel Standards: 13/16" wide x 3/16" deep x selected length. Lengths: 12", 18", 24", 30", 36", 42", 48", 60", 72", 84", and 96".

255 Steel Standards: 5/8" wide x 3/16" deep x selected length. Lengths: 12", 18", 24", 30", 36", 42", 48", 60", 72", 84", and 96".

255 Aluminum Standards: 5/8" wide x 3/16" deep x selected length. Lengths: 12", 18", 24", 30", 36", 42", 48", 60", 72", 84", and 96".

Finishes:

233 Steel Standards: Brass-look (electro-plated cold rolled steel), and Zinc (zinc-plated cold rolled steel).

255 Steel Standards: Almond, Brown or White (powder-coated cold rolled steel); Brass-look and zinc (zinc-plated cold rolled steel), and Economy Zinc (galvanized steel).

255 Aluminum Standards: Aluminum; electro-plated aluminum), and Brown or Walnut (powder-coated aluminum).

4. Technical Data

Applicable Standards: The KV 255 Steel Standard, when used with specific KV steel shelf rests, has been tested and meets the ANSI/BHMA (A156.9-2003) cabinet hardware standard for shelf rests and standards. However, representative testing in a fully configured application is the only way to assure proper performance, durability, and safety.

The aforementioned shelf support load limit is intended as a guide only and not as a warranty. Actual load bearing capabilities depend upon the type of cabinet/wall material and use of appropriate shelf standard mounting fasteners, installation technique, shelf standard spacing, shelf size and construction.

Environmental Considerations:

Environment: Excessive humidity, salts, or other chemical agents can corrode the finish and attack metal or plastic components.

Fastening: Inadequate or incorrect fasteners can result in the standards pulling loose and causing damage.

Alignment: Improper standard and clip alignment can result in a system that is ineffective and unsafe.

5. Installation

233 Pilaster Standards can be installed on the surface. The 233 Pilaster Standard can be mounted with nails, staples, or screws.

255 Pilaster Standards can be installed on the surface, or made flush with the wall or cabinet by making a dado cut. The 255 Pilaster Standard can be mounted with nails, staples, or screws.

Surface mounting: Mark the installation location. Position the standards so that numbers are right-side up. Nail the top hole of the standards into the desired position at equal heights. Check horizontal and vertical alignment with a level. Finish nailing.

For wallboard, plywood paneling, masonry and other non-wood surfaces, use a #3 flat head screw and appropriate hollow wall anchor to properly secure the standard. Note: Proper nails are supplied for 255 Standards; screws and anchors are not.

Flush mounting: Mark the installation location and width of each standard, and rout each dado cut to the desired depth. Position the standards so that numbers are right-side up. Nail the top hole of the standards into the desired position at equal heights. Check horizontal alignment with a level. Finish nailing.

6. Availability and Cost

Availability: Knap & Vogt (KV) products are available from stocking distributors and through KV Representatives worldwide.

Cost: Current pricing is available from area KV Representatives. Please call for the nearest representative at: 800.253.1561.

7. Warranty

Limited Lifetime Warranty: Knap & Vogt offers its standard Limited Lifetime Warranty to the initial purchaser of commercial products. This warranty covers defects in materials and workmanship which occur during normal use, and the remedy is limited to repair or replacement of defective products, at KV's option. Certain types of defects and damage are excluded from warranty coverage, costs and expenses are not covered, and additional restrictions apply. A copy of the Limited Lifetime Warranty, with all warranty details, limitations and disclaimers, is available on the Customer Care Connection location at www.kv.com or from KV Customer Service, 2700 Oak Industrial Drive, Grand Rapids, MI 49505, (800) 253-1561.

8. Maintenance

233 and 255 Pilaster Standards require no maintenance. Inspect for proper fit periodically and adjust when necessary. Replace as required or recommended by application.

9. Technical Services

Knap & Vogt and area representatives can assist with any application. For further information, or for the name of the representative nearest you, please call Knap & Vogt Customer Service: 800.253.1561 or visit our website at: www.kv.com.

10. Filing Systems

Additional product information, data sheets, application sheets, and a full catalog are available upon request from Knap & Vogt.



KNAPE & VOGT®

2700 Oak Industrial Dr. NE
Grand Rapids, MI 49505-6026 USA
1.800.253.1561 | 616.459.3311
Fax: 877.636.3290
www.kv.com

BHMA Knap & Vogt shelving products follow the ANSI testing standards established by BHMA.

This and other KV literature is available for download at www.kv.com > Resource Library
Knap & Vogt reserves the right to change product specifications at any time without notice and without incurring responsibility for existing units. This information conforms to editorial style prescribed by The Construction Specifications Institute.
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FORMICA® LAMINATE BY FORMICA GROUP



AVOIDING LAMINATION DAMAGE TECHNICAL BRIEF



Typical damage that can occur to laminate when exposed to harsh chemicals.

- **AVOIDANCE OF ABRASIVE CLEANERS/MATERIALS**
- **RECOMMENDED PROCEDURE FOR TREATING STAINS**
- **AVOIDANCE OF HARSH CHEMICAL CLEANERS**
- **AVOIDANCE OF HARSH CHEMICAL STAINS**

AVOIDANCE OF HARSH CHEMICAL CLEANERS

If in doubt about the suitability of a particular cleaner, detergent, or other substance, consult with its manufacturer to make sure it is recommended for use on decorative laminate surfaces.

DO NOT use cleaners nor compounds containing strong acids or strong bases on laminate surfaces. These may mar, etch, corrode and/or permanently discolor or damage laminate surfaces.

EXAMPLES OF HARSH CLEANERS AND COMPOUNDS TO AVOID ARE:

- toilet bowl cleaners • cleaners containing sodium hypochlorite
- drain cleaners • coffee pot cleaners • tub and tile cleaners
- ceramic cook top cleaners • oven cleaners • chlorine bleach
- rust removers • lime/scale removers • metal cleaners

Never allow bottles, rags, etc., contaminated with these harsh chemical compounds to contact laminate services. Accidental spills or splatters from these compounds should be wiped off immediately, and the area rinsed thoroughly with water.

AVOIDANCE OF HARSH CHEMICAL STAINING AGENTS

Many common staining agents have no effect on laminate. Stains from the following materials and liquids, however, are more stubborn or even permanent and may not disappear.

EXAMPLES OF THESE ARE:

- hair dyes and rinses
- laundry bluing
- pharmaceuticals (tannic acid, mercurochrome, silver nitrate, povidoneiodine, dermatological tar compounds and peroxide)

OTHER EXAMPLES OF STUBBORN OR PERMANENT STAINS ARE:

- wood stains • cash registered ink • indelible inks • newsprint
- marking pens • food pricing label ink

AVOIDANCE OF ABRASIVE CLEANERS/ MATERIALS

DO NOT use abrasive cleaners, powders, scouring pads, steel wool, sandpaper, etc. to clean laminate surfaces. These can damage the surface finish and make it susceptible to staining. Ceramic or other abrasive objects, due to their inherent hardness, can cause scratching and premature wearing of laminate surfaces. Use placemats, doilies, or trivets to protect horizontal surfaces from exposure.

RECOMMENDED PROCEDURES FOR TREATING STAINS

- Damage caused by abrasion or scratches is irreversible, but can sometimes be masked by applying lemon oil or self stripping waxes, such as Pledge® or Plexus®.
- Harsh chemicals can lighten the color of laminate permanently, but the damage can sometimes be masked by applying lemon oil or self stripping waxes, such as Pledge® or Plexus®.
- Harsh staining agents may be permanent, but the visual effect can usually be lessened by applying a mild household cleaner, or by using a small amount of baking soda and water and then wiping up. DO NOT scrub the area with baking soda as it is slightly abrasive.
- Paints, glues, and other adhesive materials can be removed with solvents like denatured alcohol, paint thinner, lacquer thinner, or acetone (fingernail polish remover). **CAUTION:** Some solvents are extremely flammable; follow all warnings on the solvent container.

Note: For additional information on the proper techniques for cleaning and maintaining laminate surfaces, consult Formica Corporation's brochure (FTB-0821), titled "Formica® Compact and ColorCore®2 Compact Structural Laminate by Formica Group."

