

SECTION 094800

WHISPERWAVE Sound Absorptive Panels

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

EDIT NOTE: RETAIN PRODUCTS BELOW AS REQUIRED FOR PROJECT AND DELETE PRODUCTS NOT REQUIRED.

1. Smooth, curved, sound-absorptive wall panels.
2. Smooth, curved, sound-absorptive baffles.
3. Smooth, curved, sound-absorptive ceiling clouds.
4. Smooth, curved, sound-absorptive awnings.

1.2 SUBMITTALS

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

Manufacturer's installation instructions.

Certified test reports indicating compliance with Performance Requirements specified herein.

B. Samples: 2 full size sets of Samples of the following specified units for color selection or verification.

EDIT NOTE: RETAIN PRODUCTS BELOW AS REQUIRED FOR PROJECT AND DELETE PRODUCTS NOT REQUIRED.

1. Panels.
2. Baffles.
3. Ceiling clouds.
4. Awnings.

C. Closeout Submittals:

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

1.3 QUALITY ASSURANCE

A. Single Source Responsibility: Obtain 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.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store materials in manufacturer's original unopened containers with brands, names, and production lot numbers clearly marked on these containers.

B. 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.

1.5 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.
 3. Systems may be installed in cool storage rooms and rooms with high humidity

1.6 WARRANTY

- A. Provide manufacturer's written warranty per Section 017700 – Closeout Procedures.

1.7 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 OF 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 the following manufacturer:
 1. pinta acoustic, inc.
2601 49th Avenue North, Suite 400
Minneapolis, Minnesota 55430
Telephone: 800-662-0032
612-355-4250
Fax: 612-355-4255
Website: www.pinta-acoustic.com
E-mail: sales@pinta-acoustic.com
 2. Approved substitution.

2.2 MANUFACTURED UNITS

EDIT NOTE: FOR EACH PROJECT, SELECT THE DESIRED PANEL, BAFFLE, CEILING CLOUD, OR AWNING, ALONG WITH THE REQUIRED THICKNESS, FINISH, AND IF APPLICABLE, THE EDGE.

- A. WHISPERWAVE® Panel: Lightweight, open-cell willtec® foam panel complying with the following requirements:
 1. Density: 0.5 to 0.7 pounds per cubic foot (0.23 to 0.32 kg per m³) per ASTM D3574-77.
 2. Tensile Strength: 8 psi (0.06 MPa).
 3. Microbial Growth: Passes UL 181, Section 11.
 4. Fungus Resistance: 0 per ASTM G21.
 5. Flammability: Class 1 per ASTM E84.
 6. Flame Spread: Per ASTM E84.

- a. Natural: 5.
- b. HPC: 15.
- 7. Smoke Density: Per ASTM E84.
 - a. Natural: 50.
 - b. HPC: 200.
- 8. Panel Size: 24 inch by 48 inch (610 mm by 1219 mm).
- 9. Panel Thickness: 2 inches (51 mm).

EDIT NOTE: SELECT PANEL THICKNESS ABOVE OR BELOW. DELETE THICKNESS NOT REQUIRED FOR PROJECT.

- 10. Panel Thickness: 2.5 inches (63.5 mm).

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 TO IMPROVE STAIN RESISTANCE AND CLEANABILITY.

- 11. Finish: Natural White.
- 12. Finish: Natural Grey.
- 13. Finish: Applied Black HPC coating.
- 14. Finish: Applied White HPC coating.
- 15. Finish: Applied Light Grey HPC coating.
- 16. Finish: Applied Medium Grey HPC coating.
- 17. Finish: Applied Light Blue HPC coating.
- 18. Finish: Applied Ivory HPC coating.
- 19. Finish: Applied Almond HPC coating.
- 20. Finish: Applied custom color HPC coating.
- 21. Sound Absorption Coefficients: ASTM C423-90a.

| Frequencies (Hz) | 125 | 250 | 500 | 1,000 | 2,000 | 4,000 | Average | Mounting |
|-------------------------|------|------|------|-------|-------|-------|---------|----------|
| 2 inch (51 mm) Natural: | 0.11 | 0.33 | 0.85 | 1.05 | 1.09 | 1.06 | 0.85 | B |
| 2 inch (51 mm) Painted: | 0.07 | 0.37 | 0.89 | 1.05 | 1.04 | 1.03 | 0.85 | B |
| 2 inch (51 mm) Hypalon: | 0.13 | 0.41 | 1.02 | 1.18 | 1.18 | 1.13 | 0.95 | B |
| 3 inch (76 mm) Natural: | 0.09 | 0.68 | 1.20 | 1.18 | 1.12 | 1.05 | 1.05 | A |
| 3 inch (76 mm) Painted: | 0.15 | 0.72 | 1.21 | 1.20 | 1.15 | 1.13 | 1.05 | A |
| 3 inch (76 mm) Hypalon: | 0.13 | 0.85 | 1.25 | 1.22 | 1.13 | 1.14 | 1.10 | A |

