**Product Name:** Directional Fissured

**Manufacturer:** CertainTeed Ceilings

# SECTION 09 51 00 (09510) – ACOUSTIC CEILINGS

## PART 1 – GENERAL

* 1. RELATED DOCUMENTS

A. Drawings and general provisions of the contract apply to this section. This includes General and Supplementary Conditions of Division 01 (1) Specification Sections.

* 1. SUMMARY

1. Section includes acoustic panels and suspension systems for ceilings
2. Related Sections
3. Section 09 20 00 (09250) - Gypsum Board, Framing & Accessories
4. Division 23 (15) – Heating, Ventilating and Air Conditioning (HVAC)
5. Division 26 (16) – Electrical
   1. REFERENCES
6. ASTM A641 – *Specification for Steel Sheet, Zinc-Coated (galvanized) Carbon Steel Wire*
7. ASTM A653 – *Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galv-annealed) by the Hot-Dip Process*
8. ASTM C423 – *Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method*
9. ASTM C635 – *Standard Specification for Metal Suspension Systems for Acoustic Tile and Lay-in Panel Ceilings*
10. ASTM C636 – *Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings*
11. ASTM E84 – *Test Method for Surface Burning Characteristics of Building Materials*
12. ASTM E119 – *Fire Test of Building Construction and Materials*
13. ASTM E580 – *Practice for Application of Ceiling Suspension Systems for Acoustic Tile and Lay-in Panels in Areas Requiring Seismic Restraint*
14. ASTM E795 – *Practice for Mounting Test Specimens During Sound Absorption Tests*
15. ASTM E1111 – *Test Method for Measuring Interzone Attenuation of Ceiling Systems*
16. ASTM E1264 – *Classification for Acoustic Ceiling Products*
17. ASTM E1414 – *Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum*
18. ASTM E1477 – *Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating Sphere Reflectometer*
19. CAN/ULC-S102 – *Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*
20. ISO 14024 *Environmental Labels and Declarations - Type I Environmental Labeling - Principles and Procedures*
21. ISO 14025 - *Environmental Labels and Declarations -- Type III Environmental Declarations -- Principles and Procedures*
22. ISO 14644 – *Classification of Air Cleanliness*
23. CISCA (Ceilings & Interior Systems Construction Association) – *Ceilings Systems Handbook*
24. CISCA (Ceilings & Interior Systems Construction Association) – *Acoustical Ceilings – Use and Practice*
25. CISCA (Ceilings & Interior Systems Construction Association) – *Guidelines For Seismic Restraint Direct Hung Suspended Ceiling Assemblies*
26. Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers Version 1.2
    1. California Dept. of Public Health CDPH/EHLB/Standard Method v1.2, 2017
27. Health Product Declaration Standard v2.0 – hpdcollaborative.org
    1. SUBMITTALS
28. Product Data
29. Submit manufacturer’s published technical information for each product indicated
30. Shop Drawings
31. Submit reflected ceiling plans drawn to scale prescribed by Architect
    1. Include coordinated penetrations and ceiling-mounted items
    2. Include any necessary details or drawings from the manufacturer regarding recommended installation
32. Samples
33. Submit representative manufacturer’s sample of each panel indicated
34. Submit representative manufacturer’s sample of each suspension member indicated
35. Certifications

# Provide manufacturer’s written certification that products submitted meet or exceed all specified requirements

1. Provide laboratory reports that certify compliance with specified tests
2. Provide third party verified life cycle information with published environmental product declaration (EPD)
   1. Per ISO 14025 *Environmental Labels and Declarations - Type III Environmental Declarations - Principles and Procedures*
   2. QUALITY ASSURANCE
3. Source Limitations
4. Acoustic Ceiling Panel
   1. Obtain each type through one source from a single manufacturer
5. Suspension System
6. Obtain each type through one source from a single manufacturer
7. Installer Qualifications
8. Must be experienced in the installation of systems similar to those specified herein
9. Surface Burning Characteristics
10. ASTM E1264
    1. Class A
11. ASTM E84 [United States]
    1. Flame spread of 25 or less
    2. Smoke developed of 50 or less
12. CAN/ULC-S102 [Canada]
    1. Flame spread of 25 or less
    2. Smoke developed of 50 or less
13. Fire Resistance Rating: Test in accordance with ASTM E119 or CAN/ULC-S101, UL/ULC Classified, and listed in “UL/ULC Fire Resistance Directory”
    1. Refer to Fire Resistance Directory for specified UL or ULC Design Number and related assembly constructed data
    2. Consult with authorities having jurisdiction for requirements to achieve an acceptable fire resistance rating for a particular fire resistance assembly
    3. DELIVERY, STORAGE AND HANDLING
14. Delivery of acoustic ceiling products will be in the original unopened packages with the manufacturer’s label intact
15. Handling and storage should be in accordance with the manufacturer’s Safety Data Sheets (SDS)
16. Individual panels should be handled carefully to avoid damage
    1. PROJECT CONDITIONS
17. Environmental Limitations
18. Install acoustic panels only in conditions that are within the manufacturer’s published limits for temperature and humidity
19. Areas receiving ceiling panels should be free of construction debris and dust
20. Mechanical, sprinkler and electrical trades shall have completed their work above the ceiling structure prior to commencement of the ceiling panel installation
    1. COORDINATION
21. Coordinate the installation of the acoustic ceiling system with any and all trades whose work is impacted by that installation
    1. EXTRA MATERIALS
22. Provide extra materials in the manufacturer’s unopened packaging, with the manufacturer’s label intact, as detailed below
23. Acoustic Panels – Minimum [5%] of each type installed
24. Suspension System Components – Minimum [5%] of each type installed

