

MetaLine Security Ceiling System

MR-MANUFACTURER

Interfinish

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Interfinish is a division of the Chicago Metallic Corporation focused on Metal and Specialty Ceiling Systems. The wide variety of ceiling products includes linear metal, open cell, baffles, skylights, metal tiles and planks, and security systems.

Interfinish was created in 1994 as a result of the acquisition of Alcan Building Products' Ceiling Division. Interfinish is a combination of Chicago Metallic's long history and experience of over 100 years in manufacturing building products, and Alcan's proven metal ceiling systems. Chicago Metallic's dedication and commitment to excellence extends to Interfinish with a strong focus on design innovation, quality and service.

Interfinish has local sales representatives located all across the country to promptly respond to your project needs providing you with the extra effort and technical expertise that will help your project run more smoothly from start to finish.

PP-PRODUCT PRESENTATION

MetaLine Security Ceiling Systems are the perfect solution for the architect or designer when the job needs to combine durability and security without compromising aesthetics.

This system is engineered to stand up to abuse and high pressure or steam cleaning - requirements that are imperative in correctional facilities, hospitals, labs, cafeterias and clean rooms.

For supervised facilities in which security is top priority, MetaLine provides access only through designated door panels designed to "lock" to the grid framing system, prohibiting unauthorized penetration or dislodging.

TS-TECHNICAL SUPPORT

MetaLine Security Ceiling System

Section 09500 - Acoustical Treatment

PART 1 - GENERAL

1.01 Scope

- A. Furnish and install the MetaLine Security Ceiling System as manufactured and supplied by Interfinish, a division of the Chicago Metallic Corporation.

1.02 Related Sections

- A. Section 09120 Ceiling Suspension Systems
- B. Section 09130 Acoustical Suspension Systems

- C. Section 09545 Special Ceiling Surfaces
- D. Section 13020 Integrated Assemblies
- E. Section 13080 Sound, Vibration, and Seismic Control
- F. Section 15550 Heating, Ventilating, and Air Conditioning
- G. Section 16500 Lighting

1.03 References

- A. American Society for Testing and Materials
 - 1. A-361 - Specification for Steel Sheet, Galvanized by Hot Dip Process.
 - 2. B-209 - Specification for Aluminum and Aluminum Alloy Sheet and Plate.
 - 3. C-423 - Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
 - 4. C 635 - Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
 - 5. C 636 - Standard Recommended Practice for Installation of Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
 - 6. D-523 - Test Method for Specular Gloss
 - 7. E-84 - Test Method for Surface Burning Characteristics of Building Materials.
 - 8. E-580 - Practice for Application of Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels in Areas Requiring Seismic Restraint.
 - 9. E-795 - Practices for Mounting Test Specimens During Sound Absorption Tests.

1.04 Submittals

- A. Product/Technical Literature
 - 1. Submit descriptive literature along with installation recommendations and practices as illustrated in Interfinish literature.
- B. Samples
 - 1. Submit Interfinish sample kit containing appropriate MetaLine Security Ceiling System samples.
- C. Shop Drawings
 - 1. Submit shop drawings illustrating appropriate placement and installation of the MetaLine Security Ceiling System.
- D. Certification
 - 1. Furnish certification of materials and system conforming to specification requirements.
 - 2. Provide written warranty against defective workmanship and materials for a period of ___ year(s) (up to 20 yrs. maximum) from filing notice of completion.

1.05 Project Conditions

- A. Environmental Requirements
 - 1. Verify that the area in which the MetaLine Security Ceiling System is to be installed is weathertight and dry.
 - 2. Installation shall occur only when temperature and humidity conditions closely approximate interior conditions that will exist when area is complete and occupied.
- B. Trade Requirements
 - 1. Heating or cooling systems shall be in operation in order to establish and maintain a suitable climate as referenced above prior to, during, and after installation.
 - 2. All wet trades work is to be dry and thoroughly complete prior to installation of the MetaLine Security Ceiling System.