FORMICA® LAMINATE BY FORMICA GROUP



AVOIDING LAMINATION DAMAGE

TECHNICAL BRIEF

LIMITED WARRANTY

Formica Corporation expressly warrants that, for a period of one (1) year from the date of first sale, these products will be reasonably free of defects in materials and workmanship, and that when properly handled and fabricated, will conform, within accepted tolerance, to applicable manufacturing specifications. Colors subject to dye lot variations. This limited warranty only applies to Formica® Brand Laminate which is stored, handled, fabricated and installed in the manner recommended by Formica Corporation. Due to the variety of uses and applications to which Formica® Brand Laminate may be put, FORMICA CORPORATION CAN MAKE NO WARRANTY THAT THIS PRODUCT IS SUITABLE FOR ANY PARTICULAR PURPOSE AND CAN MAKE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OTHER THAN THOSE SET FORTH ABOVE.

DISCLAIMER OF WARRANTIES

THE WARRANTIES SET FORTH HEREIN OR IN FORMICA CORPORATION'S WARRANTY DOCUMENTS WITH RESPECT TO A PRODUCT ARE THE ONLY WARRANTIES MADE BY FORMICA CORPORATION IN CONNECTION WITH THESE PRODUCTS, AND ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. PRODUCTS SOLD BY FORMICA CORPORATION ARE SOLD ONLY TO THE SPECIFICATIONS SPECIFICALLY SET FORTH BY FORMICA CORPORATION IN WRITING. FORMICA CORPORATION'S SOLE OBLIGATION FOR A REMEDY TO BUYER SHALL BE REPAIR OR REPLACEMENT OF NON-CONFORMING PRODUCTS, OR AT THE OPTION OF FORMICA CORPORATION, RETURN OF THE PRODUCT AND REFUND OF THE PURCHASE PRICE. BUYER ASSUMES ALL RISK WHATSOEVER AS TO THE RESULT OF THE USE OF THE PRODUCTS PURCHASED, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES.

LIMITATION OF LIABILITY

No claim by buyer of any kind, including claims for indemnification, whether as to quality or amount of products delivered or for non-delivery of products, shall be greater in amount than the purchase price of the products in respect of which damages are claimed. IN NO EVENT SHALL FORMICA CORPORATION BE LIABLE TO BUYER FOR ANY SPECIAL, INDIRECT, INCIDENTAL, RELIANCE, EXEMPLARY, OR CONSEQUENTIAL DAMAGES OR COVER, OR LOSS OF PROFIT, REVENUE OR USE, IN CONNECTION WITH, ARISING OUT OF, OR AS A RESULT OF, THE SALE, DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS SOLD HEREUNDER, OR FOR ANY LIABILITY OF BUYER TO ANY THIRD PARTY WITH RESPECT THERETO. BUYER SHALL INSPECT FOR NONCONFORMITY PROMPTLY UPON RECEIPT. Failure by buyer to give Formica Corporation written notice of claim within 30 days from date of delivery or, in the case of non-delivery from the date fixed for delivery, shall constitute a waiver by buyer of all claims in respect of such products.

This limited warranty gives purchaser of Formica® Brand Laminate specific legal rights. Other rights may be available and vary from state to state.

Any information or suggestion concerning application, specifications or compliances with codes and standards is provided solely for your convenient reference and without any representation as to accuracy or suitability. Formica Corporation disclaims any legal responsibility. The user must verify and test the suitability of any information or products for their own particular purpose of specific application.

MANUFACTURER

Formica® Brand Laminate sheets are manufactured by Formica Corporation.

TECHNICAL SERVICES

Technical assistance may be obtained through your local Formica® Brand Products Distributor or from Formica Corporation trained representatives in sales offices throughout the country. To assist these representatives, Formica Corporation maintains a sales and technical services staff in Cincinnati, Ohio. For technical assistance, contact your distributor or sales representative; write the company directly at Formica Corporation Technical Services Department, 10155 Reading Road, Cincinnati, OH, 45241; call (513) 786-3578 or 1-800-FORMICA™; or fax (513) 786-3195. In Canada, call 1-800-363-1405. In Mexico, call (525) 530-3135.

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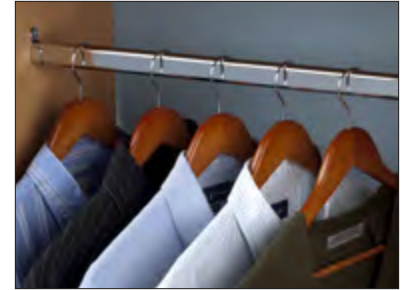
For warranty information, please visit www.formica.com or call 1-800 -FORMICA™.

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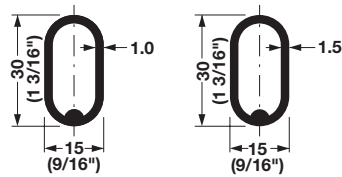
Tubes



Welded tube



4



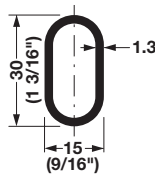
Oval Wardrobe Tube, welded

Material: Steel; Finish: chrome-plated

Material thickness	Length	Item No.
1.0	2337 (92")	801.13.209
1.0	2500 (98 7/16")	801.13.201
1.5	2500 (98 7/16")	801.09.239

Note

Supports ordered separately.



Oval Wardrobe Tube

Length: 2438 mm (96")

Thickness: 1.3 mm

Material: Aluminum

Finish	Item No.
matt aluminum	801.13.391
matt nickel	801.13.691
dark oil-rubbed bronze	801.13.191

Note

Supports ordered separately.



End Caps

- For oval tube 801.13.201
- Caps are inserted in by pushing into the end of the tube

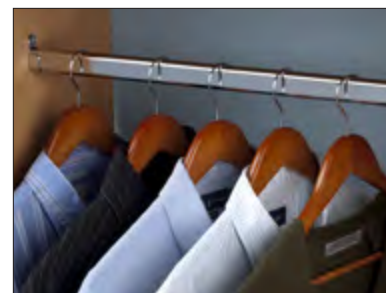
Material: Plastic

Finish	Item No.
chrome-plated	802.05.295

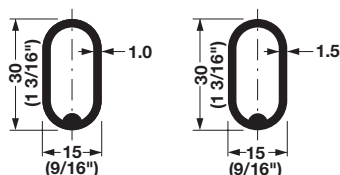
Tubes



Welded tube



4



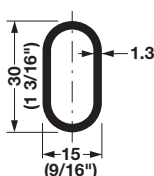
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Supports ordered separately.



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Material: Plastic

Finish	Item No.
chrome-plated	802.05.295

TEST REPORT FOR ONEPOINTE SOLUTIONS LLC

Report No.: 104340859GRR-001

Date: 24-Jul-2020

P.O.: 22806

Telephone: +1 616 656 7401

Facsimile: +1 616 656 2022

www.intertek.com

ONEPOINTE SOLUTIONS LLC TEST REPORT

SCOPE OF WORK

SEFA 8PL-2016 RECOMMENDED TESTING STANDARDS FOR LABORATORY GRADE WOOD CASEWORK
on Base Cab and Wall Cabinet

REPORT NUMBER

104340859GRR-001

ISSUE DATE

24-Jul-2020

PAGES

34

DOCUMENT CONTROL NUMBER

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TEST REPORT FOR ONEPOINTE SOLUTIONS LLC

Report No.: 104340859GRR-001

Date: 24-Jul-2020

P.O.: 22806

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www.intertek.com

SECTION 1

CLIENT INFORMATION

Attention:

Don Carlson

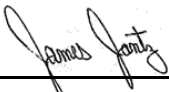
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Elgin, TX 78621

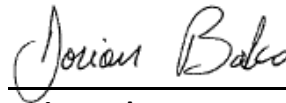
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Phone: (512) 982-1973

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James Jantz
Project Manager



Dorian Bako
Project Reviewer

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SECTION 2**SUMMARY AND CONCLUSION**

Date Received

26-May-2020

Dates Tested

26-May-2020 to 24-Jul-2020

DESCRIPTION OF SAMPLES

MODEL NUMBER	DESCRIPTION OF SAMPLE	DIMENSIONS
PL-BASE-354822-12	Base Cab	48" x 35" x 22"
PL-WALL-304812-02	Upper Cab	48" x 30" x 12"
N/A	Table	N/A

Condition of Samples:

Production

WORK REQUESTED/APPLICABLE DOCUMENTS

SEFA 8PL-2016 RECOMMENDED TESTING FOR LABORATORY GRADE WOOD CASEWORK

Intertek quote Qu-1074945

CONCLUSION

TEST	RESULTS
4.2 Cabinet Load Test	CONFORMING
4.3 Cabinet Concentrated Load Test	CONFORMING
4.4 Cabinet Torsion	CONFORMING
4.5 Cabinet Submersion Test	CONFORMING
5.1 Door Hinge Test	CONFORMING
5.3 Door Cycle Test	CONFORMING
6.1 Drawer Static Test	CONFORMING
6.3 Drawer Impact Test	CONFORMING
6.4 Drawer Internal Impact Test	CONFORMING
6.5 Drawer Cycle Test	CONFORMING
7.2 Shelf Load Test	CONFORMING
8.8 Edge Impact Test	CONFORMING
9.2 Wall Cabinet Load Test	CONFORMING

The submitted sample met the acceptance criteria of all the tests listed above.

