

**INC Panl-Sorb<sup>®</sup>**  
**Metal Faced Acoustical Panels**  
**Suggested Construction Specification**  
**Section 09840**

Bulletin # 007-1002

**I.01 GENERAL – METAL FACED ACOUSTICAL PANELS**

A. Sound Absorbing acoustical wall and ceiling treatment shall be accomplished by using INC Panl-Sorb<sup>®</sup> Metal Faced Acoustical Panels. The manufacturer shall have a complete pre-engineered system of components available including panels, mounting brackets and low-frequency stand-offs as required to construct a complete system as designed.

B. Panels and components shall be supplied in ready to use modules manufactured by Industrial Noise Control, Inc. (INC) of North Aurora, IL.

**2.01 DESIGN REQUIREMENTS**

A. Acoustical panels shall be modular and demountable. All panel connections shall allow easy disassembly and reassembly with no degradation of acoustical or mechanical performance. All components of like function and size shall be interchangeable.

**3.01 MATERIALS**

A. Panels shall be 2" thick consisting of a one-piece formed perforated panel body filled with acoustical sound absorbing material.

B. Steel Materials: All steel used in the panel construction shall be galvanized coated. Standard panels are electro-galvanized (EG) and may be painted without chemical wash. G-90 hot dipped galvanized, aluminum or stainless steel used when specified.

C. Perforated Panel Body: Shall be 22 gauge EG sheet steel perforated to an effective open area of 33% using 0.093" diameter holes on .156" staggered centers. Panel body shall be fully perforated and formed on the long edges to provide additional 13% additional absorptive surface.

D. Mounting Channels: Shall be 18 gauge formed with smooth rolled or hemmed edges with pre-punched mounting holes.

E. Absorptive Fill: Shall be a 2" thick x 1.5LB minimum density fibrous sound absorbing material. Insulation shall meet ASTM C-423 Sound Absorption Coefficient of NRC-1.15. Insulation shall exhibit the following properties:

1. Odor: None
2. Corrosiveness (ASTM C 665):  
Does not accelerate corrosion on steel, copper or aluminum.
3. Resistance to Fungi or Bacteria (ASTM C665):  
Does not promote growth of fungi or bacteria and shall be mold and vermin resistant.
4. Water Vapor Sorption (ASTM C1104):  
Less than 0.01% by volume.
5. Temperature Resistance (ASTM C 411):  
Will not deteriorate up to +1200° F.

F. Fill Protection: Panel fill shall be totally encapsulated using a 1.5 mil polyethylene film. Wrap shall be separated from the panel perforated skin with a polyethylene web mesh spacer. Metal spacers, chicken wire, etc., are not acceptable

#### 4.01 CONSTRUCTION

- A. Panel Size: 30" standard panel width available to 42" maximum width x 12' maximum length.
- B. Module Thickness: 2" standard units.
- C. Panel Body: Shall be one-piece formed construction. Spotwelded or otherwise assembled panel shells are not acceptable.
- D. Internal Panel Reinforcement: When specified, an internal 18 gauge steel reinforcement channel shall be inserted to provide additional panel rigidity.

#### 5.01 FINISH

- A. All components may be supplied either unpainted in EG or factory finished using manufacturer's standard paint coating systems.
- B. When factory painting is required all components shall be properly cleaned and degreased, and be free of blemishes prior to applying the coating system.
- C. Polyester baked powder coat finish used when specified.

#### 6.01 PANEL ACOUSTICAL PERFORMANCE

- A. All metal faced acoustical panels shall exhibit the following Sound Absorption Characteristics as tested and documented by an independent, accredited test laboratory in accordance with ASTM C423-02a and E795-00.

### Panel-Sorb® Metal Acoustical Panels - Acoustical Data

Panel-Sorb® Style	Mounting			Absorption Data by Octave Band Frequency (Hz)					NRC
				250	500	1000	2000	4000	
PS-C	Flush		NR	0.62	1.18	1.26	1.16	1.29	1.05
	Flush		Sabins	15.47	29.49	31.39	29.11	32.22	
	4" Space		Sabins	17.23	35.32	36.01	32.56	38.33	
PS-I	Flush		NR	0.59	1.19	1.23	1.16	1.22	1.05
	Flush		Sabins	14.64	29.76	30.63	28.90	30.43	
	4" Space		Sabins	16.31	35.65	35.14	32.33	36.20	
PS-I-FS (1.5 Mil Encapsulated)	Flush		NR	0.64	1.05	1.16	1.05	1.05	0.95
	Flush		Sabins	15.95	26.22	28.92	26.35	26.36	
	4" Space		Sabins	25.25	37.03	34.88	33.16	34.90	

Acoustical data based on a 30" x 10' x 2" thick Panel-Sorb®.

## 7.01 FIRE RATING

- A. Standard panels meet ASTM E84 Class I Smoke & Fire Standards.
- B. Panel acoustical fill meets the following:
  - Surface Burning Characteristics (ASTM E84, NFPA 255 & UL 723):
  - Flame Spread = 5
  - Smoke Developed = 5

## 8.01 MANUFACTURER EXPERIENCE & CERTIFICATIONS

- A. The manufacturer shall have designed and produced a standard pre-engineered system meeting the specifications stated herein for a minim of 10 years.
- B. The manufacturer warrants that when the panels and components are assembled in strict accordance with its specifications and instructions, that the resulting completed structure shall meet the intended mechanical and acoustical performance specified for the project.
- C. Products shall be warranted for a period of one year from the date of shipment against any defects in workmanship or materials.



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