1.06 Maintenance

- A. Replacement Material

1. Furnish additional material equal to ___% of the ceiling system area.

PART 2 - PRODUCTS

2.01 Manufacturer

A. MetaLine Security Metal Ceiling System as manufactured by Interfinish, 4849 S Austin Ave, Chicago, IL 60638-1492.

2.02 Materials

A. MetaLine Security Ceiling System Panels

1. MetaLine Panels

- a. MetaLine panels shall measure a nominal (1' x 2') (1' x 4') (2' x 2') (2' x 4') and be formed from (18 g) (20 g) G-90 hot-dipped galvanized steel per ASTM A-361 or .040 aluminum per ASTM B-209.
- b. The metal from which the MetaLine panels are formed shall receive a factory-applied baked enamel finish, per ASTM D-523, that is applied to the metal prior to forming. The finish shall be Interfinish -001 White, unless specified otherwise, with the metal receiving a 0.8 mil finish coat over a 0.2 prime coat.
- c. The MetaLine panel shall be formed with upturned legs on all four sides of the panel that angle outward from the face of the panel at a 97.1 degree angle from the face of the panel. The resulting panel profile will permit the upturned legs of the MetaLine panel to snap-in and lock under the bulb of the MetaLine grid components (described below), which will serve to keep the panel tight against the horizontal flanges of the supporting grid suspension system, thus preventing the insertion of objects between the panel and the grid, and, ultimately, the removal of the panel.
- d. The MetaLine panels shall be provided with an additional security feature, a half-slot, located on each panel leg, 4-1/4" from each corner, which will serve to prevent objects, that have been forced through and around the panel at the corners, from being slid along the side of the panel in an effort to disengage the panel leg from underneath the bulb of the grid component..
- e. The MetaLine panels shall be offered either perforated, for sound control, or non-perforated. The standard perforation pattern shall be non-directional, and shall consist of .078" diameter perforations on .216" diagonal centers.

B. Suspension System Components and Perimeter Treatment

1. Main Runner Component

- a. The main runner component shall measure 1-1/2" high by 12 ft. long and shall have a 15/16" wide face.
- b. The face of the main runner component shall be coated with an Interfinish -01 white finish. The finish shall be a baked polyester enamel and shall be an identical match to that present upon the MetaLine panels.
- c. The bulb of the main runner component shall be rectangular in shape and oversized so as to provide a larger surface under which the MetaLine panels are to lock.
- d. The main runners shall possess non-directional bayonet-style couplings.

2. Cross Tee Components

- a. The cross tee components shall measure 1-1/2" high by (1') (2') (4') in length and shall have a 15/16" wide face.
- b. The finish shall be identical to that present on the main runner.
- c. The bulb of the cross tee components shall be identical to that found upon the main runner.
- d. The cross tee components shall possess stab-in end tabs for quick installation with lateral pull-out protection.

- e. The ends of the cross tee components shall butt to the face of the main runner.
- 3. Perimeter Treatment
 - a. Wall Channel and Hold-Down Inserts
 - 1. Wall channel moldings shall measure 15/16" x 1-9/16" I.D. x 3/4" and be manufactured from a minimum thickness (25g) (18g) electro-galvanized steel or .040 thickness aluminum metal.
 - 2. Hold-Down inserts shall be provided for insertion between the Wall Channel and MetaLine panel and will serve to tightly secure the panel to the channel. Hold-Down inserts shall measure 3/4" x 1-1/2" I.D. x 3/4" and be manufactured from a minimum thickness (24g) (18g) electro-galvanized steel or .040 thickness aluminum metal.
 - b. Wall Angle
 - 1. Wall angle shall measure 15/16" x 15/16" and be manufactured from a minimum thickness (25g) (18g) electro-galvanized steel or .040 thickness aluminum metal.
- C. Accessories
 - 1. Acoustical Insulation
 - a. Blanket Insulation
 - 1. The insulation shall be offered in 1" thickness x 1-1/2 pcf and 1-1/2" thickness x 1-1/2 pcf.
 - b. Acoustical Pads
 - 1. The insulation shall be offered in (Clear) (Black) PVC-wrapped acoustical pads. The acoustical pads shall be made available in 1" thickness x 1-1/2 pcf and 1-1/2" thickness x 1 pcf. The pads shall measure (2' x 2') (2' x 4').
 - 2. Fasteners and Related Items
 - a. Security fasteners shall be used to positively attach MetaLine panels to the Wall Angle (described above), and also to attach the Access Panel (described below) to the Suspension System Components (described above). The fasteners shall be #10 X 1/2" with white-finished button-heads.
 - b. Corresponding drivers shall be made available for the security fasteners.
 - 3. Compression Member Struts
 - a. Compression member struts shall be made available for downbracing purposes. The compression member struts shall be of a design as shown in Interfinish literature, and shall be manufactured to a length of _____.
 - 4. Access Panels
 - a. Access panels, measuring (2' x 2') (2' x 4'), shall be made available. The access panels shall be offered with the same metal type and thickness, perforation pattern, and paint finish options as the standard MetaLine panels. The access panels shall be formed with all sides at a 90-degree angle to the face of the panel so as to provide ease of removal and re-installation. The access panel shall be held in place by security fasteners (described above) that are screw-attached through the suspension system into the panel.

