

Rockfon® Mono® Acoustic Ceiling [and] [Wall] Systems

Alternate locations; 09 23 13 Acoustical gypsum plastering
09 51 53 Direct applied acoustical ceilings
09 51 13 Acoustical Panel Ceilings

Important Specifier notes:

Rockfon® Mono® Acoustic should only be installed, maintained and repaired by certified Rockfon Mono Acoustic Installers. Please contact Rockfon customer service for contact details of your nearest certified installer.

Rockfon Mono Acoustic is a high sound absorbing (NRC 0.95) interior ceiling system with a lightly textured bright white surface providing a continuous, seamless monolithic surface.

There are three types of Mono Acoustic systems included in this specification to choose from;

Rockfon Mono Acoustic TE - 1200mm x 1800mm panels fastened directly to Chicago Metallic drywall suspension grid installed in a 1200mm x 600mm pattern.

Rockfon Mono Acoustic TE Direct - 1200mm x 900mm panels adhered to existing or new smooth flat surfaces such as plaster or gypsum.

Rockfon Mono Acoustic TE Flecto - 1200 x 900mm panels for concave or convex shapes with a minimum radius of 1500mm affixed to framework or solid surface in desired geometry.

The Mono Acoustic TE system should not be used where there is a negative air pressure in the plenum space as this creates air movement through the face of the ceiling, causing a filter effect on the panel surface, resulting in an uneven visual appearance over time. Use ducted air return or other method to ensure that air pressure is equalized between the room and plenum space above the ceiling.

For projects where there is a negative air pressure in the plenum space, use the Mono Acoustic TE Direct system with panels adhered onto an existing solid surface such as gypsum, plaster or concrete.

All Mono Acoustic panels are finished on-site with Mono Acoustic joint compound, Mono Acoustic joint tape and Mono Acoustic Elegant Render spray-applied acoustical surface treatment. Use of any other finishing materials is not recommended as they could negatively impact the system performances.

Mono Acoustic systems are suitable for interior ceiling and wall applications not subject to impact.

When critical light conditions due to incident light exist, unevenness in the ceiling will become visible. This is the case for both traditional gypsum ceilings and Rockfon Mono Acoustic ceilings.

The monolithic nature of the ceiling means it is non-demountable, so careful sequencing of the construction work is essential, along with the installation of access hatches if access is required.

Mono Acoustic integrates with services such as lighting, HVAC, plumbing and security systems in much the same way as gypsum panel ceilings and requires a similar coordination effort.

Select diffuser units that will work with the 40mm thickness of Mono Acoustic panels.

If more than the recommended amount of Elegant Render is used, or if the finished installation is repainted, a reduction in sound absorption should be anticipated.

Contact Rockfon Customer Service at 800.323.7164 for additional information or visit rockfon.com.

PART 1 - 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:

1. Suspension system for monolithic acoustical ceilings.
2. Rockfon Mono Acoustic TE attached directly onto flat drywall ceiling suspension.
3. Rockfon Mono Acoustic TE Direct adhered to existing flat surfaces.
4. Rockfon Mono Acoustic TE Flecto attached to undulating and curved surfaces.
5. Perimeter trims and accessories.

B. Related Sections:

1. Section 09 22 00 Supports for Plaster and Gypsum Board.
2. Section 09 51 13, Acoustical Panel Ceilings.
3. Section 09 51 53, Direct applied acoustical ceilings.
4. Section 09 53 23, Metal Acoustical Ceiling Suspension Assemblies.
5. Section 09 54 00, Specialty Ceilings.
6. Section 13 48 00, Sound, Vibration, and Seismic Control.
7. Section 21 00 00, Fire Suppression.
8. Division 22, Plumbing.
9. Division 23, Heating, Ventilation and Air Conditioning (HVAC).
10. Division 26, Electrical.

1.3 REFERENCES

A. Abbreviations and Acronyms:

1. CISCA: Ceilings & Interior Systems Construction Association; www.cisca.org.
2. ASTM: ASTM International, formerly known as American Society for Testing and Materials; www.astm.org.
3. UL: Underwriters Laboratories; <https://ul.org>.
4. ULC: UL Canada; <https://canada.ul.com>.