SAMPLE DISPOSITION

The samples were returned to Institutional Casework, Inc. at conclusion of testing.

TEST EQUIPMENT

ASSET #	DESCRIPTION	LAST CAL	NEXT DUE
138520	STEEL RULE 36"	01/06/2020	01/06/2021
138012	Scale/0-1,000#	09/20/2019	09/20/2020
138148	DIGITAL PROTRACTOR	12/19/2019	12/19/2020
138296-1-50	50lb steel bars	01/04/2017	01/04/2020
138279	FORCE GAUGE	12/30/2019	12/30/2020
138235	DIAL INDICATOR	10/08/2019	10/08/2019
138390	Portable Drawer Cycle Station	VBU	VBU
117500.29	Stopwatch	05/16/2019	05/16/2020

4.1 SEFA 8PL-2016 – DESCRIPTION OF TEST UNIT:

Date Received: 26-May-2020
Date Tested: 26-May-2020-24-Jul-2020
Location Tested: Intertek Kentwood, MI

MODEL NUMBER	DESCRIPTION OF SAMPLE	DIMENSIONS
PL-BASE-354822-12	Base Cab	48" x 35" x 22"
PL-WALL-304812-02	Upper Cab	48" x 30" x 12"
N/A	Table	N/A

PART DESCRIPTION:

Base unit has one drawer, two doors and a shelf.

The hardware on the units is as follows:

MODEL NUMBER	DESCRIPTION OF SAMPLE
Blum 71B3590	Hinge
Blum 569H4570B	Drawer Slides
PL-AS1.0-46x21	Shelf

Refer to the following pages for photographs.



Test Unit (Base Unit)



Drawer Slide



Hinge

Door/Drawer Pull



Shelf Support

4.2 SEFA 8PL-2016 – CABINET LOAD TEST:

Date Received: 26-May-2020

Date Tested: 26-May-2020-27-May-2020

Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab

Condition of Samples: Production

Number of Samples: One (1)

TEST PROCEDURE:

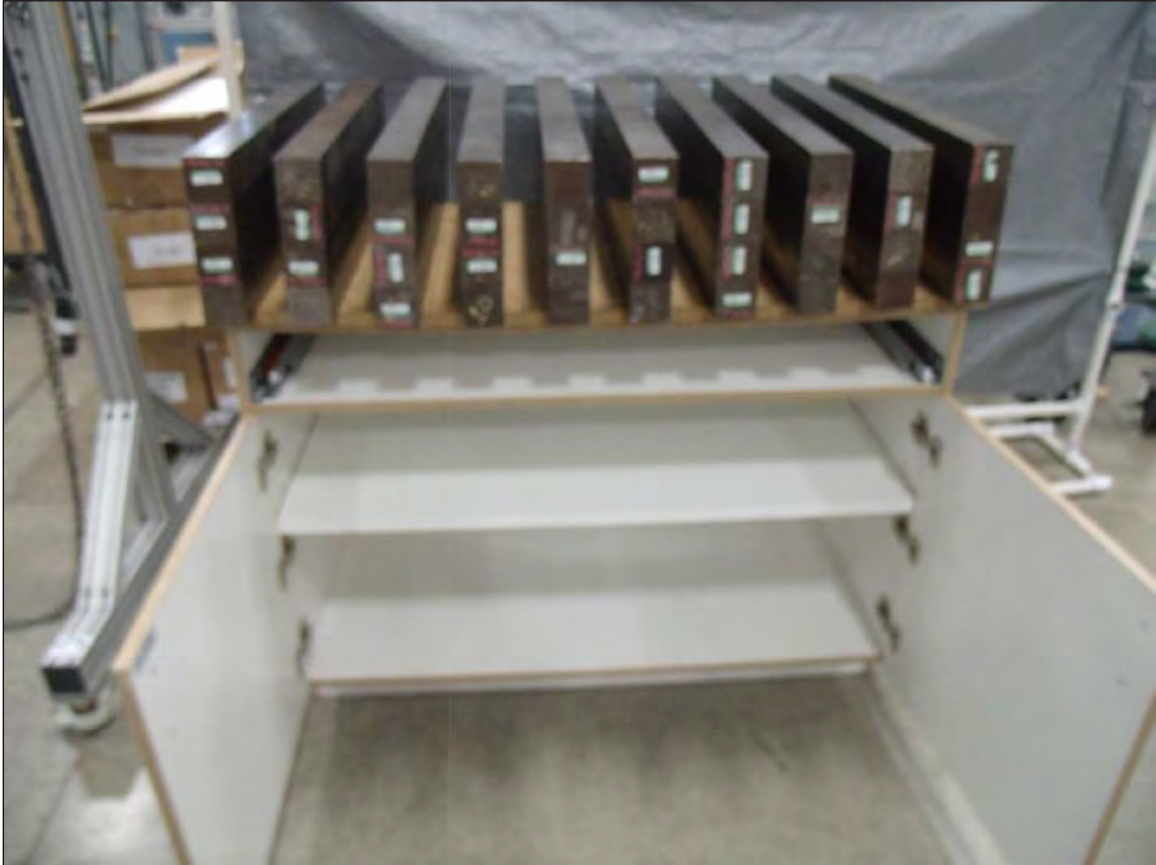
4.2.2 Test Method: Verify that the cabinet is level. Load the cabinet top by using 2000 lbs. (907.2 kg) of solid steel bars (Per Section 3.1) stacked 4 high and evenly spaced. After 24 hours, unload the cabinet.

ACCEPTANCE CRITERIA:

4.2.3 Acceptance Level: The cabinet will have no signs of permanent failure.

RESULTS:

The submitted sample met the acceptance criteria for the test described above. Refer to the following page for photograph.



Cabinet Load Test

4.3. SEFA 8PL-2016 – CABINET CONCENTRATED LOAD TEST:

Date Received: 26-May-2020

Date Tested: 27-May-2020

Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab

Condition of Samples: Production

Number of Samples: One (1)

TEST PROCEDURE:

4.3. Test Method: Using 50 lb. solid weights or 10 lb sandbags (per Section 3.1), apply a total of 200 lbs. (90.70 kg) to the top of the cabinet along the cabinet center line and operate doors and drawers.

ACCEPTANCE CRITERIA:

4.3.3 Acceptance Level: Door and drawer operation shall be normal under condition of test load. There shall be no sign of permanent deformation to front rail, cabinet joinery, doors, or drawers. Doors and drawers shall operate normally.

RESULTS:

The submitted sample met the acceptance criteria for the test described above. Refer to the following page for photograph.



Cabinet Concentrated Load Test

4.4 SEFA 8PL-2016 – CABINET TORSION:

Date Received:

26-May-2020

Date Tested:

27-May-2020-28-May-2020

Location Tested:

Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab

Condition of Samples:

Production

Number of Samples:

One (1)

TEST PROCEDURE:**4.4.2 Test Method:**

The cabinet shall be tested in its normal upright position, raised not less than four inches off the floor and supported on rear and one front corner. The area of support under the cabinet shall be centered on the leveling feet of the cabinet. Per Section 3.1, secure the cabinet diagonally from the supported corner with seven solid steel bars so that 350 lbs. (158.75 kg.) of weight is placed on the top of the cabinet to prevent over-turning. Apply four solid steel bars (200 lbs (90.72 kg.)) to the unsupported corner for a period of 24 hours. Remove weight and place the cabinet on the floor in its normal upright position observe the cabinet joinery. Level the cabinet and measure the face and back of the cabinet across the diagonal corners.

ACCEPTANCE CRITERIA:**4.4.3 Acceptance Level:**

When returned to normal position, the operation of the cabinet shall be normal, and there will be no signs of permanent damage. The difference between the two measurements taken from measuring the diagonal corners shall be no more than 1/8" (3.175 mm).

