

SECTION 09 51 00
CONTOUR® Acoustical Ceiling Panels

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

EDIT NOTE: DELETE THE FOLLOWING PANEL TYPES NOT REQUIRED FOR PROJECT.

1. Patterned lay-in-applied acoustical ceiling panels.
2. Patterned adhesive-applied acoustical ceiling panels.
3. Flat designed lay-in-applied acoustical ceiling panels.
4. Flat designed adhesive-applied acoustical ceiling panels.
5. Custom designed lay-in -applied acoustical ceiling panels.
6. Custom designed adhesive-applied acoustical ceiling panels.

B. Related Sections:

EDIT NOTE: ADD OR DELETE SECTIONS PER PROJECT REQUIREMENTS.

1. Section 09 53 00 – Acoustical Ceiling Suspension Systems.
2. Section 09 51 00 – Acoustical Ceilings.
3. Section 09 21 16 – Gypsum Board Assemblies.
4. Division 21 – Fire Suppression.
5. Division 23 – Mechanical. Diffusers, vents, and other mechanical items.
6. Division 26 – Electrical. Lights and other ceiling mounted electrical items.

1.2 SYSTEM DESCRIPTION

A. Acoustical Performance Requirements:

1. NRC (Noise Reduction Coefficient): Comply with ASTM C423-90a.

1.3 SUBMITTALS

A. Comply with Section 01 33 00 – Submittal Procedures.

B. Product Data: Manufacturer's technical data for each type of panel and baffle including fire-resistive characteristics, finishes, details of installation, and the following:

1. Manufacturer's installation instructions.
2. Certified test reports indicating compliance with Performance Requirements specified herein.

C. Samples: 2 full size sets of Samples of each specified panel for color selection or verification.

D. Closeout Submittals: Comply with Section 01 77 00 – Closeout Procedures.

1. Operating and Maintenance Manual, including cleaning and maintenance instructions.
2. Extra Material for Owner's stock.
3. Material Safety Data Sheets (MSDS).

1.4 QUALITY ASSURANCE

A. Single Source Responsibility: Obtain panel units for entire Project from a single manufacturer.

B. Manufacturer's Qualifications: Firm with not less than Closeout Submittals: Comply with Section 5 years experience in manufacturing of products similar in complexity to those required for this Project.

- C. Installer's Qualifications: Firm with not less than 5 years experience in installation of products similar in complexity to those required for this Project, including specific requirements indicated.
 - 1. Successfully completed not less than 5 comparable scale projects.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Comply with Section 01 60 00 – Product Requirements.
- B. Deliver and store materials in manufacturer's original unopened containers with brands, names, and production lot numbers clearly marked on these containers.
- C. Storage and Protection: Comply with manufacturer's recommendations.
 - 1. Store products in a cool, dry place out of direct sunlight.
 - 2. Protect from elements and from damage.

1.6 PROJECT CONDITIONS

- A. Environmental Requirements within building:
 - 1. Panels do not require special environmental conditions.
 - 2. Systems may be installed at any stage of construction.

1.7 SCHEDULING

- A. Do not install acoustical ceilings until work in plenum space is completed, tested, and approved.

1.8 WARRANTY

- A. Provide manufacturer's written warranty per Section 01 77 00 – Closeout Procedures.

1.9 MAINTENANCE

- A. Extra Materials:
 - 1. Deliver not less than the following quantity of each type, color, and pattern of material, exclusive of material required to properly complete installation.

EDIT NOTE: RETAIN AMOUNT OF EXTRA MATERIALS USED ON PROJECT. DELETE THIS ARTICLE IF NO EXTRA MATERIALS REQUIRED OR ACCEPTABLE.

- a. 3 percent.
- b. 5 percent.
- c. 1 carton.
- 2. Furnish Extra Materials from same production run to verify run for color.
- 3. Package replacement materials with protective covering, identified with appropriate labels.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, provide products from :
 - 1. ArtUSA
2775 Bankers Ind Blvd
Atlanta GA 30366
Telephone: 888-454-6975

Fax: 770-246-7860
Website: www.noisecontrolproducts.com
E-mail: sales@noisecontrolproducts.com

- B. Substitutions: Comply with Section 01 60 00 – Product Requirements.

2.2 MANUFACTURED UNITS

EDIT NOTE: SELECT THE FOLLOWING SYSTEM FOR LAY-IN INSTALLED PANELS.

- A. Acoustical Ceiling Panels: Sag resistant acoustical foam panel consisting of lightweight, open-cell willtec® foam core, with applied Hypalon® finish surface, adhered to 3/8 inch (9.5 mm) foil backed, honeycomb substrate.

willtec foam physical properties

1. Density: 0.5 to 0.7 pounds per cubic foot (0.23 to 0.32 kg per m³).
2. Tensile Strength: 8 psi (0.06 MPa).
3. Flammability: Class 1 per ASTM E84.
4. Flame Spread: 25.
5. Smoke Density: 65.
6. Size: Nominal 24 inch by 24 inch (610 mm by 610 mm).

