**Product Name:** Ecophon Focus E

**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 A446 – *Specification for Steel Sheet, Zinc-Coated (galvanized) by the Hot Dip Process, Structural (physical) Quality*
7. ASTM A641 - *Specification for Steel Sheet, Zinc-Coated (galvanized) Carbon Steel Wire*
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. DIN 5036 – *Radiometric and Photometric Properties of Materials*
20. ISO 4611 – *Plastic – Determination of the Effects of Exposure to Damp, Heat, Water Spray and Salt Mist*
21. ISO 11654 – *Sound Absorbers for Use in Buildings – Rating of Sound Absorption*
22. ISO 14025 - *Environmental Labels and Declarations -- Type III Environmental Declarations -- Principles and Procedures*
23. ISO 14644 – *Classification of Air Cleanliness*
24. CISCA (Ceilings & Interior Systems Construction Association) – *Ceilings Systems Handbook*
25. CISCA (Ceilings & Interior Systems Construction Association) – *Acoustical Ceilings – Use and Practice*
26. CISCA (Ceilings & Interior Systems Construction Association) – *Guidelines For Seismic Restraint Direct Hung Suspended Ceiling Assemblies*
27. Danish Society of Indoor Climate – *Indoor Climate Label*
28. Nordic Council of Ministers – *Nordic Swan Eco-label*
29. Swedish Asthma & Allergy Association
30. Building Information Foundation RTS – *Emission Classification of Building Materials*
31. California Department of Public Health CDPH/EHLB/Standard Method Version 1.1, 2010
32. French VOC Label - Émissions dans l'air intérieur
    1. SUBMITTALS
33. Product Data
34. Submit manufacturer’s published technical information for each product indicated
35. Shop Drawings
36. 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
37. Samples
38. Submit representative manufacturer’s sample of each panel indicated
39. Submit representative manufacturer’s sample of each suspension member indicated
40. 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
    1. Flame spread of 25 or less
    2. Smoke developed of 50 or less
    3. DELIVERY, STORAGE AND HANDLING
12. Delivery of acoustic ceiling products will be in the original unopened packages with the manufacturer’s label intact
13. Handling and storage should be in accordance with the manufacturer’s Safety Data Sheets (SDS)
14. Individual panels should be handled carefully to avoid damage
    1. PROJECT CONDITIONS
15. Environmental Limitations
16. Install acoustic panels only in conditions that are within the manufacturer’s published limits for temperature and humidity
17. Areas receiving ceiling panels should be free of construction debris and dust
18. Mechanical, sprinkler and electrical trades shall have completed their work above the ceiling structure prior to commencement of the ceiling panel installation
    1. COORDINATION
19. Coordinate the installation of the acoustic ceiling system with any and all trades whose work is impacted by that installation
    1. EXTRA MATERIALS
20. Provide extra materials in the manufacturer’s unopened packaging, with the manufacturer’s label intact, as detailed below
21. Acoustic Panels – Minimum 5% of each type installed
22. 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/ceilings](http://www.certainteed.com/ceilings)

## 2.2 ACOUSTIC CEILING UNITS

1. Acoustical Ceiling Panel (ACP) – Type 1
2. Name: VOC Compliant Ecophon Focus E
3. Physical Characteristics
   1. Type: XII (per ASTM E1264)
   2. Form: 2 (per ASTM E1264)
   3. Pattern: G (per ASTM E1264)
   4. Size: [2’x2’, 2’x4’, 2’x5’, 2’x6’, 2’x8’, 4’x4]
   5. Thickness: 3/4”
   6. Edges:
      1. E/24 [Reveal for 15/16” grid]
      2. E/15 [Narrow Reveal for 9/16” grid]
   7. Finished Surface: Akutex FT
   8. Finished Surface Color: White
      1. Ecophon Color Options: [Volcanic Ash, Silver Stone, Silk Slate, Summer Breeze, Silent Steam, Ocean Storm, Moonlight Sky, Golden Field, Sunset Heat, Ruby Rock, Dark Diamond, Morning Drizzle, Cloudy Day, Pale Pearl, Highland Fog]
   9. Panel Backing: Single layer of smooth, resin-bonded glass tissue
   10. Core Composition: Glasswool
   11. Recycled Content: 71%
       1. 1% (pre-consumer)
       2. 70% (post-consumer)
4. Performance Criteria
   1. Sound Absorption Rating per ISO 11654 (E-200 mounting)
      1. Class A absorber
   2. Noise Reduction Coefficient (NRC) per ASTM C423 (E-400 mounting)
      1. 0.90
   3. Sound Absorption Average (SAA) per ASTM C423 (E-400 mounting)
      1. 0.90
   4. Articulation Class (AC): per ASTM E1111
      1. 190
   5. Light Diffusion per DIN 5036
      1. 99%
   6. Light Reflectance (LR) per ASTM E1477
      1. .85 to .04 (dependent upon color)
   7. Ceiling Attenuation Class (CAC) per ASTM E1414
      1. 23
   8. Humidity Resistance per ISO 4611
      1. Warranted to withstand relative humidity of up to 95% at 104ºF without sagging, warping or delaminating for 10-years
   9. Flame Spread Classification per ASTM E84: Class A
5. Independent Certifications and Recommendations
   1. VOC content
      1. Third-party certification of compliance
         1. Per *California Department of Public Health CDPH/EHLB/Standard Method Version 1.1, 2010*
   2. 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*
   3. Indoor Climate Label (highest class for ceiling panels)
      1. Danish Society of Indoor Climate
   4. Nordic Swan Eco-label
      1. Nordic Council of Ministers
   5. Recommended by Swedish Asthma and Allergy Association
   6. M1 emission classification
      1. Building Information Foundation RTS – Emission Classification of Building Materials
   7. French VOC Label
      1. Émissions dans l'air intérieur

2.3 SUSPENSION SYSTEM

1. Manufacturer: CertainTeed Ceilings
2. Product
3. Name: [15/16” Classic Stab, 15/16” Classic Aluminum Capped Stab, 15/16” Classic Hook, 15/16” Classic Aluminum Capped Hook, 15/16” Classic Environmental Stab, 9/16” Elite Narrow Stab, 9/16” Smoothline Bolt Slot]
4. Physical Characteristics
5. Structural Classification: [Intermediate Duty, Heavy Duty] (per ASTM C635)
6. Double web design manufactured of hot-dipped galvanized steel
7. Flange Size:
   1. 15/16”
   2. 9/16”
8. Color: White
9. Components
10. Main Runners
    1. Size: 12’
11. Cross Tees
    1. Size: [8’, 5’, 4’, 2’, 1’]
12. Edge Molding
    1. Type: [angle, shadow-line]
    2. Profile: As selected by the Architect
13. Attachment Devices: Anchors sufficient for five-times design load indicated in ASTM C635 (Table 1). Wire for hangers of size and type to suit intended application, complying with ASTM C641, Class 1 zinc coating, not less than 12 gauge
    1. Seismic Restraints: Pursuant to CISCA recommendations, ASTM E580 and local code requirements
    2. ICC-ES Evaluation Service Report (ESR-3336)

a. Suspended Ceilings Framing Systems and Seismic Perimeter Clip

## 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**