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| Version | Date | Description of Revisions |
| 1 | August 30, 2006 | Approved final document. |
| 2 | November 13, 2009 | Modified ‘Related Section’ |
| 3 | June 25, 2012 | Addition of References and Replacement Parts section on this page |
| 4 | July 9, 2012 | Reformatted to Reduce White Space |
| 5 | April 23, 2015 | General formatting |
| 6 | September 30, 2015 | First draft Phase 1 review (AV) |
| **7** | **December 14, 2015** | **Updated, Finalized Specification – Legal Reference eDOCS #6324302 v3 (AV)** |
| 8 | January 30, 2017 | Removed all named products and replaced them with performance specifications and standards. (CPD)  Updated Reference Standard ASTM C423-17 (AAM) |

NOTE:

This is a CONTROLLED Document. Any documents appearing in paper form are not controlled and should be checked against the on-line file version prior to use.

**Notice:** This Document hardcopy must be used for reference purpose only.

**The on-line copy is the current version of the document.**

# GEneral

## Related Sections

### *[Under "Related Sections", identify other Sections that are related to, and/or dependent on, the work results or information specified elsewhere. The list should be limited to Sections with specific information that the reader might expect to find in this Section, but is specified elsewhere. For example, if hardware for aluminum entrances is specified in the aluminum entrance Section, a cross-reference would be appropriate in the finish hardware Section. The purpose of this cross-referencing is for information only, to aid in finding those other requirements—not to define the scope of the Section.*

### *Cross-referencing here may also be used to coordinate assemblies or systems whose components may span multiple Sections and which must meet certain performance requirements as an assembly or system.*

### *Contractor is responsible for coordination of the Work.*

### *This Section is to be completed/updated during the design development by the Consultant. If it is not applicable to the section for the specific project it may be deleted.]*

### *[List Sections specifying installation of products supplied but not installed under this Section and indicate specific items.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Execution requirements for ...[item]... specified under this Section.

### *[List Sections specifying products installed but not supplied under this Section and indicate specific items.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Product requirements for ...[item]... for installation under this Section.

### *[List Sections specifying related requirements.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: [Optional short phrase indicating relationship].

## References

*[Delete .1 if Section 01060 – Regulatory Requirements is included in Contract Documents.]*

### Comply with the latest edition of the following statutes, codes, standards, and all amendments thereto:

#### American Society for Testing & Materials (ASTM)

##### ASTM C423-17, Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.

##### ASTM E84-16, Standard Test Method for Surface Burning Characteristics of Building Materials.

##### ASTM E795-16, Standard Practices for Mounting Test Specimens during Sound Absorption Tests.

#### General Services Administration (GSA) US [Consultant to determine if there is a Canadian equivalent]

##### GSA: A-A-1922A (Formerly GSA: FF-S-325 Group II, Type 3, Class 3)

## Submittals

### Shop drawings: Submit shop drawings indicating panel layout and locations of fastenings.

### Manufacturer's instructions: Submit manufacturer's printed instructions for panel installation and maintenance.

### Submit coordination drawings for ceiling supports.

## Measurement and Payment

*[Choose one of the following payment language provisions that best suits the individual project.*

*If this Section is not specifically referenced by an item in the Bid Form, please use the following language:*

### The work of this Section will not be measured separately for payment. All costs associated with the work of this Section shall be included in the Contract Price.

*OR If this Section is specifically referenced in the Bid Form, use the following language and identify the relevant item in the Bid Form:*

### All costs associated with the work of this Section shall be included in the price(s) for Item No(s). \_\_\_ in the Bid Form.

*If the work of this Section is to be measured and paid for by several different methods, please amend the standard wording given above to reflect the different methods of measurement and payment.*]

# PRODUCTS

## Materials

### Acoustic panels, one-piece full height units:

#### Sound Absorption: Provide panels that are certified to meet the following minimum sound absorption for a 24 inch by 48 inch (610 by 1219 mm) panel when tested in accordance with ASTM C42317 and ASTM E795-16:

##### 125 Hz: 10.08 sabins.

##### 250 Hz: 7.92 sabins.

##### 500 Hz: 8.08 sabins.

##### 1000 Hz: 9.28 sabins.

##### 2000 Hz: 9.52 sabins.

##### 4000 Hz: 10.64 sabins.

##### Noise Reduction Coefficient: 1.10, minimum.

#### Fire: Provide panels that demonstrate the following performance when tested in accordance with ASTM E84-16:

##### Flame Spread: 10 maximum.

##### Smoke Density: 10 maximum.

### Panels sizes: 762 mm wide, 50 mm thick, V-ridged on 150 mm centres to depth 20 mm.

### Facing: 0.85 mm zinc coated steel, perforated with 2.4 mm holes on 4.0 mm staggered centres.

### Framing: Minimum two 1.0 mm galvanized steel transverse framing members with stainless steel inserts for attachment to mounting brackets.

### Acoustic insulation: 50 mm thick fiberglass density 24 kg/m³, wrapped in 0.025 mm thick flame guard polyethylene and [Globeglas] glass fibre mat sheeting on exterior side. Flammability test for polyethylene wrap and sheeting per *[Consultant to obtain replacement standard in place of withdrawn ASTM D568-77(1985)]*: Self-extinguishing in 3-5 sec.

### Sound absorption characteristics in sabins, tested in accordance with ASTM-C423-09a:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 125 | 250 | 500 | 1000 | 2000 | 4000 | Hz |
| 7.8 | 20.5 | 35.2 | 34.5 | 31.5 | 33.1 | sabins |

### Finish: 38 micron DFT primer, 50 micron DFT baked-on, polyurethane enamel applied in factory, colour [       ]. Finish panel end closures to match panel face finish.

### Mounting: Four 3 mm thick galvanized steel, support brackets minimum per panel supplied by manufacturer. For lengths over 2,400 mm add two support brackets per each additional 1,200 mm length galvanized steel fasteners.

### Ceiling suspension: galvanized steel channels 38 mm cold rolled steel, 0.70 kg/m.

### Ceiling anchors:

#### Ultimate Tension in 4,000 PSI Concrete: [2600 Lb.]

#### Ultimate Shear in 4,000 PSI Concrete: [2400 Lb.]

#### Meets/exceeds: GSA: A-A-1922A (Formerly GSA: FF-S-325 Group II, Type 3, Class 3);

### Hangers: 7.9 mm dia. minimum galvanized mild steel.

# EXECUTION

## Examination

### Examine surfaces to receive acoustic panels and report conditions which would adversely affect installation.

### Do not commence installation until unsatisfactory conditions have been corrected.

## Installation

### Install panels in accordance with the manufacturer's printed instructions.

### Lay out panels according to reviewed layout.

### Replace defective panels.

### Align facing surfaces of panels uniformly true, plumb and straight to line.

## Ceiling Installation

### Drill in anchors at 1,200 mm o.c. both directions.

### Coordinate ceiling supports with pipes, ducts and other ceiling hung items. Install ceiling panels to a tolerance of 1:1,000.

**END OF SECTION**