

EuroStone™ Sustainable Ceiling Panel

**PART 1 - GENERAL**

1.01 Scope

Furnish and install EuroStone Sustainable Ceiling Panels and accessories by Empacomercio, S.A. de C.V.

1.02 References

- A. Section 09 22 26 - Suspension Systems
- B. Section 09 29 00 Gypsum Board
- C. Section 09 58 00 Integrated Ceiling Assemblies
- D. Section 13 42 00 Building Modules
- E. Section 13 48 00 - Sound, Vibration, and Seismic Control
- F. Section 23 50 00 - Central Heating Equipment
- G. Section 26 50 00 - Lighting

1.03 Standards

- A. American Society for Testing and Materials (ASTM)
  - 1. C 177 Thermal Performance.
  - 2. C 635 Sound Absorption and Sound Absorption Coefficients.
  - 3. C 635 Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
  - 4. C 636 Installation of Metal Ceiling Suspension Systems.
  - 5. D 3273 Resistance to Growth of Mold.
  - 6. E 84 Surface Burning Characteristics.
  - 7. E 119 Fire Tests of Building Construction and Material.
  - 8. E 136 Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.
  - 9. E 580 Application of Ceiling Suspension systems for Acoustical Tile and Lay-in Panels in Areas Requiring Seismic Restraint.
  - 10. E 1264 Classification for Acoustical Ceiling Products.
  - 11. E 1414 Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.
  - 12. E 1477 Luminous Reflectance Factor of Acoustical Materials.
- B. Cornell University Study Results. Effects of Man-Made Mineral Fibers in Settled Dust on Sick Building Syndrome in Air Conditioned Offices.
- C. U.S. Green Building Council (USGBC).
- D. City of New York Building Code. Section 27.348 (Uplift Test).

1.04 Submittals

- A. Product data: Manufacturers standard data sheets listing dimensions and details.
- B. Samples: Manufacturers standard samples including suspension, panels and colors.
- C. Shop Drawings: Reflected ceiling plan and elevation drawings indicating ceiling layouts, dimensions and perimeter conditions.

1.05 Quality Assurance

- A. Surface Burning Characteristics tested per ASTM E84: Flame Spread: 0; Smoke Developed: 0; Fuel Contributed: 0
- B. Fuel Emission Characteristics: B.T.U.: 0; Ignition: 0; Mass Loss 0.4% (exposed to heat flux 20 minutes)

- C. Fire Resistance Ratings tested per ASTM E119: 1 hour (CMC/FCA 60-03, 04, 06)
- D. Mold Resistance Rating tested per ASTM D3273: Rated 10 (0 mold growth on both front and back sides).
- E. Combustion Toxicity Rating - University of Pittsburgh test: 0 with 250 grams of material in the test chamber; Non-toxic; Non-lethal.

#### 1.06 Project Conditions

##### A. Environmental Requirements

1. Panels do not require special environmental conditions and may be installed at any stage of construction.
2. Verify weather tightness of area prior to installation.
3. Wet trades work to be thoroughly dry and complete prior to installation.
4. Deliver materials in manufacturer's original packaging, unopened and undamaged.
5. Store materials in an enclosed dry location at room temperature and protect from soiling and direct sunlight.

#### 1.07 Warranty

- A. Panels will be warranted by manufacturer to remain dimensionally stable up to 120°F and 100% RH for the lifetime (defined as 40 years) of the building. Warranted to be free of man-made mineral fibers, toxic chemicals, asbestos or formaldehyde; organic content and chemical inhibitors. Warranted to be free of compositions contributive to Sick Building Syndrome.

#### 1.08 Maintenance

- A. Furnish additional material equal to [\_\_\_\_]% of the ceiling system area.

## **PART 2 - PRODUCTS**

### 2.01 Manufacturer

- A. EuroStone Sustainable Ceiling Panels by Empacomercio, S.A. de C.V., Bahía de Santa Barbara 152, Mexico City, Mexico C.P. 11300 Phone (52-55) 5355 9215 Web: eurostone.com.mx

### 2.02 Materials

- A. Panels: EuroStone sustainable ceiling panel to lay in [9/16 inch][15/16 inch] exposed t-bar ceiling suspension.
- B. Nominal Size: 7/8 inch thick x 24 inch x 24 inch.
- C. Material: inorganic fire, mold and mildew resistant perlite blend.
- D. Color: Bright white.
- E. Surface: Fine[Terric][Novum][Windsor][Tetrum]  
[Kalypso!™], Medium[Montreaux], Bold[Cresta].
- F. Edge detail:
  1. Square edge for 15/16 inch wide suspension system. Pattern [Terric][Montreaux].
  2. Reveal edge for (15/16)(9/16) inch wide suspension system. Pattern [Terric][Montreaux][Kalypso!™][Novum - scored 8" x 8"][Windsor - scored perimeter][Tetrum - scored 12" x 12"][Cresta].
- G. Sound: NRC 0.65 per ASTM C 423. CAC 37 per ASTM C 1414.
- H. Light: LR .76 per ASTM E 1477.

- I. Indoor Air Quality: Rated 10 per ASTM D 3273 (no mold growth front and back sides). 0 voc's, 0 fiber release.
- J. Stability: 0 sag at 100% RH and 120 degrees F.
- K. Fire: Class A per ASTM E84: Flame Spread: 0; Smoke Developed: 0; Fuel Contributed: 0.1 hour rating per ASTM E119(CMC/FCA 60-03, 04, 06)
- L. Combustion Toxicity Rating - University of Pittsburgh test: 0 with 250 grams of material in the test chamber; Non-toxic; Non-lethal.
- M. Thermal performance: R = 1.27 per ASTM C177.
- N. Will not support the growth of mold, mildew, fungus or other microorganisms.
- O. Weight: 1.6 lbs. per square foot
- P. Classification type: Type XX, pattern [E][K] per ASTM E-1284.
- Q. Sustainability: 100% recyclable, 0 VOC's, 0 Fiber release.
- R. Back-loading: 1 lb/sq.ft. insulation in direct contact with the panels.
- S. Acceptable product: EuroStone sustainable ceiling panel as manufactured by Chicago Metallic Corporation.
- T. Suspension system: Refer to Section [095323] [\_\_\_\_\_] for acoustical panel suspension system.

### **PART 3 - EXECUTION**

#### **3.01 Examination**

- A. Examine area receiving system to identify conditions which will adversely affect installation. Do not begin installation until adverse conditions have been remedied.

#### **3.02 Installation**

- A. Refer to manufacturer's written installation instructions.
- B. Install lay in acoustical ceiling panels flush and level in suspension system.
- C. Install panels with hand protection to avoid soiling.
- D. Press panels from above to set into grids. Do not pull from face.
- E. Handle components to prevent damage.
- F. Cut perimeter panels [square to lay on to wall angle][square to butt against wall angle with panel dimensionally supporting itself on three sides][with reveal edge].
- G. Clean adjacent surfaces and remove unused product and debris from site.
- H. Clean ceiling panels by vacuuming, brushing, or washing with water. Allow panels to dry after washing, before replacing.
- I. Remove and reinstall improperly installed material.
- J. Remove damaged ceiling panels, replace with undamaged ceiling panels.