- B. WHISPERWAVE® Baffle. Lightweight, open-cell willtec® foam panel complying with the following requirements:

- 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: Per ASTM E84.
 - a. Natural: 5.
- 5. Smoke Density: Per ASTM E84.
 - a. Natural: 50.
- 6. Baffle Size: 24 inch by 48 inch (610 mm by 1219 mm).
- 7. Baffle Thickness: 2 inches (51 mm).

EDIT NOTE: SELECT PANEL COLOR BELOW. DELETE PANEL COLORS NOT REQUIRED FOR PROJECT.

- 8. Finish: Natural White.
- 9. Finish: Natural Grey.
- 10. Finish: Applied Black HPC coating.
- 11. Finish: Applied White HPC coating.
- 12. Finish: Applied Light Grey HPC coating.
- 13. Finish: Applied Medium Grey HPC coating.

14. Finish: Applied Light Blue HPC coating.
15. Finish: Applied Ivory HPC coating.
16. Finish: Applied Almond HPC coating.
17. Finish: Applied custom color HPC coating.
18. Sabins per baffle: 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>Average</u> |
|-------------------------|------------|------------|------------|--------------|--------------|--------------|----------------|
| Natural: | 1.0 | 5.4 | 10.8 | 16.3 | 18.7 | 24.0 | 12.7 |

EDIT NOTE: RETAIN OPTION OR OPTIONS BELOW AS REQUIRED FOR PROJECT AND DELETE OPTIONS NOT REQUIRED.

- C. **WHISPERWAVE® [Ceiling Cloud] [and] [Awning]**. Lightweight, open-cell willtec® foam panel complying with the following requirements:
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: 5, per ASTM E84.
 5. Smoke Density: 50, per ASTM E84.
 6. Baffle Size: 48 inch by 96 inch (1219 mm by 2438 mm).
 7. Baffle Thickness: 2-1/2 inches (64 mm).

EDIT NOTE: SELECT PANEL COLOR BELOW. DELETE PANEL COLOR NOT REQUIRED FOR PROJECT.

8. Finish: Natural White.
9. Finish: Natural Grey.
10. Sabins per baffle: 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>Average</u> |
|-------------------------|------------|------------|------------|--------------|--------------|--------------|----------------|
| Natural: | 1.0 | 5.4 | 10.8 | 16.3 | 18.7 | 24.0 | 12.7 |

2.3 ACCESSORIES

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

EDIT NOTE: SELECT ADHESIVE ABOVE FOR USE WITH PANELS. SELECT CHAIN BELOW FOR USE WITH BAFFLES.

- B. Lightweight chain or 1/16 inch (1.6 mm) steel cable.
1. Use steel cable for wall-to-wall installations with corkscrew hangers.

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 acoustical 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 units.

EDIT NOTE: USE THE FOLLOWING PARAGRAPH AND SUBPARAGRAPHS FOR ADHESIVE APPLIED INSTALLATIONS ONLY.

B. Acoustical Panels:

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

EDIT NOTE: USE THE FOLLOWING PARAGRAPH AND SUBPARAGRAPHS FOR CHAIN APPLIED INSTALLATIONS ONLY.

C. Acoustical Baffles: Do not fasten anchors of any type to steel deck without written approval from structural engineer of record.

1. Install mounting cable or chain by attaching to bottom chord of trusses or joists.
2. Attach bottom end of cable or chain directly to baffle's integral web strapping or grommets directly or with "S" type hooks.
3. Install baffle in configuration and elevations indicated, true to lines and plane indicated.
 - a. Do not install baffles more than 10 feet (3 m) below ceiling or roof structure from which it is hanging. This may cause excessive swaying of baffles by air movement.

EDIT NOTE: IF HANGING BAFFLES ON A WALL-TO-WALL CABLE SYSTEM, USE ONLY CORKSCREW HANGERS.

- D. Cable installation with corkscrew hangers: Follow manufacturer's installation instructions.

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

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