RESULTS:

The submitted sample met the acceptance criteria for the test described above. There was no change in the measurement. Refer to the following page for photograph.



Cabinet Torsion

4.5 SEFA 8PL-2016 – CABINET SUBMERSION TEST:

Date Received: 26-May-2020
Date Tested: 16-Jun-2020-19-Jun-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab

Condition of Samples: Production
Number of Samples: One (1)

TEST PROCEDURE:

4.5.2. Test Method: The material thickness along the perimeter of the cabinet shall be measured on 6" increments. Record the thickness of the material to be submerge in water. Place the entire test cabinet in its upright position such that the cabinet is submerged in 2" of water. After 24 hours, remove the unit from the water and wait 48 hours to measure the thickness of the material at the points measure initially. Calculate the new arithmetic mean.

ACCEPTANCE CRITERIA:

4.5.3 Acceptance Level: The cabinet will show no permanent deformation or deterioration. Increase in thickness shall not exceed 10% of the initial mean measurements.

RESULTS:

The submitted sample met the acceptance criteria of the test described above. The thickness increased by 9.2% Refer to the following page for photograph.



Cabinet Submersion Test

5.1 SEFA 8PL-2016 – DOOR HINGE TEST:

Date Received: 26-May-2020

Date Tested: 18-Jun-2020

Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab

Condition of Samples:

Production

Number of Samples:

One (1)

TEST PROCEDURE:**5.1.2. Test Method:**

Remove the shelf for this test. With unit and top set as described in Section 4.1, add sufficient weight to the top in order to prevent overturning. With cabinet door opened 90 degrees, hang a sling made up of two 100 lb. (45.35 kg) weights (shot bags or solid weights) over top of the door at a point 12" (304.8 mm) out from the hinge center-line. Slowly move door through the two full cycles of the hinge up to a 160° arc. Remove weight and swing door through its full intended range of motion and close door.

ACCEPTANCE CRITERIA:**5.1.3 Acceptance Level:**

The open door shall withstand a load of 200 lbs. (90.70 kg) when applied at a point 12" (304.8 mm) from the hinge centerline without significant permanent distortion. Operation of the door, after test, shall show no significant permanent distortion that will cause binding of the door or hinges or that will adversely affect operation of the catch.

RESULTS:

The submitted sample met the acceptance criteria of the test. The door operated normally through its entire range of motion, and the door catch operated normally. Refer to the following page for photograph.



Door Hinge Test

5.3 SEFA 8PL-2016 – DOOR CYCLE TEST:

Date Received: 26-May-2020
Date Tested: 28-May-2020-04-Jun-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab

Condition of Samples: Production
Number of Samples: One (1)

TEST PROCEDURE:

5.3.2. Test Method: This test shall be in conformance to the ANSI test procedure A156.9, Grade 1, requirements for cycle testing of doors. A cycling mechanism shall swing door 90°. Door shall operate for 100,000 cycles with a speed not greater than 15 cycles per minute.

ACCEPTANCE CRITERIA:

5.3.3 Acceptance Level: Door shall operate for the full cycle period without deterioration that will significantly affect the function of the door. The door shall operate freely without binding.

RESULTS:

The submitted sample met the acceptance criteria for the test described above. There was no functional or structural damage to the unit. The doors operated freely without binding.



Door Cycle Test

6.1 SEFA 8PL-2016 – DRAWER STATIC TEST:

Date Received: 26-May-2020

Date Tested: 15-Jun-2020

Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab

Condition of Samples: Production

Number of Samples: One (1)

TEST PROCEDURE:

6.1.2. Test Method: With unit and top set as described in Section # 4.1, add sufficient weight to the top in order to prevent overturning. Open the drawer to 13" (330.2 mm.) of travel and hang 150 lbs. (68.0 kg.) from the drawer head at the center line of the drawer for five minutes. Remove the weight and operate the drawer through the full cycle.

ACCEPTANCE CRITERIA:

6.1.3. Acceptance Level: There shall be no permanent damage that will interfere with the normal operation of the drawer and the drawer head should remain tightly fastened to the drawer.

RESULTS:

The submitted sample met the acceptance criteria for the test described above. Refer to the following page for photograph.



Drawer Static Load Test

6.3 SEFA 8PL-2016 – DRAWER IMPACT TEST:

Date Received: 26-May-2020

Date Tested: 15-Jun-2020

Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab

Condition of Samples: Production

Number of Samples: One (1)

TEST PROCEDURE:

6.3.2 Test Method: Remove drawer; support each corner with 2"x2"x1" (50.8 x 50.8 x 25.4 mm) supports. Drop a 10 lb. (4.545 Kg) sand or shot bag from a height of 24" (609.6 mm) into the bottom of the drawer at the center of the width of the drawer. Remove the sand or shot bag.

ACCEPTANCE CRITERIA:

6.3.3. Acceptance Level: Operate the drawer through the full cycle. Drawer shall operate normally. Any deformation will not cause binding or interference with the operation of the drawer.

RESULTS:

The submitted sample met the acceptance criteria of the test described above. Refer to the following page for a photograph.



Drawer Impact Test

6.4 SEFA 8PL-2016 – DRAWER INTERNAL IMPACT TEST:

Date Received:

26-May-2020

Date Tested:

24-Jul-2020

Location Tested:

Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab

Condition of Samples:

Production

Number of Samples:

One (1)

TEST PROCEDURE:

6.4.2. Test Method:

Position the drawer on a table at a 45° angle. Place a 2" (50.8 mm.) diameter by 12" (304.8 mm.) long steel rod (approximately 10 lbs. (4.535 kg.) 13" (330.2 mm.) from the target impact area such that the rod will roll freely to impact the back of the drawer. Subject the back to three impacts and reverse the drawer to subject the front to three additional impacts.

ACCEPTANCE CRITERIA:

6.4.3. Acceptance Level:

The drawer shall show no permanent damage. All joinery shall be intact and the drawer, when replaced in the unit, shall operate normally. Minor scratches and dents are acceptable.

RESULTS:

The submitted sample met the acceptance criteria for the test described above. Refer to the following page for photograph.



Drawer Internal Impact Test-Front to Rear



Drawer Internal Impact Test-Rear to Front

6.5 SEFA 8PL-2016 – DRAWER CYCLE TEST:

Date Received: 26-May-2020
Date Tested: 08-Jun-2020-14-Jun-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab

Condition of Samples: Production
Number of Samples: One (1)

TEST PROCEDURE:

6.5.2. Test Method: A dynamic load of 75 lbs. (34.019 kg) shall be uniformly distributed in the drawer. Measure force required to activate the drawer. Operate over the full range of motion without engaging bumpers, stops or self-closing features for 50,000 cycles at a rate not to exceed 10 ± 2 cycles per minute.

ACCEPTANCE CRITERIA:

6.5.3. Acceptance Level: The drawer shall operate freely without evidence of binding. The force required to open and close loaded drawer shall not be greater than 8 lbs. (3.628 kg.) to activate hardware.

RESULTS:

The submitted sample met the acceptance criteria for the test described above. Pull force at the end of the test was 6.9 lbf. Refer to the following page for photograph.



Drawer Cycle Test

7.2 SEFA 8PL-2016 – SHELF LOAD TEST:

Date Received: 26-May-2020
Date Tested: 06-Jun-18-Jun-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-BASE-354822-12	Base Cab
PL-WALL-304812-02	Upper Cab

This test is only shelf deflection of the shelf in a Base Cab.

Condition of Samples: Production
Number of Samples: One (1)

TEST PROCEDURE:**7.2.2 Test Method:**

A shelf shall be mounted in the manner in which it is designed. Measure the distance from the underside of the shelf to a reference point perpendicular to the center of the shelf. Use shot or sand bags weighing 10 lbs. (4.535 kg) each. Unless otherwise specified, load the shelf uniformly to 40 lbs. (18.14 kg) per square foot shelf area to a maximum of 200 lbs. (90.70 kg). Measure the deflection on the shelf by measuring the distance to the reference point and calculating the difference between the two measurements. Record data and remove the load.

ACCEPTANCE CRITERIA:**7.2.3. Acceptance Level:**

The allowable maximum deflection of a shelf is 1/180 of the span and not in excess of .25" (6.35 mm.). Maximum allowable deflection shall not exceed 0.25".

RESULTS:

SHELF TYPE	SHELF LOAD	DEFLECTION MEASURED	RESULTS
Base Cab	200 lbs	0.163"	Conforming
Wall Cab	135 lbs	0.246"	Conforming

The submitted samples met the acceptance criteria for the test described above. Refer to the following page for photographs.