RETAIN THE FOLLOWING PANEL THICKNESS FOR PATTERNED PANELS AND BASIX 2 PANELS.

7. Panel Thickness: 2-1/8 inches (54 mm) total thickness.

RETAIN THE FOLLOWING PANEL THICKNESS FOR BASIX 1 PANELS.

8. Panel Thickness: 1-3/8 inches (35 mm) total thickness.

EDIT NOTE: SELECT ONE OR MORE OF THE FOLLOWING PATTERNS, FLAT DESIGNS, OR CUSTOM DESIGN. DELETE DESIGNS NOT REQUIRED FOR PROJECT.

9. Patterned Design: Crosspoint.
10. Patterned Design: Allusion.
11. Patterned Design: Mosaic.
12. Patterned Design: Matrix 2.
13. Patterned Design: Vision.
14. Patterned Design: Horizon.
15. Patterned Design: Panorama.
16. Patterned Design: Spectrum.
17. Patterned Design: Classic.
18. Patterned Design: Matrix 4.
19. Patterned Design: Matrix 6.
20. Patterned Design: TriLine Corner.
21. Patterned Design: TriLine.
22. Flat Design: Basix 1.
23. Flat Design: Basix 2.
24. Custom Design: Provide custom CNC routing of patterns, images, and designs as indicated on Drawings.

EDIT NOTE: SELECT PANEL COLOR BELOW. DELETE PANEL COLORS NOT REQUIRED FOR PROJECT. HYPALON USED IN THESE MATERIALS HAS BEEN SPECIALLY FORMULATED BY DUPONT CORPORATION FOR PINTA TO IMPROVE STAIN RESISTANCE AND CLEANABILITY. MINIMUM ORDERS AND LONGER LEAD TIME MAY APPLY FOR CUSTOM COLORS.

25. Finish: Provide panels in the following Hypalon-coated finish:
 - a. Finish: Arctic White.
 - b. Finish: Black Onyx.
 - c. Finish: Grey Mist.
 - d. Finish: Almond
 - e. Finish: Custom color.
26. Ceiling Attenuation Class (CAC) of 34 per ASTM E-1414-97.

27. Sound Absorption Coefficients: Type E mountings (16 inch air space), ASTM C423-90a.

<u>Frequencies (Hz)</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1,000</u>	<u>2,000</u>	<u>4,000</u>	<u>NRC</u>
Basix 1:	0.63	0.54	0.81	1.24	1.30	1.36	0.95
Basix 2:	0.43	0.73	1.18	1.44	1.44	1.54	1.20
Patterns	0.61	0.67	1.01	1.33	1.43	1.56	1.10

28. Acceptable Product: CONTOUR Acoustical Ceiling Panels.

EDIT NOTE: SELECT THE FOLLOWING SYSTEM FOR ADHESIVE APPLIED PANELS.

- B. Acoustical Ceiling Panels: Acoustical foam panel consisting of lightweight, open-cell willtec® foam core, with applied Hypalon® finish surface.

willtec foam physical properties

1. Density: 0.5 to 0.7 pounds per cubic foot (0.23 to 0.32 kg per ^{m3}).
2. Tensile Strength: 8 psi (0.06 MPa).
3. Flammability: Class 1 per ASTM E84.
4. Flame Spread: 25.
5. Smoke Density: 65.
6. Size: Nominal 24 inch by 24 inch (610 mm by 610 mm).

EDIT NOTE: RETAIN THE FOLLOWING PANEL THICKNESS FOR PATTERNED PANELS AND BASIX 2 PANELS.

7. Panel Thickness: 1-3/4 inches (44 mm) total thickness.

EDIT NOTE: RETAIN THE FOLLOWING PANEL THICKNESS FOR BASIX 1 PANELS.

8. Panel Thickness: 1 inch (25 mm) total thickness.

EDIT NOTE: SELECT ONE OR MORE OF THE FOLLOWING PATTERNS, FLAT DESIGNS, OR CUSTOM DESIGN. DELETE DESIGNS NOT REQUIRED FOR PROJECT.

9. Patterned Design: Crosspoint.
10. Patterned Design: Allusion.
11. Patterned Design: Mosaic.
12. Patterned Design: Matrix 2.
13. Patterned Design: Vision.
14. Patterned Design: Horizon.
15. Patterned Design: Panorama.
16. Patterned Design: Spectrum.
17. Patterned Design: Classic.
18. Patterned Design: Matrix 4.
19. Patterned Design: Matrix 6.
20. Patterned Design: TriLine Corner.
21. Patterned Design: TriLine.
22. Flat Design: Basix 1.
23. Flat Design: Basix 2.
24. Custom Design: Provide custom CNC routing of patterns, images, and designs as indicated on Drawings.

EDIT NOTE: SELECT PANEL COLOR BELOW. DELETE PANEL COLORS NOT REQUIRED FOR PROJECT. HYPALON USED IN THESE MATERIALS HAS BEEN SPECIALLY FORMULATED BY DUPONT CORPORATION FOR PINTA TO IMPROVE STAIN RESISTANCE AND CLEANABILITY. MINIMUM ORDERS AND LONGER LEAD TIME MAY APPLY FOR CUSTOM COLORS.

