

## SECTION 09 80 00 (098000) – Acoustical Treatment

This Section is based on Acoustical Solutions AlphaSorb® Pyramid Acoustic Foam Panels.

### PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section includes:

1. AlphaSorb® Pyramid Acoustic Foam Panels

B. Furnish and install all sound-absorptive AlphaSorb® Pyramid Acoustic Foam Panels and any associated installation accessories as shown on the drawings, and specified herein, or as required to complete the work.

C. Related Documents: This section applies to drawings and general provisions of the subcontract. Review these documents for coordination with additional requirements and information that apply to work under this Section. Cross-reference approved supplementary manufacturers' sound-absorptive AlphaSorb® Pyramid Acoustic Foam Panels and required installation accessories including, but not limited to construction-grade adhesive, as applicable.

#### 1.2 REFERENCES

##### A. American Society for Testing and Materials (ASTM) International:

1. ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.

2. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.

3. ASTM E795 Standard Practices for Mounting Test Specimens During Sound Absorption Tests.

#### 1.3 SYSTEM DESCRIPTION

##### A. Performance Requirements

1. Provide sound-absorptive AlphaSorb® Pyramid Acoustic Foam Panel system designed and tested to provide a Class A flame spread rating when tested in accordance with ASTM E84, unless otherwise specified.

a. Flamespread: 25 maximum.

b. Smoke Developed: 50 maximum.

2. Provide sound-absorptive AlphaSorb® Pyramid Acoustic Foam Panel system which has been manufactured, fabricated and installed to provide Noise Reduction Coefficient (NRC) rating in accordance with ASTM C423-09a:

a. Acoustical Solutions AlphaSorb® Pyramid Acoustic Foam Panel. NRC (Noise Reduction Coefficient): Comply with ASTM C423-90a for A-mount/direct-applied. NRC ratings vary with thickness.

#### 1.4 SUBMITTALS



- A. Product Data: Manufacturer's technical data for AlphaSorb® Pyramid Acoustic Foam Panels including fire-resistive characteristics, finishes, details of installation, and the following:
  - 2. Manufacturer's installation instructions.
  - 3. Certified test reports indicating compliance with Performance Requirements specified herein.
- B. Samples: One (1) 12 inch by 12 inch (305mm x 305mm) sample of desired thickness of the following specified units for color selection or verification.
- C. Shop Drawings: Layout and details of AlphaSorb® Pyramid Acoustic Foam Panels. Show locations of Panels which are to be coordinated with, or supported by the structural ceiling and walls.
- D. Closeout Submittals:
  - 1. Operating and Maintenance Manual, including cleaning and maintenance instructions.
  - 2. Extra Material for Owner's stock.
  - 3. Safety Data Sheets (SDS).

### 1.5 QUALITY ASSURANCE

- E. Single-Source Responsibility: Acoustical Solutions to provide AlphaSorb® Pyramid Acoustic Foam Panels (only).
- F. Installer Qualifications: Acceptable to the manufacturer of the AlphaSorb® Pyramid Acoustic Foam Panels being installed. Utilize an installer having demonstrated 5 years minimum experience on projects of similar size and acoustical complexity.
- G. Mock-Up: Provide a mock-up for evaluation of installed appearance.
  - 1. Install Pyramid Panels in areas designated by proper authority.
  - 2. Do not proceed with remaining work until proper authority approves workmanship and appearance.
  - 3. Approved mock-up may remain as part of the work.
- H. Surface Burning Characteristics
  - 1. Tested in accordance to ASTM E84
  - 2. Fire Class A
    - a. Flame Spread Index <25
    - b. Smoke Developed Index <50

### 1.6 Delivery, Storage, and Handling

- I. Delivery: Deliver material in the manufacturer's original, unopened, undamaged containers with identification labels intact.
- J. Provide labels indicating Acoustical Solutions brand name, style, size and thickness.
- K. Storage and Protection: Comply with manufacturer's recommendations. Store Panels indoors and protected



from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

## 1.7 Project Conditions

### L. Environmental Limitations

1. Install AlphaSorb® Pyramid Acoustic Foam Panels only in conditions that are within the manufacturer's published limits for temperature and humidity.
2. Areas receiving AlphaSorb® Pyramid Acoustic Foam Panels should be free of construction debris and dust.
3. Mechanical, sprinkler and electrical trades shall have completed their work above the ceiling structure and within structural walls prior to commencement of product installation.

## 1.8 Maintenance

M. Extra Materials: Provide a minimum of 3% additional materials if required for use by owner or the building maintenance and repair.