Shelf Load Test – Base Cab



Shelf Load Test – Wall Cabinet

8.8 SEFA 8PL-2016 – EDGE IMPACT TEST:

Date Received: 26-May-2020
Date Tested: 27-May-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
N/A	9.5" x 9.5" x ¾" with 3mm edge band

Condition of Samples: Production
Number of Samples: One (1)

TEST PROCEDURE:

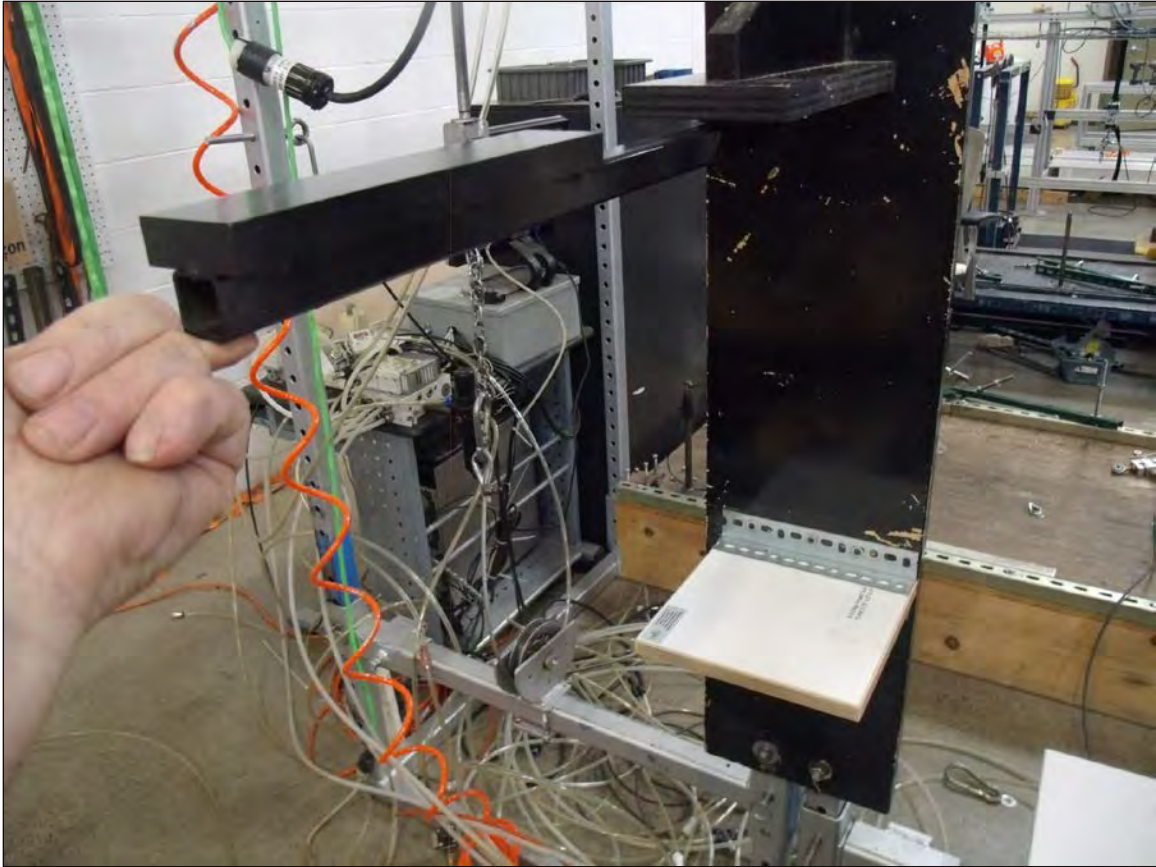
8.8.2. Test Method: Insert specimen with the 3mm edge band facing the front of the impact fixture, raise arm to stop position and then release it to let the bar impact the sample.

ACCEPTANCE CRITERIA:

8.8.3. Acceptance Level: There shall be no signs of damage to the 3mm edge banding that was applied to the test specimen

RESULTS:

The submitted sample met the acceptance criteria for the test described above. Refer to the following page for photograph.



EDGE IMPACT TEST

9.2 SEFA 8PL-2016 – WALL MOUNTED CABINET LOAD TEST:

Date Received: 26-May-2020

Date Tested: 28-May-2020

Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

MODEL NUMBER	DESCRIPTION OF SAMPLE
PL-WALL-304812-02	Wall Cabinet

Condition of Samples: Production

Number of Samples: One (1)

TEST PROCEDURE:

9.2.2 Test Method:

A wall mounted cabinet shall be mounted as per manufacturer's instructions and is to have the standard number of shelves. Use shot or sand bags weighing 10 lbs. (4.535 kg.) each. Load the shelves per Section 7.0 including the bottom, each shelf, and top uniformly with 40 lbs. (18.14 kg) per square foot shelf area to a maximum of 200 lbs. (90.70 kg). Test to be performed with doors closed.

ACCEPTANCE CRITERIA:

9.2.3. Acceptance Level:

With weights in place after a period of 24 hours, operate the doors through full travel to verify normal operation of the doors. Remove weights and operate doors to verify normal operation. Verify that there is no permanent deflection of the cabinet top, cabinet back, cabinet bottom, or shelves. After weights are removed, the cabinet shall show no permanent damage to the cabinet, cabinet bottom, or shelves.

RESULTS:

SHELF TYPE	STATIC LOAD	RESULTS
Cabinet Top	160 lbs.	Conforming
Cabinet Bottom	139 lbs.	Conforming
Shelves	135 lbs.	Conforming

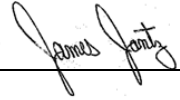
The submitted sample met the acceptance criteria for the test described above. Refer to the following page for photograph.



Wall Mounted Cabinet Load Test

SECTION 4

REVISIONS MADE TO TEST REPORT

DATE	REVISION DESCRIPTION	REVISED BY	REVISED BY
24-Jul-2020	Initial release.	James Jantz	

ONEPOINTE SOLUTIONS LLC TEST REPORT

SCOPE OF WORK

SEFA 8 PL (2016) testing on PL-Base-354822-12 / PL-Wall-304812-02

REPORT NUMBER

104340859GRR-014

ISSUE DATE

27-July-2020

REVISION DATE

06-November-2020

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TEST REPORT FOR ONEPOINTE SOLUTIONS LLC

Report No.: 104340859GRR-014

Date: 27-July-2020

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SECTION 1

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Marc Schra
Test Engineer



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Project Reviewer

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SECTION 2

SUMMARY

Date Received: 26-May-2020 and 13-June-2020 and 22-October-2020
Dates Tested: 03-June-2020 to 24-July-2020, and 04-November-2020

DESCRIPTION OF SAMPLES

Part Description: PL-Base-354822-12 / PL-Wall-304812-02
Material Submitted: Eight (8x) Pre-prepped cabinet samples
Material Specification: SEFA 8 PL (2016)
Condition of Samples: Production

WORK REQUESTED/APPLICABLE DOCUMENTS

SEFA 8 PL (2016)
Intertek quote Qu-01074945-1

SECTION 3**CONCLUSION**

TEST	RESULTS
8.1 Chemical Spot Test	Conforming
8.2 Hot Water Test	Conforming
8.3 Ball Impact Resistance Test	Conforming
8.6 Dart Impact Resistance Test	Conforming
8.7 Edge Delaminating Test	Conforming
8.9 Wear Resistance (Abrasion)	Conforming

SAMPLE DISPOSITION

After testing completed, samples were rendered unusable and then disposed of.

SUBMITTED TEST SAMPLE

Figure 1: Typical sample as received

SECTION 4**8.1 CHEMICAL SPOT TEST:**

Date Received: 26-May-2020 and 13-June-2020
Date Tested: 03-June-2020 to 04-June-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

Part Description: PL-Base-354822-12 / PL-Wall-304812-02
Material Submitted: Eight (8x) Pre-prepped cabinet samples
Material Specification: SEFA 8 PL (2016)
Condition of Samples: Production

TEST PROCEDURE:

Test Method: Per SEFA 8-PL-2016 Section 8.1
The received sample to be tested for chemical resistance as described herein: Place panel on flat surface, clean with soap (Liqui-Nox at 5% concentration) and water and blot dry. Condition the panel for 48-hours at $73\pm 3^{\circ}\text{F}$ ($23\pm 2^{\circ}\text{C}$) and $50 \pm 5\%$ relative humidity. Test the panel for chemical resistance using forty-nine (49) different chemical reagents by the following methods.

