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USACE / NAVFAC / AFCEC / NASA UFGS-09 83 13 (August 2010)  
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Preparing Activity: USACE Superseding  
UFGS-09 83 13 (May 2009)

## UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated July 2014

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### SECTION 09 83 13

#### ACOUSTICAL WALL TREATMENT 08/10

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NOTE: This guide specification covers the requirements for fabric covered acoustical wall panel systems.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable items(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).

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## PART 1 GENERAL

### 1.1 REFERENCES

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NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a RID outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically  
be deleted from this section of the project  
specification when you choose to reconcile  
references in the publish print process.

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The publications listed below form a part of this specification to the  
extent referenced. The publications are referred to within the text by the  
basic designation only.

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

AATCC 16 (2004; E 2008; E 2010) Colorfastness to  
Light

ASTM INTERNATIONAL (ASTM)

ASTM C423 (2009a) Sound Absorption and Sound  
Absorption Coefficients by the  
Reverberation Room Method

ASTM D5034 (2009; R 2013) Breaking Strength and  
Elongation of Textile Fabrics (Grab Test)

ASTM E84 (2014) Standard Test Method for Surface  
Burning Characteristics of Building  
Materials

INTERNATIONAL CODE COUNCIL (ICC)

ICC IBC (2012) International Building Code

SCIENTIFIC CERTIFICATION SYSTEMS (SCS)

SCS Scientific Certification Systems  
(SCS) Indoor Advantage

U.S. GREEN BUILDING COUNCIL (USGBC)

LEED NC (2009) Leadership in Energy and  
Environmental Design(tm) New Construction  
Rating System

UL ENVIRONMENT (ULE)

ULE Greenguard UL Greenguard Certification Program

1.2 SUSTAINABILITY REQUIREMENTS

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NOTE: The bracketed items are representative of  
LEED material documentation and requirements that  
may apply to this project. These items should be  
edited to reflect the project requirements.

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Materials in this technical specification may contribute towards contract  
compliance with sustainability requirements.

### 1.2.1 LEED REQUIREMENTS

See Section 01 33 29 LEED DOCUMENTATION for project LEED NC [local/regional materials,] [low-emitting materials,] [recycled content,] [certified wood,] [ \_\_\_\_ ] [ and ] [rapidly renewable materials] requirements.

### 1.2.2 EPA Comprehensive Procurement Guidelines

See Section 01 62 35 RECYCLED/RECOVERED/BIOBASED MATERIALS for requirements associated with EPA designated products.

### 1.2.3 USDA Biobased

See Section 01 62 35 RECYCLED/RECOVERED/BIOBASED MATERIALS for requirements associated with USDA Biobased designated products.

### 1.2.4 Air Quality Certification

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NOTE: Products meeting the Gold standard will also meet the basic standard. Require Gold when the facility will be used by people sensitive to air quality conditions, such as child development centers and medical facilities.  
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Product shall be third party certified in accordance with ULE Greenguard[ Gold], SCS Scientific Certification Systems Indoor Advantage[ Gold ]or equal. Certification shall be performed annually and shall be current.

### 1.3 SUBMITTALS

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NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list to reflect only the submittals required for the project.

The Guide Specification technical editors have designated those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item, if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy,

Air Force, and NASA projects.

Choose the first bracketed item for Navy, Air Force  
and NASA projects, or choose the second bracketed  
item for Army projects.

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Government approval is required for submittals with a "G" designation;  
submittals not having a "G" designation are for [Contractor Quality Control  
approval.] [information only. When used, a designation following the "G"  
designation identifies the office that will review the submittal for the  
Government.] Submit the following in accordance with Section 01 33 00  
SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Approved Detail Drawings[; G][; G, [\_\_\_\_]]

SD-03 Product Data

Installation  
Acoustical Wall Panels[; G][; G, [\_\_\_\_]]

SD-04 Samples

Acoustical Wall Panels[; G][; G, [\_\_\_\_]]

SD-07 Certificates

Acoustical Wall Panels

SD-11 Closeout Submittals

LEED Documentation

#### 1.4 DELIVERY, STORAGE, AND HANDLING

Protect materials delivered and placed in storage from the weather,  
humidity and temperature variations, dirt, dust, or other contaminants.

#### 1.5 WARRANTY

Provide manufacturer's standard performance guarantees or warranties that  
extend beyond a one year period.

### PART 2 PRODUCTS

#### 2.1 FABRIC COVERED ACOUSTICAL WALL PANELS

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NOTE: Drawings must show locations and dimensions  
of acoustical panels, details of joints, base, head,  
and mounting details.

The same or similar acoustical benefits can possibly  
be obtained by other means such as wall covering,  
etc.