PART 3 - EXECUTION

3.01 Inspection and Preparation

- A. Inspect area in which ceiling system is to be installed in order to identify any conditions that might adversely affect the installation of the ceiling system. Do not start work until adverse conditions have been corrected. Verify that all work performed by other trades above the ceiling system has been completed prior to installation.
- B. Field measure the area in which the ceiling system is to be installed and establish the layout in order to create appropriate borders and minimize out-of-square conditions.

3.02 Installation

A. Suspension System Components and Perimeter Treatment

1. Install perimeter wall channel or angle to walls with anchors every 12" along the length of the chosen perimeter treatment.
2. Main runner components shall be installed on 48 inch centers, and shall be suspended directly from the existing structure by not less than 12 gauge steel hanger wire spaced on 48 inch centers along the length of the component. All hanger wires shall be wrapped tightly at least 3 full turns.
3. Attach compression posts at a center spacing as recommended by the factory along the length of each main runner component and to the existing structure by means of an industry-approved method. A compression post shall be installed adjacent to each supporting hanger wire. A compression post shall then be wire-tied to the hanger wire at the uppermost and lowermost point of the post.
4. Main runner components shall be interconnected by 4 ft. cross tees installed on 24 inch centers to form 24" x 48" modules. Wherever shown on the design plans, these modules shall be divided by cross tee components measuring 24 inch in length and installed perpendicular to the 4 ft. module -forming cross tee components to form 24" x 24" modules.
5. As noted on the design plans, affix additional hanger wires to grid components for enhanced support as warranted.
6. All ceiling systems shall comply with seismic design requirements, per ASTM E-580, when applicable.

B. MetaLine Panels and Related Items

1. Insert the MetaLine panel through the grid module from below. Once through the module, the panel should be held level above the grid components, and then inserted downward, into the grid module. Once installed, the face of the panels shall rest on the inside surfaces of the horizontal flanges of the main runners and cross tees, with the legs of the panel snapping and locking underneath the rectangular bulb of the grid components.
2. Mount panels to perimeter treatment, either channel or angle. When exposed fasteners are required, MetaLine panels are to be affixed to the perimeter treatment with security fasteners. From below, the fasteners should be affixed through the perimeter treatment into the MetaLine panel. The placement of the fasteners should begin 3" in from each edge of the panel, and occur every 6" in between.
3. When an unexposed fastening system is required, Hold-Down Inserts should be used in lieu of the security fasteners. In such instances, the hold-down insert is inserted between the top leg of the Wall Channel and the backside of each MetaLine panel at the perimeter of the installation.
4. Mount access panels within a grid module of appropriate dimensions. Fasten the access panel to the grid components using security fasteners attached through the face of the ceiling suspension components into the access panel. The fasteners should be located at each corner of the access panel and 6" O.C., along each side, in between.
5. Lay PVC-wrapped acoustical pads into grid module so that pads rest upon the backside of a MetaLine panel. If an acoustical blanket is required, lay the blanket over the top of the grid system.

3.03 Repair and Clean

- A. Repair any damaged or dented areas by removing and replacing the affected components.
- B. Clean all ceiling system components with a non-solvent based, non-abrasive commercial cleaning solution.

3.04 Maintenance Material

- A. Furnish additional material equal to ___% of the ceiling system area.