Method A: Test volatile chemicals by placing a cotton ball saturated with reagent in the mouth of a 1-oz. (29.574cc) bottle and inverting the bottle on the surface of the panel. The cotton ball shall remain in contact with the sample for duration of the test.

Method B: Test non-volatile chemicals by placing five drops of the reagent on the surface of the panel and covering with a 24 mm watch glass, convex side down.

For both of the above methods, leave the reagents on the panel for a period of one hour. Wash off the panel with water, clean with detergent (Liqui-Nox at 5% concentration) and naphtha, and rinse with deionized water. Dry with a towel and evaluate after 24 hours at $73\pm 3^{\circ}\text{F}$ ($23\pm 2^{\circ}\text{C}$) and $50 \pm 5\%$ relative humidity using the following rating system.

Rating Scale:

Level 0	No detectable change.
Level 1	Slight change in color or gloss.
Level 2	Slight surface etching or severe staining.
Level 3	Pitting, cratering, swelling, or erosion of coating with obvious and significant deterioration.

Number of Samples: Two (2)

ACCEPTANCE CRITERIA:

Per SEFA 8-PL-2016

The Range of Results is provided to establish the acceptable range for Laboratory Grade Finish. Results will vary from manufacturer to manufacturer. Laboratory grade finishes should result in no more than four (4) Level 3 conditions. Suitability for a given application is dependent upon the chemicals used in a given laboratory.

RESULTS:**Table 1: 8.1 Chemical Spot Test Results Table**

TEST NO.	CHEMICAL (% BY VOL.)	METHOD	RATING	COMMENTS
1	Acetate, Amyl	A	0	
2	Acetate, Ethyl	A	0	
3	Acetic Acid, 98%	B	0	
4	Acetone	A	0	
5	Acid Dichromate, 5%	B	0	
6	Alcohol, Butyl	A	0	
7	Alcohol, Ethyl	A	0	
8	Alcohol, Methyl	A	0	
9	Ammonium Hydroxide, 28%	B	0	
10	Benzene	A	0	
11	Carbon Tetrachloride	A	0	
12	Chloroform	A	0	
13	Chromic Acid, 60%	B	0	
14	Cresol	A	0	
15	Dichloroacetic Acid	A	0	
16	Dimethylformamide	A	0	
17	Dioxane	A	0	
18	Ethyl Ether	A	0	
19	Formaldehyde, 37%	A	0	
20	Formic Acid, 90%	B	1	Slight gloss change
21	Furfural	A	2	Staining
22	Gasoline	A	0	
23	Hydrochloric Acid, 37%	B	0	
24	Hydrofluoric Acid, 48%	B	0	
25	Hydrogen Peroxide, 30%	B	0	
26	Iodine, Tincture of	B	0	
27	Methyl Ethyl Ketone	A	0	
28	Methylene Chloride	A	2	Gloss change
29	Monochlorobenzene	A	0	
30	Naphthalene	A	0	
31	Nitric Acid, 20%	B	0	
32	Nitric Acid, 30%	B	0	

TEST REPORT FOR ONEPOINTE SOLUTIONS LLC

Date: 27-July-2020

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TEST NO.	CHEMICAL (% BY VOL.)	METHOD	RATING	COMMENTS
33	Nitric Acid, 70%	B	1	Slight gloss change
34	Phenol, 90%	A	0	
35	Phosphoric Acid, 85%	B	0	
36	Silver Nitrate, Saturated	B	0	
37	Sodium Hydroxide, 10%	B	0	
38	Sodium Hydroxide, 20%	B	0	
39	Sodium Hydroxide, 40%	B	0	
40	Sodium Hydroxide, Flake	B	0	
41	Sodium Sulfide, Saturated	B	0	
42	Sulfuric Acid, 33%	B	0	
43	Sulfuric Acid 77%	B	0	
44	Sulfuric Acid, 96%	B	1	Slight gloss change
45	Sulfuric Acid, (77%) and Nitric Acid (70%), equal parts	B	1	Slight gloss change, slight color change
46	Toluene	A	0	
47	Trichloroethylene	A	0	
48	Xylene	A	0	
49	Zinc Chloride, Saturated	B	0	

TOTALS			
ITEMS	REQUIREMENT	NO. REAGENT WITH 3 RATINGS	DISPOSITION
Volatile Subtotal:	-	0	---
Non-volatile Subtotal:	-	0	---
Grand Totals:	No More than Four Level 3 Conditions	0	*Conforming

PHOTOGRAPHS:



Chemical Spot Test "As Received" Test Panels



Chemical Spot Test Volatile Chemical Set-up



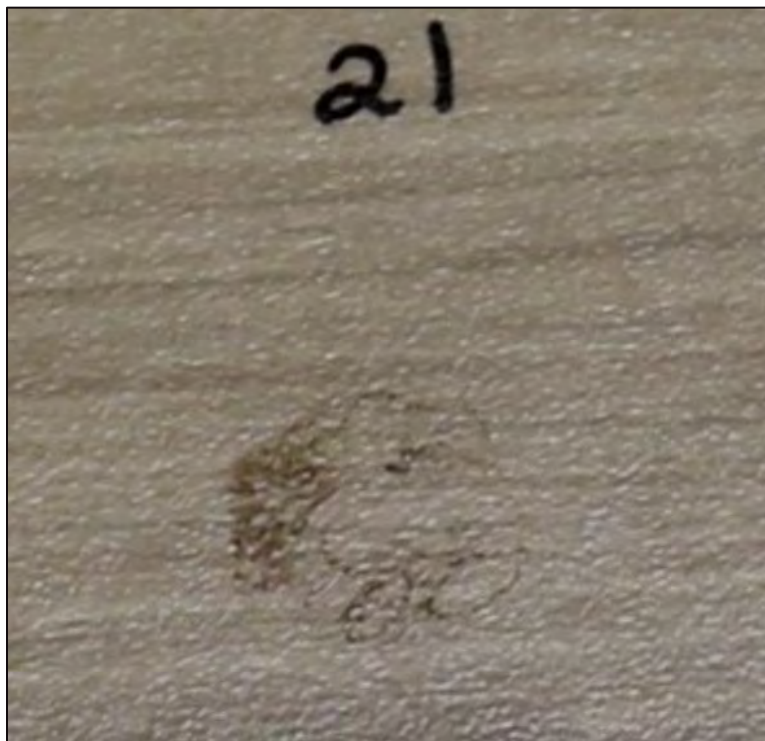
Chemical Spot Test Non-volatile Chemical Set-up



After exposure Volatile chemical spot test



After exposure non-volatile chemical spot test



Chemical Spot Test: #21, Furfural, Rating 2, Staining



Chemical Spot Test: #28, Methylene Chloride, Rating 2, Gloss change

SECTION 5**8.2 HOT WATER TEST:**

Date Received: 26-May-2020 and 13-June-2020
Date Tested: 04-June-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

Part Description: PL-Base-354822-12 / PL-Wall-304812-02
Material Submitted: Eight (8x) Pre-prepped cabinet samples
Material Specification: SEFA 8 PL (2016)
Condition of Samples: Production

TEST PROCEDURE:

Test Method: SEFA 8 PL (2016) section 8.2
ANSI/NEMA LD 3-2005 Para 3.5 Boiling Water Resistance
Number of Samples: One (1)
Conditioning: 48 hours minimum at 23±2°C and 50±5% R.H.
Sample Size: 8"x8"
Exposure Duration: 20 minutes
Reconditioning: 24 hours at 23±2°C

ACCEPTANCE CRITERIA:

A. No Effect - No change in color or surface finish.

Table 2: 8.2 Hot Water Test Evaluation Table

A.	No Effect	No change in color or surface finish
B.	Slight Effect	A change in color or surface finish only visible at certain angles or directions.
C.	Moderate Effect	A change in color or surface finish visible from all angles and directions, but does not appreciably alter the original condition of the specimen
D.	Severe Effect	A change in color or surface finish which obviously and markedly alters the original condition of the specimen.