Omit the following items that do not meet project

## **requirements.**

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Provide acoustical wall panels consisting of prefinished, factory assembled, seamless fabric covered, fiber glass or mineral fiber core system as described below manufactured to the dimensions and configurations shown on the approved detail drawings; submit drawings showing plan locations, elevations and details of method of anchorage, location of doors and other openings, base detail and shape and thickness of materials. Perimeter edges shall be [non-reinforced.] [reinforced by either an aluminum frame or a formulated resin edge hardener.] Acoustical wall panels installed in non-sprinklered areas shall comply with the requirements of ICC IBC, Standard 42-2. Comply with EPA requirements in accordance with Section 01 62 35 RECYCLED/RECOVERED/BIOBASED MATERIALS. Submit manufacturer's descriptive data and catalog cuts; fabric and vinyl swatches, minimum 450 mm 18 inches wide by 600 mm 24 inches long [3] [\_\_\_\_\_] samples of each color range specified; and certificates of compliance from an independent laboratory accredited by the National Laboratory Accreditation Program of the National Institute of Standards. A label or listing from the testing laboratory will be acceptable evidence of compliance. Wall panels shall conform to the following:

### **2.1.1 Panel Width**

[Widths shall be [600] [750] [1200] [1500] mm [24] [30] [48] [60] inches]  
[End panels may vary in width as necessary to cover wall] [Panel width shall be as detailed.]

### **2.1.2 Panel Height**

[Heights shall be [2400] [2700] [3000] mm [96] [108] [120] inches.]  
[[Panels shall be field measured for custom fit to ceiling.] [Tolerance at floor to be as detailed].] [Panel height shall be as detailed.]

### **2.1.3 Thickness**

[Panel thickness as required to meet the indicated NRC range] [\_\_\_\_\_] .

### **2.1.4 Fabric Covering**

Seamless [non-woven, embossed texture, needle punched 100 percent polyester, minimum 0.034 kg/linear meter 11 ounces/linear yard. Tear strength a minimum 110 N 25 pounds machine direction and minimum 178 N 40 pounds cross-machine direction. Tensile strength a minimum 220 N 50 pounds machine direction and minimum 330 N 75 pounds cross-machine direction in accordance with ASTM D5034.] [plain woven 2-ply 100 percent polyester, minimum 0.47 kg/linear meter 15 ounces/linear yard. Tear strength a minimum 129 N 29 pounds. Tensile strength 667 N 150 pounds minimum in accordance with ASTM D5034.] [perforated vinyl covering with fabric backing, minimum 0.62 kg/linear meter 20 ounces/linear yard total weight.] Stretch fabric covering free of wrinkles and then bond to the edges and back or bond directly to the panel face, edges, and back of panel a minimum distance standard with the manufacturer. Light fastness (fadeometer) approximately 40 hours in accordance with AATCC 16.

### **2.1.5 Fire Rating for the Complete Composite System**

Class A, 200 or less smoke density and flame spread less than 25, when tested in accordance with ASTM E84.

#### 2.1.6 Substrate

Fiber glass or mineral fiber

#### 2.1.7 Noise Reduction Coefficient (NRC) Range

[0.50-0.60] [0.80-0.90] [\_\_\_\_\_] ASTM C423

#### 2.1.8 Edge Detail

[Half bevel] [Bevel] [Radius] [Square] [Mitered] [\_\_\_\_\_] edge

#### 2.1.9 Core Type

[Standard acoustical] [High impact acoustical] [Acoustical/tackable]  
[\_\_\_\_\_] core

#### 2.1.10 Mounting

Acoustical panels shall be mounted by manufacturer's standard [concealed spline] [mechanical fasteners] [magnetic fasteners] [hook and loop] [adhesive mounting] [\_\_\_\_\_].

### 2.2 COLOR

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NOTE: Editing of color reference sentence(s) must be coordinated with the Government. Generally Section 09 06 90 COLOR SCHEDULE or drawing is used when the project is designed by an Architect or Interior designer. Select color from manufacturers standard colors or identified as a manufacturers color in this specification only when the project is very simple and has minimal finishes.

When the Government directs that color be located in the drawings add a note that states: "Where color is shown as being specific to one manufacturer, an equivalent color by another manufacturer may be submitted for approval. Manufacturers and materials specified are not intended to limit the selection of equal colors from other manufacturers. The word "color" as used herein includes surface color and pattern."

Prior to specifying a custom color finish, research to determine if additional cost and lead time is feasible. Note there is often a minimum order requirement; this requirement will also affect future orders.

When a manufacturer's name, stock number, pattern, and color is used, be certain that the product conforms to this specification, as edited.

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[In accordance with Section 09 06 90 COLOR SCHEDULE] [As indicated]  
[Selected from manufacturers standard colors] [[\_\_\_\_\_]. Color listed is not intended to limit the selection of equal colors from other manufacturers.]

## PART 3 EXECUTION

### 3.1 SURFACE CONDITIONS

Walls shall be clean, smooth, oil free and prepared in accordance with panel manufacturer's instructions. Do not begin installation until all wet work, such as, plastering, painting, and concrete are completely dry.

### 3.2 INSTALLATION

Panel installation shall be by personnel familiar with and normally engaged in installation of acoustical wall panels. Apply panels in accordance with the manufacturer's installation instructions. Submit manufacturer's installation instructions and recommended cleaning instructions.

### 3.3 CLEANING

Following installation, dirty or stained panel surfaces shall be cleaned in accordance with manufacturer's instructions and left free from defects. Panels that are damaged, discolored, or improperly installed shall be removed and new panels provided as directed.

-- End of Section --