N. Provide new unopened cartons of extra materials, packaged with protective covering for storage and identified with appropriate labels.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURER

### 2.2 MANUFACTURER

#### O. ACOUSTICAL SOLUTIONS

Acoustical Solution 2420 Grenoble Road, Richmond, VA 23294 | PH: 800-782-5742 | [AcousticalSolutions.com](http://AcousticalSolutions.com)

### 2.3 MATERIALS

P. Acoustical Solutions AlphaSorb® Pyramid Acoustic Foam Panels are manufactured from 100% open-cell melamine foam with the following characteristics:

1. Fire Resistance: ASTM E84, Class A
2. Acoustical Solutions White AlphaSorb® Pyramid Acoustic Foam Panels
  - a. NRC: 0.70 per ASTM C423 Type A mounting at 2 inches thick
  - b. NRC: 0.85 per ASTM C423 Type A mounting at 3 inches thick
  - c. NRC: 1.00 per ASTM C423 Type A mounting at 4 inches thick
3. Acoustical Solutions Light Grey AlphaSorb® Pyramid Acoustic Foam Panels
  - a. NRC: 0.70 per ASTM C423 Type A mounting at 2 inches thick
  - b. NRC: 0.85 per ASTM C423 Type A mounting at 3 inches thick
  - c. NRC: 1.00 per ASTM C423 Type A mounting at 4 inches thick



| Sound Absorption Coefficient [Sabins / ft <sup>2</sup> ] |                |        |        |        |         |         |         |      |      |               |
|--|----------------|--------|--------|--------|---------|---------|---------|------|------|---------------|
| Finish   | Thickness [in] | 125 Hz | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz | SAA  | NRC  | Mounting Type |
| White  | 2.00           | 0.05   | 0.19   | 0.66   | 0.90    | 1.01    | 1.08    | 0.69 | 0.70 | A             |
|  | 3.00           | 0.12   | 0.37   | 0.90   | 1.05    | 1.12    | 1.16    | 0.86 | 0.85 | A             |
|  | 4.00           | 0.24   | 0.50   | 1.06   | 1.15    | 1.21    | 1.19    | 0.98 | 1.00 | A             |
| Light Grey   | 2.00           | 0.08   | 0.22   | 0.68   | 0.88    | 1.00    | 1.05    | 0.70 | 0.70 | A             |
|  | 3.00           | 0.15   | 0.36   | 0.91   | 1.05    | 1.12    | 1.15    | 0.85 | 0.85 | A             |
|  | 4.00           | 0.24   | 0.52   | 1.07   | 1.19    | 1.22    | 1.20    | 0.99 | 1.00 | A             |

*Absorption results tested in accordance to ASTM C 423-09a*

4. Foam Density: Light Grey 0.56 lbs./ft<sup>3</sup> +/- 0.09 lbs./ft<sup>3</sup>  
White 0.47lbs./ft<sup>3</sup> +/- 0.13lbs./ft<sup>3</sup>
5. Service Temperature: -40 ° F to 350 ° F
6. Size: Nominal: 24 inches x 24 inches (584mm x 584mm), 24 inches by 48 inches (610mm x 1220mm) or 48 inches by 48 inches (1220mm x 1220mm). Custom sizes available.
7. Sheet Thickness: Nominal 2 inches (51 mm), 3 inches (76mm) or 4 inches (102mm). Other thicknesses available upon request.
8. Edges: Square
9. Manufacturers Standard Textiles/Colors: Available upon request.
10. Mounting: approved construction adhesive

Q. Product Substitutions: Not permitted.

## 2.4 Accessories

### A. Pyramid Panels

1. Instant grab, high strength construction adhesive such as Power Grab by Loctite.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine Pyramid Panel installation, with installer present, for compliance with requirements specified in this and other applicable Sections affecting product installation and with requirements for installation tolerances and other conditions affecting performance of the selected Acoustical Solutions product.

### 3.2 INSTALLATION

- A. Do not begin installation until materials sufficient to complete an entire room are received and prepared for installation.
- B. Symmetrically locate product layout, as desired, in each space. Coordinate work with other trades so that lighting fixtures, HVAC and other ceiling and/or wall mounted fixtures work with the Pyramid Panel layout.



- C. Install materials in accordance with manufacturer's printed instructions and to comply with governing regulations, fire resistance rating requirements as indicated and industry standards applicable to the work.
- D. Take care not to damage or mark the product; wear clean cotton or canvas gloves and avoid the use of latex gloves.

### 3.2 CLEANING

- A. Clean exposed surfaces of acoustical product and any installation accessories to comply with manufacturer's instructions for cleaning.
- B. Touch up any minor finish damage.
- C. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

### 3.3 PROTECTION

- A. Protect installed products until completion of project.

END OF SECTION