- 25. Finish: Provide panels in the following Hypalon-coated finish:
 - a. Finish: Arctic White.
 - b. Finish: Black Onyx.
 - c. Finish: Grey Mist.
 - d. Finish: Almond
 - e. Finish: Custom color.
- 26. Ceiling Attenuation Class (CAC) of 34 per ASTM E-1414-97.
- 27. Sound Absorption Coefficients: Type A mountings, ASTM C423-90a.

<u>Frequencies (Hz)</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1,000</u>	<u>2,000</u>	<u>4,000</u>	<u>NRC</u>
Basix 1:	0.12	0.24	0.59	0.89	0.96	0.99	0.65
Basix 2:	0.21	0.48	0.93	1.09	1.09	1.04	0.90
Patterns:	0.16	0.28	0.71	0.96	1.00	0.99	0.75

- 28. Acceptable Product: CONTOUR Acoustical Ceiling Panels.

2.3 SUSPENSION SYSTEM

- A. Suspension System: Refer to Section 09 53 00 – Acoustical Ceiling Suspension Assemblies for acoustical panel support system.

EDIT NOTE: RETAIN PARAGRAPH ABOVE OR BELOW. USE ANY 15/16 INCH OR 9/16 INCH GRID. 15/16 INCH GRID IS RECOMMENDED BY PANEL MANUFACTURER.

- B. Suspension System: [Architect to insert acoustical tile ceiling system suspension system specifications here.]

EDIT NOTE: RETAIN THE FOLLOWING ACCESSORIES ARTICLE WHEN INSTALLING PANELS WITH ADHESIVE. DELETE THIS ARTICLE FOR LAY-IN PANEL APPLICATIONS.

2.4 ACCESSORIES

- A. Adhesive: Non-toxic, water-based adhesive, for use with foam products.
 - 1. ArtUSA adhesive or approved substitute.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper and or timely completion.
 - 1. Do not proceed until unsatisfactory conditions have been corrected.

EDIT NOTE: USE THE FOLLOWING PREPARATION ARTICLE FOR ADHESIVE APPLIED INSTALLATIONS ONLY.

3.2 PREPARATION

- A. Prior to installing ceiling panels, make certain that surfaces to which adhesive will be applied are clean and free of dust, dirt, and other residues that would inhibit a proper bond.

3.3 INSTALLATION

- A. Comply with manufacturer's instructions and recommendations for installation of acoustical panels:
 - 1. Coordinate with mechanical and electrical in locating and spacing fixtures, diffusers, and similar items located in ceiling.
 - 2. Lay out pattern per reflected ceiling drawings. Where not otherwise indicated, lay out in such manner that margins on opposite sides of rooms are equal or greater than 1/2 tile in width.
 - 3. Where acoustical ceilings of different heights abut, install acoustical material matching ceiling at vertical surface at ceiling break match ceiling, unless otherwise indicated.
- B. Suspension system: Refer to Section 09 53 00 – Acoustical Ceiling Suspension Assemblies for installation requirements.

OR

- C. Suspension System: [Architect to insert acoustical tile ceiling system suspension system installation requirements here.]
- D. Acoustical Panels:
 - 1. Refer to manufacturer's written installation instructions.

EDIT NOTE: USE THE FOLLOWING THREE PARAGRAPHS FOR ADHESIVE APPLIED INSTALLATION.

- 2. Cut adhesive tube end to produce a 1/4 inch (6.4 mm) bead.
- 3. Apply adhesive to panels per manufacturer's recommended pattern and press panel firmly into place per manufacturer's installation requirements.
- 4. Install panels true to lines and plane indicated.

EDIT NOTE: USE THE FOLLOWING PARAGRAPH FOR LAY-IN APPLIED INSTALLATION.

- 5. Install lay-in acoustical ceiling panels flush and level in suspension system.
- 6. Basix panels (non-patterned panels): Use straight edge to cut panels to fit.
 - a. Sculpted Panels: Manufacturer recommends use of Basix style where non-full sized panels occur.

EDIT NOTE: CUTTING OF SCULPTED PANELS MAY BE DONE, HOWEVER STRAIGHT CUT PANELS AT WALL IS RECOMMENDED. BECAUSE OF THE FINISH SURFACE, DO NOT ATTEMPT TO BEVEL CUT SCULPTED PANELS. CONSULT MANUFACTURER FOR SPECIFIC CUTTING INSTRUCTIONS.

- 7. Install panels with hand protection to avoid soiling.
- 8. Install panels having directional pattern or to conform to custom design.
- 9. Press panels from above to set into grids. Do not pull from face.

3.4 CLEANING

- A. Clean adjacent surfaces and remove unused product and debris from site.
- B. After installation is completed, clean soiled surfaces of materials.
- C. Remove and reinstall improperly installed material.
- D. Remove damaged or discolored material, or material that cannot be properly cleaned, and install new material.

END OF SECTION

Hypalon® is a product of Dupont Corporation.