B. Reference Standards:

1. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
2. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.

3. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
4. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.
5. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
6. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
7. ASTM E1111/E1111M - Standard Test Method for Measuring the Interzone Attenuation of Open Office Components.
8. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; Type IV, Form 3, Pattern G.
9. ASTM E1414/E1414M - Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.
10. Light Reflectance per ASTM E 1477.
11. CAN/ULC S102, Surface Burning Characteristics of Building Materials and Assemblies.
12. International Building Code.
13. UL 2821, GREENGUARD Certification Program Method for Measuring and Evaluating Chemical Emissions From Building Materials, Finishes and Furnishings Using Dynamic Environmental Chambers.

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 standard product features and options as well as material transparency documentation including Environmental Product Declaration (EPD) and maintenance data.
- B. Samples: Submit 6" x 6" samples of specified ceiling panels with applied finish.
- C. Shop Drawings: Plan and details of [ceilings] [walls] [islands], including hanger locations, suspension, access hatches and other items that integrate with the system.
- D. Rockfon Mono Acoustic Training Certification for the installers used for this installation.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Supply additional material (full-size ceiling panels) equal to 5% of ceiling area.
- B. Extra materials should match products installed and be packaged with protective covering for storage and identified with labels describing contents.

1.7 QUALITY ASSURANCE

- A. Submit documentation asserting that the installer has been trained and certified by Rockfon for installation of the Rockfon Mono Acoustic system.

B. Provide suspension, acoustical panel units, joint filler and acoustical surface treatment from a single manufacturer.

C. Coordinate ceiling installation with related trades including wall framing and gypsum, lighting, plumbing, HVAC, security and any other trades integrating with the ceiling.

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.

C. Store materials in a dry location with a temperature between 5 - 30°C (41-86°F) and relative humidity between 40% and 60%, maximum 80%.

1.9 PROJECT CONDITIONS

A. Installation area must be enclosed, free from debris and contaminants such as dust and moisture, and fully climatized prior to, during and after installation.

B. Installation area to be well ventilated to facilitate adequate drying of joint compounds and acoustical surface coating.

2.0 WARRANTY

A. Manufacturer Warranty: Submit a written limited product warranty executed by manufacturer for materials deemed to be defective from the manufacturer for the following periods;

1. Monolithic acoustical panels: 15 year limited product warranty.
2. Suspension system: 30 year limited product warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of design; Rockfon Mono Acoustic by Rockfon North America, 4849 South Austin Avenue, Chicago, IL 60638. 1-800-323-7164; www.rockfon.com.

2.2 MATERIALS

A. Rockfon Mono Acoustic ceiling and wall systems by Rockfon.

1. [Rockfon Mono Acoustic TE attached directly onto flat drywall ceiling suspension].
2. [Rockfon Mono Acoustic TE Direct adhered to existing flat surfaces].
3. [Rockfon Mono Acoustic TE Flecto attached to undulating and curved surfaces].

B. Rockfon Mono Acoustic TE system directly onto flat drywall ceiling suspension.

1. Suspension for Rockfon Mono TE Acoustic panels to be Chicago Metallic drywall suspension grid installed 1200mm x 600mm on center, manufactured by Rockfon, 4849 South Austin Avenue, Chicago, IL 60638. 1-800-323-7164; www.rockfon.com.
 - a. Rockfon Chicago Metallic 3600mm drywall main runners installed 1200mm on center. Manufactured from commercial quality steel with factory punched hanger holes and slotting for cross channels 200mm on center.
 - b. Rockfon Chicago Metallic 1200mm drywall furring channels installed 600mm on center. Manufactured from commercial quality steel with ends designed to positively lock into drywall main runners.