RESULTS:

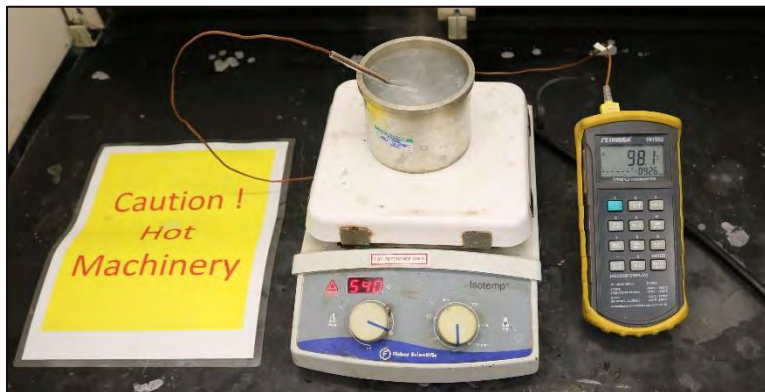
Table 3: 8.2 Hot Water Test Results Table

SAMPLE	OBSERVATIONS	CONFORMING
1	None	Conforming

PHOTOGRAPHS:



8.2 Hot Water Test Sample Before Testing



8.2 Hot Water Test Setup

**8.2 Hot Water Test Sample After Testing****TEST EQUIPMENT:**

ASSET NUMBER	EQUIPMENT	CALIBRATION DATE	CALIBRATION DUE
117286	NEMA LD 3-2005 SEC 3.5	REF ONLY	REF ONLY
114231.13	Digital Timer	4/30/2020	4/30/2021
117346	Digital Thermometer	2/4/2020	2/4/2021
117343.2	Thermocouple Wire	4/13/2016	VBU

SECTION 6**8.3 BALL IMPACT RESISTANCE TEST:**

Date Received: 22-October-2020
Date Tested: 04-November-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

Part Description: PL-Base-354822-12 / PL-Wall-304812-02
Material Submitted: Eight (8x) Pre-prepped cabinet samples
Material Specification: SEFA 8 PL (2016)
Condition of Samples: Production

TEST PROCEDURE:

Test Method: SEFA 8 PL (2016) section 8.2
ANSI/NEMA LD 3-2005 Para 3.8 Ball Impact Resistance
Number of Samples: One (1)
Conditioning: 48 hours minimum at 23±2°C and 50±5% R.H.
Sample Size: 12"x12"
Impact Ball: 224±3g and 38.1mm diameter

ACCEPTANCE CRITERIA:

Minimum of 50" (1250mm)

RESULTS:

Table 4: 8.3 Ball Impact Resistance Test Results Table

SAMPLE	IMPACT RESISTANCE HEIGHT (inch)	OBSERVATIONS	CONFORMING
1	60	Quarter Ring Fracture	Conforming

PHOTOGRAPHS:

Figure 2: 8.3 Ball Impact Resistance Test no fracturing observed at 50 inches

TEST EQUIPMENT:

ASSET NUMBER	EQUIPMENT	CALIBRATION DATE	CALIBRATION DUE
114244	Digital Caliper	12/22/2019	12/22/2020
114229	Temperature And Humidity Recorder	2/1/2020	2/1/2021
114248	Scout Pro Portable Balance 6200g Capacity	4/7/2020	4/7/2021
114241	26 Ft Tape Measure	1/27/2020	1/27/2021

SECTION 7**8.6 DART IMPACT RESISTANCE TEST:**

Date Received: 26-May-2020 and 13-June-2020
Date Tested: 09-June-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

Part Description: PL-Base-354822-12 / PL-Wall-304812-02
Material Submitted: Eight (8x) Pre-prepped cabinet samples
Material Specification: SEFA 8 PL (2016)
Condition of Samples: Production

TEST PROCEDURE:

Test Method: SEFA 8 PL (2016) section 8.2
ANSI/NEMA LD 3-2005 Para 3.9 Impact Resistance
Number of Samples: One (1)
Conditioning: 48 hours minimum at 23±2°C and 50±5% R.H.
Sample Size: 8"x8"
Impact Ball: 25.0±0.5g and 5mm diameter tip
Initial Drop Height: 125mm
Drop Height Increase Increments: 25mm

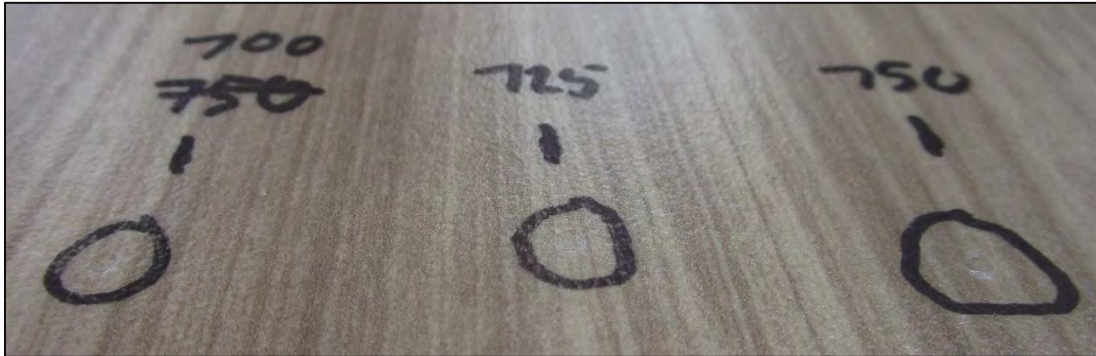
ACCEPTANCE CRITERIA:

Minimum 500mm (20")

RESULTS:

Table 5: 8.3 Ball Impact Resistance Test Results Table

SAMPLE	IMPACT RESISTANCE HEIGHT (inch)	OBSERVATIONS	CONFORMING
1	26.6	Ring Fracturing	Conforming

PHOTOGRAPHS:**Figure 3: 8.3 Ball Impact Resistance Test Sample After Testing****TEST EQUIPMENT:**

ASSET NUMBER	EQUIPMENT	CALIBRATION DATE	CALIBRATION DUE
117557	Digital Caliper	8/25/2019	8/25/2020
114241	26 ft Tape Measure	1/27/2020	1/27/2021
114229	Temperature and Humidity Recorder	2/1/2020	2/1/2021
114159	Scale, Analytical Balance 0-120 g	9/30/2019	9/30/2020

SECTION 8**8.7 EDGE DELAMINATING TEST:**

Date Received: 26-May-2020 and 13-June-2020
Date Tested: 10-June-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

Part Description: PL-Base-354822-12 / PL-Wall-304812-02
Material Submitted: Eight (8x) Pre-prepped cabinet samples
Material Specification: SEFA 8 PL (2016)
Condition of Samples: Production

TEST PROCEDURE:

Test Method: SEFA 8 PL (2016) section 8.7
Number of Samples: One (1)

ACCEPTANCE CRITERIA:

Peel value must exceed 18.5 lbs/inch.

RESULTS:**Table 6: 8.7 Edge Delaminating Test Results Table**

SAMPLE	MAX PEEL STRENGTH (LBS/INCH)	DISPOSITION
1	52.2	Conforming

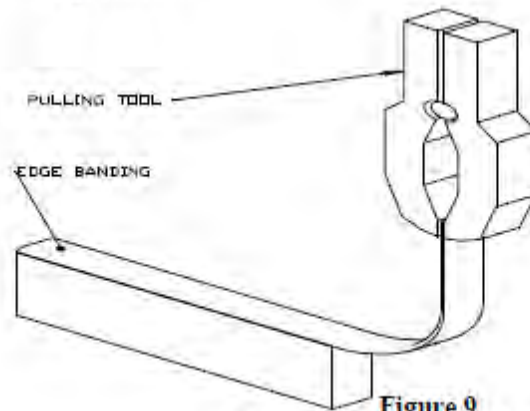
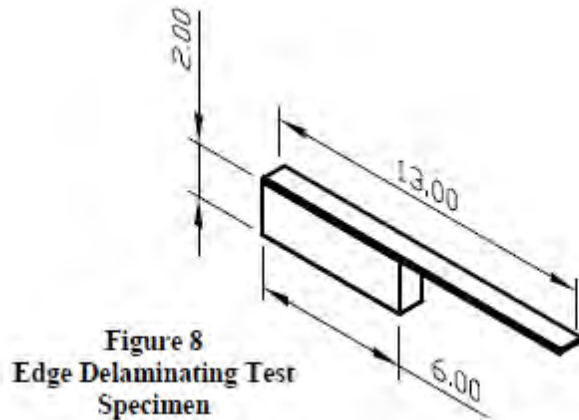
PHOTOGRAPHS:

Figure 4: 8.7 Edge Delaminating Test Orientation

TEST EQUIPMENT:

