

THIS SECTION IS BASED ON ROCKFON'S "GRAPHGRID™ OPEN PLENUM WIRE PANEL".

Rockfon GraphGrid™ Open Plenum Wire Panel is meant for interior applications. Specifications as shown here pertain to interior applications only.

GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes: Provide suspended ceiling acoustical ceiling panels including but not limited to:
 - 1. Metal Panel.
- B. Related Sections:
 - 1. Section 09 52 23, Metal Acoustical Ceiling Suspension Assemblies.
 - 2. Section 09 54 00, Specialty Ceilings.
 - 3. Section 09 58 00, Integrated Ceiling Assemblies.
 - 4. Section 01 81 13, Sustainable Design Requirements
 - 5. Section 26 50 00, Lighting.

1.3 REFERENCES

- A. Abbreviations and Acronyms:
 - 1. ASTM: American Society for Testing and Materials
 - 2. CISCA: Ceilings & Interior Systems Construction Association; www.cisca.org.
 - 3. IBC: International Building Code
 - 4. ASCE 7 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures
 - 5. ICCES: International Code Council-Evaluation Services - AC 156 Acceptance Criteria for Seismic Qualification Testing of Non-structural Components
 - 6. ICCES: International Code Council-Evaluation Services Report - ESR 2631 Rockfon Chicago Metallic Corporation Suspended Ceiling Framing Systems and Suspension Ceiling Systems
 - 7. California Department of Public Health CDPH/EHLB Emission Standard Method Version 1.1 2010
 - 8. LEED - Leadership in Energy and Environmental Design is a set of rating systems for the design, construction, operation, and maintenance of green buildings
 - 9. International Well Building Standard
 - 10. Mindful Materials
 - 11. Living Building Challenge
- B. Reference Standards:

1. ASTM A1008 - Standard Specification for Steel, Sheet, Cold Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability
2. ASTM A641 - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
3. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process
4. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings
5. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels
6. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials
7. ASTM E580 - Installation of Metal Suspension Systems in Areas Requiring Moderate Seismic Restraint
8. ASTM E1264 - Classification for Acoustical Ceiling Products

C. Alternates

1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and approved products will be set forth by the Addenda. If included in a Bid are substitute products that have not been approved by Addenda, the specified products shall be provided without additional compensation.
2. Submittals that do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); Underwriters' Laboratories Classified Acoustical performance; Panel design, size, composition, color, and finish; Suspension system component profiles and sizes; Compliance with the referenced standards.

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Installation Meetings: Conduct meeting at Project site. Agenda includes Project conditions, coordination with work of other trades and layout of items which penetrate ceilings.

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's Product data, including suspension system and maintenance data.
- B. Samples: Submit samples of specified metal ceiling panel.
- C. Show Drawings: Necessary technical drawings and documents that pertain to the layout of the acoustical metal ceiling.
- D. Certifications: Acoustical metal ceiling product's certifications that confirm compliance with applicable tests and standards.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Supply additional material (full-size ceiling panels) equal to [] of ceiling area. Additional material should match Products installed and have the appropriate labels and identification.

- B. Supply extra materials that match products installed and are packaged with protective covering for storage and identified with labels describing contents.

1.7 QUALITY ASSURANCE

- A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.
- B. Fire Performance Details: Suspension ceiling components will feature markings of applicable testing and inspecting organization.
- C. Coordination of Work: Coordination between installers and other related professions in reference to acoustical ceiling work can include electrical fixtures and systems, fire safety systems, gypsum and building construction.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect system components from excessive moisture in shipment, storage, and handling. Deliver in unopened bundles and store in a dry place with adequate air circulation.

1.9 WARRANTY

- A. Manufacturer Warranty: Submit a written warranty executed by manufacturer for a period of 1 year from date for metal ceilings, of Substantial Completion, agreeing to repair or replace suspension system components that fail or are compromised within the specified warranty period. Failed or compromised parts can include, but are not limited to:
 - 1. Rusting or defects directly made by the manufacturer.
 - 2. Sagging or warping directly made by the manufacturer.

PART 2 - PRODUCTS

2.01 Manufacturer

- A. Metal Ceiling Systems:
 - 1. Rockfon, 4849 South Austin Avenue, Chicago, IL 60638. 1-800-323-7164; www.rockfon.com.
- B. Suspension Systems:
 - 1. Rockfon, 4849 South Austin Avenue, Chicago, IL 60638. 1-800-323-7164; www.rockfon.com.
- C. Aluminum Perimeter Trim:
 - 1. Rockfon, 4849 South Austin Avenue, Chicago, IL 60638. 1-800-323-7164; www.rockfon.com.