- c. 12ga galvanized hanger wires installed maximum 1200mm along main runners and maximum 450mm from perimeters.
2. Rockfon Mono Acoustic TE Panel.
- a. Material; Stone Wool substrate with non-directional facing on front face and high-performance membrane on back side.
 - b. Size; 1200mm x 1800mm x 40mm.
 - c. Edges; Tapered for Mono Acoustic joint tape and joint compound.
 - d. Color; White base for Mono Acoustic Elegant White spray applied finish.
 - e. Noise Reduction Coefficient per ASTM C423; NRC 0.95 on finished system.
 - f. Articulation Class per ASTM E1111/E1111M; AC 190.
 - g. Resistance to mold per ASTM D3273; Rating 10 (no mold growth).
 - h. Flame spread and smoke developed Class A per ASTM E1264.
 - i. Emissions per UL 2818; achieves ULE Greenguard requirements.
 - j. Recycled content 40% minimum.
 - k. R Value (BTU Units): 5.3.
3. Rockfon Mono Acoustic TE panel attachment devices
- a. Rockfon Mono Acoustic Intersection Brackets.
 - b. Rockfon Mono Acoustic Fastening Washers.
 - c. Fasteners; #8 x 2-3/8" (60mm) Self-drilling sheet metal fasteners for drywall suspension.
4. Rockfon Mono Acoustic TE finish materials designed for Mono Acoustic panels.
- a. Rockfon Mono Acoustic powder filler, mixed with water on jobsite per manufacturer instructions.
 - b. Rockfon Mono Acoustic 40mm wide joint tape.
 - c. Rockfon Mono Acoustic Elegant Render white, water-based spray-applied fine texture surface applied per manufacturers installation instructions.
5. Rockfon Mono Acoustic TE Perimeter solutions.
- a. Along walls use Rockfon Chicago Metallic Wall Channel: 3000mm long by 40mm high with a 25mm top and bottom flange. manufactured from 0.5mm thick galvanized steel.
 - b. At floating islands and peninsulas use Rockfon InfinityD perimeter trim; [Straight] [Curved], [102mm] [203mm] high made from extruded aluminum with grooved taping flange and primed for adhesion of joint compound and paint.
 - c. Along walls use joint sealant between wall and edge of Rockfon Mono Acoustic Direct panel.
 - d. Install controls joints following gypsum ceiling guidelines in ASTM C840.

C. Rockfon Mono Acoustic TE Direct system for adhering to existing flat and smooth ceiling and wall surfaces.

1. Surface for Rockfon Mono Acoustic TE Direct panels.

- a. Existing surface to accept Mono Acoustic TE Direct panels to be flat, smooth, dry and free from any material that may deter adhesion. Allowable surfaces include gypsum board, concrete, hardboard, plywood and wood.
- b. New surface to accept Mono Acoustic TE Direct panels to be constructed from gypsum board with finished joints, attached to Rockfon Chicago Metallic drywall ceiling suspension.

2. Rockfon Mono Acoustic TE Direct Panel.

- a. Material; Stone Wool substrate with non-directional facing on front face.
- b. Size; 1200mm x 900mm x 40mm.
- c. Edges; Tapered for Mono Acoustic joint tape and joint compound.
- d. Finish: Field spray applied Mono Acoustic Elegant Render. Color; White.
- e. Noise Reduction Coefficient per ASTM C423; NRC 0.90 on finished system.
- f. Ceiling Attenuation Class per ASTM C1414; CAC 34 based on applying panels to 5/8" gypsum boards.
- g. Articulation Class per ASTM E1111/E1111M; AC 190.
- h. Resistance to mold per ASTM D3273; Rating 10 (no mold growth).
- i. Flame spread and smoke developed Class A per ASTM E1264.
- j. Emissions per UL 2818; achieves ULE Greenguard requirements.
- k. Recycled content 40% minimum.
- l. R Value (BTU Units): 5.3.

3. Rockfon Mono Acoustic TE Direct panel attachment.

- a. Recommended adhesive; Titebond® GREENchoice Acoustical Ceiling Tile Construction Adhesive (www.titebond.com).