ASSET NUMBER	EQUIPMENT	CALIBRATION DATE	CALIBRATION DUE
114255	Digital Caliper	10/7/2019	10/7/2020
114217	UTM	12/17/2019	12/17/2020
114220	Load Cell	12/17/2019	12/17/2020
114229	Temperature and Humidity Recorder	2/1/2020	2/1/2021

SECTION 9**8.9 WEAR RESISTANCE (ABRASION):**

Date Received: 26-May-2020 and 13-June-2020
Date Tested: 08-June-2020 to 12-June-2020
Location Tested: Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

Part Description: PL-Base-354822-12 / PL-Wall-304812-02
Material Submitted: Eight (8x) Pre-prepped cabinet samples
Material Specification: SEFA 8 PL (2016)
Condition of Samples: Production

TEST PROCEDURE:

Test Method: SEFA 8 PL (2016) section 8.9
ANSI/NEMA LD 3 2005 para 3.13
Number of Samples: Three (3)
Conditioning: 48 hours minimum at 23±2°C and 50±5% R.H.
Wheels: S-32
Sample Paper: 180grit applied to the outer surface of abrasive wheels.
Weights: 500g
Sand Paper Calibration:
Zinc Plate: S-34 53.4653
Zinc Plate Weight 1: Post 500 cycles 53.3836
Zinc Plate Weight 2: Post 500 additional cycles. 53.3189 53.2307
Zinc Plate Mass Loss (L1 and L2): L1: 82 mg L2: 88 mg
Correction Factor (CF): 0.7727
Test Procedure:
Inspection Rate: Every 25 Cycles
Initial Wear Point (IP): 2. Solid colors—that point at which the color layer is first worn through in 4 quadrants and the sublayer is exposed.
Final Wear Point (FP): 2. Solid colors—that point at which the color layer is completely removed, exposing the sublayer the full width of the abrading wheel around its entire path.
Sandpaper Replacement Rate: Every 500 cycles

ACCEPTANCE CRITERIA:

Per SEFA 8 PL (2016): Report

Per ANSI/NEMA LD 3: 400 cycles minimum

RESULTS:**Table 7: 8.9 Wear Resistance (Abrasion) Results Table**

SAMPLE	INITIAL WEIGHT (g)	FINAL WEIGHT (g)	RATE OF WEAR (g/100 CYCLES)	IP (CYCLES)	FP (CYCLES)	WEAR RESISTANCE (CYCLES)	DISPOSITION
1	165.7685	165.0579	0.0271	525	2625	1200	
2	167.0888	166.3849	0.0256	600	2750	1300	
3	155.6347	154.9225	0.0282	550	2525	1200	
Mean:	---	---	0.0270	---	---	1250	Conforming

PHOTOGRAPHS:**Figure 5: 8.9 Wear Resistance (Abrasion) Samples After Testing.**

TEST REPORT FOR ONEPOINTE SOLUTIONS LLC

Date: 27-July-2020



Report No.: 104340859GRR-014

P.O.: PO22806

TEST EQUIPMENT:

ASSET NUMBER	EQUIPMENT	CALIBRATION DATE	CALIBRATION DUE
111151	250g Scale	5/5/2020	5/5/2021
117397	Taber Test Supply	REF ONLY	REF ONLY
117401	Abrasion Wear Test Machine	11/6/2019	11/6/2020
114229	Temperature and Humidity Recorder	2/1/2020	2/1/2021

Revisions Made To Test Report

INDEX	DATE	REVISION DESCRIPTION	REVISED BY	REVIEWED BY																																
001	7/27/20	Initial Release	---	---																																
002	11/6/20	<p>Additions/Changes:</p> <p>-Revision date to pg 1</p> <p>-This table</p> <p>-Page 3: Added 10/22/20 to dates received Added 11/4/20 to dates tested</p> <p>-Page 4 Changed 8.3 Ball impact from Nonconforming to conforming.</p> <p>-Page 15 * Removed Nonconforming date and replaced it with conforming testing in report 104481451GRR-001</p> <p>* Original data:</p> <p>SECTION 8</p> <p>8.3 BALL IMPACT RESISTANCE TEST:</p> <table><tr><td>Date Received:</td><td>26-May-2020 and 13-June-2020</td></tr><tr><td>Date Tested:</td><td>24-July-2020</td></tr><tr><td>Location Tested:</td><td>Intertek Kentwood, MI</td></tr></table> <p>DESCRIPTION OF SAMPLES:</p> <table><tr><td>Part Description:</td><td>PL-Base-354822-12 / PL-Wall-304812-02</td></tr><tr><td>Material Submitted:</td><td>Eight (8x) Pre-prepped cabinet samples</td></tr><tr><td>Material Specification:</td><td>SEFA 8 PL (2016)</td></tr><tr><td>Condition of Samples:</td><td>Production</td></tr></table> <p>TEST PROCEDURE:</p> <table><tr><td>Test Method:</td><td>SEFA 8 PL (2016) section 8.2 ANSI/NEMA LD 3-2005 Para 3.8 Ball Impact Resistance</td></tr><tr><td>Number of Samples:</td><td>One (1)</td></tr><tr><td>Conditioning:</td><td>48 hours minimum at 23±2°C and 50±5% R.H.</td></tr><tr><td>Sample Size:</td><td>12"x12"</td></tr><tr><td>Impact Ball:</td><td>224±3g and 38.1mm diameter</td></tr></table> <p>ACCEPTANCE CRITERIA: Minimum of 50" (1250mm)</p> <p>RESULTS:</p> <p>Table 4: 8.3 Ball Impact Resistance Test Results Table</p> <table><tr><th>SAMPLE</th><th>IMPACT RESISTANCE HEIGHT (inch)</th><th>OBSERVATIONS</th><th>CONFORMING</th></tr><tr><td>1</td><td>41</td><td>Ring Fracturing</td><td>Nonconforming</td></tr></table>	Date Received:	26-May-2020 and 13-June-2020	Date Tested:	24-July-2020	Location Tested:	Intertek Kentwood, MI	Part Description:	PL-Base-354822-12 / PL-Wall-304812-02	Material Submitted:	Eight (8x) Pre-prepped cabinet samples	Material Specification:	SEFA 8 PL (2016)	Condition of Samples:	Production	Test Method:	SEFA 8 PL (2016) section 8.2 ANSI/NEMA LD 3-2005 Para 3.8 Ball Impact Resistance	Number of Samples:	One (1)	Conditioning:	48 hours minimum at 23±2°C and 50±5% R.H.	Sample Size:	12"x12"	Impact Ball:	224±3g and 38.1mm diameter	SAMPLE	IMPACT RESISTANCE HEIGHT (inch)	OBSERVATIONS	CONFORMING	1	41	Ring Fracturing	Nonconforming	Marc Schra 	Derek Blakeslee 
Date Received:	26-May-2020 and 13-June-2020																																			
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SAMPLE	IMPACT RESISTANCE HEIGHT (inch)	OBSERVATIONS	CONFORMING																																	
1	41	Ring Fracturing	Nonconforming																																	

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*New Data

SECTION 8.3**8.3 BALL IMPACT RESISTANCE TEST:**

Date Received:	22-October-2020
Date Tested:	04-November-2020
Location Tested:	Intertek Kentwood, MI

DESCRIPTION OF SAMPLES:

Part Description:	PL-Base-354822-12 / PL-Wall-304812-02
Material Submitted:	Eight (8x) Pre-prepped cabinet samples
Material Specification:	SEFA 8 PL (2016)
Condition of Samples:	Production

TEST PROCEDURE:

Test Method:	SEFA 8 PL (2016) section 8.2 ANSI/NEMA LD 3-2005 Para 3.8 Ball Impact Resistance
Number of Samples:	One (1)
Conditioning:	48 hours minimum at 23±2°C and 50±5% R.H.
Sample Size:	12"x12"
Impact Ball:	224±3g and 38.1mm diameter

ACCEPTANCE CRITERIA:

Minimum of 50" (1250mm)

RESULTS:

Table 4: 8.3 Ball Impact Resistance Test Results Table

SAMPLE	IMPACT RESISTANCE HEIGHT (inch)	OBSERVATIONS	CONFORMING
1	60	Quarter Ring Fracture	Conforming

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*Replaced image of ring fracture with image of no fracture from 104481451GRR-001

*Revised caption of Figure 2 from "8.3 Ball Impact Resistance Test Ring fracturing observed" to "8.3 Ball Impact Resistance Test no fracturing observed at 50 inches"

*Replaced test equipment table with table from 104481451GRR-001

-Renumbered Pages