2.02 MATERIALS

- A. Acoustical Metal Panels: Panel Metal Ceiling System, "GRAPHGRID™ OPEN PLENUM WIRE PANEL" by Rockfon with following characteristics:
 - 1. Surface: Smooth
 - 2. Composition: Metal

3. Material: 0.12" Steel
 4. Color:
 5. NRC:
 6. Fire Class: Class A.
 7. Light Reflectance:
 8. Recycled Content: up to 85%
- B. Panels and Accessories:
1. GraphGrid lay-in panels made from 0.12 inch diameter steel wire welded to form panels for 24 inch by 24 inch ceiling modules. Wire cell size to be nominal (1 inch by 1 inch) (2 inch by 2 inch) (3 inch by 3 inch) (4 inch by 4 inch).
 2. Finish: Baked enamel paint on all sides (01 White) (08 Black) (44 Satin Silver) (Other color _____).
 3. Perimeter Trim
 - a. Rockfon Infinity Perimeter Trim: Made from extruded aluminum (6), (8), (10), (12) inches deep. Painted exposed faces or on all sides to match planks.
 - b. Wall Angle 1" wide, 2" high, 144" length, painted on all sides
- C. Suspension System:
1. Main Tees:
 - a. Cubegrid C1811 144 inch long, manufactured from 0.015 inch thick steel or Cubegrid C1800 144 inch long, manufactured from 0.020 inch thick steel, (15/16) inch wide with factory punched holes only where necessary to achieve tee intersections, hanger wire suspension and integral bayonet-style end couplings.
 - b. Finish: Web and end couplings - baked enamel paint () (custom color _____). Cap - (matching baked enamel color)].
 2. Cross Tees:
 - a. Cubegrid (C1802 24 inch long) (C1804 48 inch long, manufactured from 0.015 inch thick steel (15/16) wide with factory punched cross tee slots only where required to achieve grid intersections and integral bayonet-style end couplings.
 - b. Finish: Web and end couplings: baked enamel paint ()(custom color _____). Cap: (matching baked enamel color).
 3. Seismic Perimeter Clips
 - a. Manufactured from commercial quality steel with gold finish sized to fit 1-1/2 inch high ceiling grid components and clip to minimum (7/8)(15/16) inch wide wall angle support with minimum (3/8)(3/4) inch clearance at perimeter walls and ceiling penetrations per IBC 2006 seismic Design Category (C)(D, E, F).
 4. Wall Angle:
 - a. (1 inch wide x 2 inches high) (XXXXX 7/8 inch wide by 7/8 inch high) 15/16 inch face by (120) (144) inches long finished identical to main tees and cross tees.
 5. Perimeter Trim
 - a. Rockfon Infinity Perimeter Trim: Made from extruded aluminum (2), (4), (6), (8), (10), (12) inches deep. Painted exposed faces or on all sides to match planks.

EXECUTION

1.10 EXAMINATION

- A. Examine suspension assemblies, with installer present, for compliance with requirements specified in this and other Sections affecting ceiling panel installation and with requirements for installation tolerances and other conditions affecting performance of acoustic ceiling assemblies.

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- B. Proceed with installation only after unsatisfactory conditions have been corrected.

1.11 INSTALLATION

- A. Install ceiling panels to comply with ASTM C636/C636M, ASTM E580, and seismic design requirements indicated, according to manufacturer's written instructions and CISCA's "Ceiling Systems Handbook.
- B. Main Tees: Installed 48 inches on center, by direct suspension from existing structure, with not less than 12 gage steel hanger wires, wrapped tightly 3 full turns, spaced 48 inches on center along component length.
- C. Cross Tees:
 - 1. Installed perpendicular to main tees 24 inches on center to form 24 inch x 24 inch, or 24 inch x 48" modules.
 - 2. Installed perpendicular to module 48 inches on center to form 48 inch x 48 inch modules.
- D. Angle / Moldings: Installed on vertical surfaces, intersecting suspension components by appropriate method in accordance with industry accepted practice.
- E. Additional Hanger Wires: Wrapped tightly 3 full turns to structure and components at locations where imposed loads could cause deflection exceeding 1/360 span.
- F. Panel: Lay panels into ceiling module. Panels are directional with wires on panel faces to be in same direction.

1.12 REPAIR

- A. Remove damaged or compromised components; replace with undamaged components.

1.13 CLEANING

- A. Clean exposed surfaces in accordance with manufacturer's written instructions.

END OF SECTION