4. Rockfon Mono Acoustic finish materials designed for Mono Acoustic panels.

- a. Rockfon Mono Acoustic powder filler, mixed with water on jobsite per manufacturer instructions.
- b. Rockfon Mono Acoustic 40mm wide joint tape.
- c. Rockfon Mono Acoustic Elegant Render white, water-based spray-applied fine texture surface applied per manufacturers installation instructions.

5. Perimeter solutions.

- a. Along walls use joint sealant between wall and edge of Mono Acoustic Direct panel.
- d. Control joints; For existing surfaces, install joints following existing construction. For new construction follow gypsum ceiling guidelines in ASTM C840.

D. Rockfon Mono Acoustic TE Flecto system for undulating surfaces.

1. Surface for Rockfon Mono Acoustic TE Flecto panels.

a. Allowable existing surfaces include steel framing, hardboard, plywood and wood.

2. Rockfon Mono Acoustic TE Flecto Panel.

a. Material; Stone Wool substrate with non-directional facing on front face and high-performance membrane on back side.

b. Size; 1200mm x 900mm x 40mm.

c. Minimum bend radius: 1500mm

d. Edges; Tapered for Mono Acoustic joint tape and joint compound.

e. Finish: Field spray applied Mono Acoustic Elegant Render. Color; White.

f. Noise Reduction Coefficient per ASTM C423; NRC 0.90 finished system.

g. Resistance to mold per ASTM D3273; Rating 10 (no mold growth).

h. Flame spread and smoke developed Class A per ASTM E1264.

i. Emissions per UL 2818; achieves ULE Greenguard requirements.

j. Recycled content 40% minimum.

k. R Value (BTU Units): 5.3.

3. Rockfon Mono® Acoustic Flecto panel attachment.

a. Rockfon Mono® Acoustic Intersection Brackets.

b. Rockfon Mono® Acoustic Fastening Washers.

c. Fasteners; #8 x 2-3/8" (60mm) Self-drilling sheet metal fasteners for drywall suspension.

4. Rockfon Mono® Acoustic finish materials designed for Mono Acoustic panels.

a. Rockfon Mono® Acoustic powder filler, mixed with water on jobsite per manufacturer instructions.

b. Rockfon Mono® Acoustic 40mm wide joint tape.

c. Rockfon Mono® Acoustic Elegant Render white, water-based spray-applied fine texture surface applied per manufacturers installation instructions.

5. Perimeter solutions.

a. Along walls use joint sealant between wall and edge of Mono Acoustic Direct panel.

E. Accessories.

1. Integrate services in a similar fashion as with a typical gypsum panel ceiling, with allowance for 40mm Mono Acoustic panel thickness.

2. Mono Acoustic access and inspection hatches that accommodate field cut and fit Mono Acoustic panels to be sprayed with Mono Acoustic Elegant Render.

- a. Square access and inspection hatch [400 x 400mm] [600 x 600mm].
 - b. Round inspection hatch Ø700mm.
 - c. For other inspection and access hatches; Coordinate with Electrical division to ensure that light fixtures work with 40mm thick Mono Acoustic panels and suspension.
3. Light fixtures; Coordinate with Electrical division to ensure that light fixtures work with 40mm thick Mono Acoustic panels and applicable suspension.
 4. Air diffusers; Coordinate with HVAC division to ensure that air diffusers work with 40mm thick Mono Acoustic panels and applicable suspension. Ensure that there is neutral air pressure between the plenum and the room. Use ducted air-return with Mono Acoustic TE system.
 5. Sprinklers; Coordinate with Electrical division to ensure that sprinkler trim works with 40mm thick Mono Acoustic panels and applicable suspension.
 6. Security cameras; Coordinate with Electrical division to ensure that camera housings and trim work with 40mm thick Mono Acoustic panels and suspension.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine suspension assemblies, with installer present, to ensure that they are square and level within 2mm over 1 meter (5mm over 5 meters) in all directions.
- B. Check that movement joints (if required) are installed to align with the building.
- C. Prior to, during and after installation, ensure proper coordination between trades integrating with the Mono Acoustic system including HVAC, electrical and sprinklers.
- D. For Mono TE system, confirm that the HVAC air-return system through the plenum is a ducted design providing neutral air pressure between the plenum and the room. Plenum air return with negative air pressure in the plenum is not allowed and voids the warranty.
- E. To optimize drying time of Mono Acoustic filler and Elegant Render, temperature should be between 5 – 40°C and relative humidity between 40 – 60%, maximum 80%.
- F. If necessary, protect the floor, walls and any furniture at the jobsite by masking prior to installation of joint filler and spray applied finish.
- G. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Rockfon Mono Acoustic is for interior use only and is to be installed only by Certified Rockfon Mono Acoustic Installers following Rockfon Mono Acoustic installation instructions.
- B. Always follow good safety practices including wearing protective equipment and maintaining safe jobsite conditions.
- C. For Mono Acoustic TE system.
 1. Install 3600mm Chicago Metallic drywall suspension main runners 1200mm on center, supported by [12ga hanger wire] [pencil rod] every 1200mm and within 450mm of perimeters. Install 1200mm Chicago Metallic furring channels 600mm on center to create 1200mm x 600mm framing.