**PART 2 - PRODUCTS**

2.1 MANUFACTURER

1. CertainTeed Ceilings
2. Address: 20 Moores Road, Malvern, PA 19355
3. Telephone: 800-233-8990
4. Web: [www.certainteed.com](http://www.certainteed.com)

## 2.2 ACOUSTIC CEILING UNITS

1. Acoustical Ceiling Panel (ACP) - [Type ACP-1]
2. Name: [Directional Fissured, Protectone Directional Fissured]
3. Physical Characteristics
   1. Type: III (per ASTM E1264)
   2. Form: 2 (per ASTM E1264)
   3. Pattern: C, D (per ASTM E1264)
   4. Size: [2’x2’, 2’x4’]
   5. Thickness: [5/8”]
   6. Edges: Square
   7. Finished Surface: Painted
   8. Finished Surface Color: White
   9. Core Composition: Wet-felted mineral fiber
   10. Recycled Content:
       1. Directional Fissured: 33%
          1. 28% (pre-consumer)
          2. 5% (post-consumer)
       2. Protectone Directional Fissured: 44%
          1. 42% (pre-consumer)
          2. 2% (post-consumer)
4. Performance Criteria
   1. Noise Reduction Coefficient (NRC) per ASTM C423 (E-400 mounting)
      1. 0.55 [Directional Fissured & Protectone Directional Fissured]
   2. Light Reflectance (LR) per ASTM E1477
      1. 0.82
   3. Ceiling Attenuation Class (CAC) per ASTM E1414
      1. 33 [Directional Fissured 2x2]
      2. 35 [Directional Fissured 2x4, Protectone Directional Fissured 2x2]
      3. 40 [Protectone Directional Fissured 2x4]
   4. Humidity Resistance
      1. Must be installed in controlled conditions for temperature (60-85ºF) and relative humidity (less than 70%)
   5. Flame Spread Classification per ASTM E84, CAN/ULC-S102: Class A
   6. Underwriters Laboratories, Inc. Fire-resistance Time-rated Assemblies
      1. Protectone Directional Fissured only: [D203, D205, G208, G218, G248, G255, L201, P204, P259, P260, P261, P262, P264, P266, P270]
5. Independent Environmental Certifications
   1. VOC content
      1. Third-party certification of compliance
         1. Per California Dept. of Public Health *CDPH/EHLB/Standard Method v1.2, 2017*
   2. Recycled content
      1. Third-party verified Type I Environmental Label
         1. Per ISO 14024 *Environmental Labels and Declarations - Type I Environmental Labeling - Principles and Procedures*
   3. Environmental Product Declaration
      1. Third-party verified Type III Environmental Product Declaration
         1. Per ISO 14025 *- Environmental Labels and Declarations - Type III Environmental Declarations -- Principles and Procedures*
   4. Health Product Declaration
      1. Per Health Product Declaration Standard v2.0
         1. hpdcollaborative.org

2.3 SUSPENSION SYSTEM

1. Manufacturer: CertainTeed Ceilings
2. For information pertaining to specific suspension system offerings, reference CertainTeed Ceilings’ library of Suspension System 3-Part Specifications

## PART 3 – EXECUTION

3.1 EXAMINATION

1. Ascertain acceptability of substrates and building conditions under which the ceiling system is to be installed. Do not proceed with the installation until any and all unacceptable conditions have been rectified.

3.2 PREPARATION

1. Unless otherwise directed by the reflected ceiling plan, measure the space in which the ceiling system is to be installed and establish a layout that balances border widths at opposite ends of the ceiling.
2. When possible, coordinate the ceiling system layout to avoid the use of less than half width panels at the perimeter.

3.3 INSTALLATION

1. Install the ceiling system in accordance with the following:
2. Manufacturer’s printed instructions
3. ASTM C636
4. Ceilings & Interior Systems Construction Association (CISCA) recommendations
5. Applicable local code requirements
6. Approved shop drawings

3.4 MAINTENANCE

1. Replace any and all damaged ceiling system components
2. Clean any and all exposed surfaces in accordance with the manufacturer’s printed instructions

# END OF SECTION

**CertainTeed Ceilings shall be held harmless for any damages resulting from the use of this specification guide**