2. Installation of drywall suspension for Mono Acoustic TE is similar to installing for gypsum ceiling panels, with additional critical tolerances for squareness and level within 2mm over 1 meter (5mm over 5 meters) in all directions.
3. Install [Rockfon Chicago Metallic perimeter channels along walls] [and] [Rockfon Infinity D perimeter trim at island or peninsula conditions].
4. Attach Rockfon Mono Acoustic panels to suspension using #8 x 2-3/8" long self-drilling sheet metal fasteners through Mono Acoustic Intersection brackets at panel edges and Mono Acoustic Washers in middle of panel underneath furring channels.
5. Apply Mono Acoustic joint tape and Mono Acoustic joint filler layers in accordance with Mono Acoustic installation instructions to maintain the systems acoustical performance.
6. Apply Mono Acoustic spray applied Elegant Render layers in accordance with Mono Acoustic installation instructions to achieve systems acoustical performance and visual evenness.

C. For Mono Acoustic TE Direct system.

1. Install 1200mm x 900mm Mono Acoustic TE Direct panels to existing flat surfaces in accordance with Mono Acoustic installation instructions using Titebond® GREENchoice Acoustical Ceiling Tile Construction Adhesive (www.titebond.com).
2. Apply Mono Acoustic joint tape and Mono Acoustic joint filler layers in accordance with Mono Acoustic installation instructions to maintain the systems acoustical performance.
3. Apply Mono Acoustic spray applied Elegant Render layers in accordance with Mono Acoustic installation instructions to achieve systems acoustical performance and visual evenness.

D. For Mono Acoustic TE Flecto system.

1. Install Rockfon Mono Acoustic Flecto in accordance with Rockfon Mono Acoustic installation instructions.
2. Install 1200mm x 900mm Rockfon Mono Acoustic Flecto panels to existing framing made from steel, hardboard, plywood or wood with a minimum bend radius of 1500mm.
3. Fit Rockfon Mono Acoustic Flecto panels to framing and attach using fasteners suitable for the framing material and Mono Acoustic Washers.
4. Apply Rockfon Mono Acoustic joint tape and Mono Acoustic joint filler layers in accordance with Mono Acoustic installation instructions to maintain the systems acoustical performance.
5. Apply Rockfon Mono Acoustic spray applied Elegant Render layers in accordance with Mono Acoustic installation instructions to achieve systems acoustical performance and visual evenness.

3.3 REPAIR

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

3.4 CLEANING

A. Dry clean exposed surfaces carefully with vacuum cleaner & soft brush operating at low power.

B. Small areas of dirt can be covered using Mono Acoustic Elegant Render applied using a pencil paint brush. Apply a blocker covering surface discolouration before painting if needed.

C. For large areas requiring repair, contact a trained and certified Mono Acoustic installer.

D. Mono Acoustic must not be cleaned with water or wiped with a wet cloth.

END OF SECTION