



Designation: E 1264 – 98

Standard Classification for Acoustical Ceiling Products¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This classification covers ceiling products that provide acoustical performance and interior finish in buildings. Products used in performance spaces and other special applications may require more detailed specification than provided by this classification.

1.2 This classification classifies acoustical ceilings by type, pattern, and certain ratings for acoustical performance, light reflectance, and fire safety. It does not cover the aspects of acoustical ceilings when used as a component of a system or assembly tested for fire endurance or floor/ceiling sound transmission.

1.3 This classification does not include physical properties, such as structural hardness, friability, sag, linear expansion and contraction, and transverse strength, which may affect the handling, installation, and use of acoustical ceiling products (see Test Methods C 367).

2. Referenced Documents

2.1 ASTM Standards:

- C 367 Test Methods for Strength Properties of Prefabricated Architectural Acoustical Tile or Lay-In Ceiling Panels²
- C 423 Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method²
- C 634 Terminology Relating to Environmental Acoustics²
- E 84 Test Method for Surface Burning Characteristics of Building Materials³
- E 413 Classification for Rating Sound Insulation²
- E 795 Practices for Mounting Test Specimens During Sound Absorption Tests²
- E 1110 Classification for Determination of Articulation Class²
- E 1111 Test Method for Measuring the Interzone Attenuation of Ceiling Systems²

tion of Ceiling Systems²

E 1414 Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum^{2,4}

E 1477 Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers⁵

3. Terminology

3.1 *Definitions*—For definitions of terms used in this classification, see Terminology C 634.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *acoustical panel*—a form of a prefabricated sound absorbing ceiling element used with exposed suspension systems.

3.2.2 *acoustical tile*—a form of a prefabricated sound absorbing ceiling element used with concealed or semi-exposed suspension systems, stapling, or adhesive bonding.

3.2.3 *butt*—a joint detail for acoustical tile, butt bevel, or butt square edge, without kerfing of the edges, intended for adhesive bonding to solid backing.

3.2.4 *edge and joint detail*—various edge and joint details are available in accordance with Table 1 and Fig. 1 for acoustical ceiling products.

3.2.5 *excelsior*—long, thin wood shavings.

3.2.6 *fissured pattern*—a surface with irregular depressions of varying lengths, widths, and depths extending below the basic product face.

3.2.7 *flush reveal edge*—acoustical lay-in panels are intended for use in direct hung exposed suspension systems with a narrow exposed edge that is flush with the panel face.

3.2.8 *glass fiber base*—ceilings composed principally of glass in fiber form with appropriate binders.

3.2.9 *kerfed and rabbeted*—joint detail for acoustical tile. Tile with kerfed and rabbeted edges on all four sides, with or without beveled edges, are intended for concealed suspension system or adhesive bonding.

¹ This classification is under the jurisdiction of ASTM Committee E-33 on Environmental Acoustics and is the direct responsibility of Subcommittee E33.04 on Application of Acoustical Materials and Systems.

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² *Annual Book of ASTM Standards*, Vol 04.06.

³ *Annual Book of ASTM Standards*, Vol 04.07.

⁴ Test Method E 1414 is an adaptation of the AMA-1-II-1967 Test Method for Ceiling Sound Transmission Test by Two-Room Method.

⁵ *Annual Book of ASTM Standards*, Vol 06.01.

TABLE 1 Edge and Joint Detail, Types I, II, III, IV, VIII, IX, X, XI, and XII

Acoustical Unit	Edge Detail	Joint Detail
Tile	Beveled	Kerfed and Rabbeted or Tongue and Groove or Butt
	Square	Kerfed and Rabbeted or Tongue and Groove or Butt
	Beveled Long Edges, Square Edge Trimmed on Ends	Kerfed and Rabbeted Long Edges Only, Ends Trimmed. (For Semi-concealed System)
Panels	Square	
	Reveal	
	Flush Reveal	
	Narrow Reveal	
	Narrow Flush Reveal	
Metal Pan	Square	
	Reveal	
	Flush Reveal	
	Narrow Reveal	
	Narrow Flush Reveal	
Metal Strip	Varies with Manufacturer	

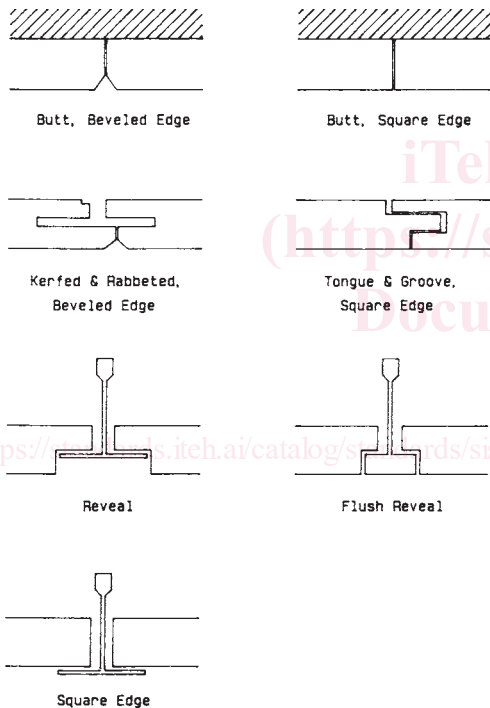


FIG. 1 Edge and Joint Details

3.2.10 *kerfed and rabbeted long edges, ends trimmed*—acoustical tile, 2 ft or longer, is intended for installation in semi-exposed, or semi-exposed direct hung suspension systems.

3.2.11 *metal facings (pans)*—metal facing (pan) ceiling systems with mineral or glass fiber base backings are intended for use where sound absorption is needed and where durable and easily maintainable surfaces are a necessity.

3.2.12 *mineral base*—ceilings composed principally of mineral materials such as fibers manufactured from rock or slag, with or without binders.

3.2.13 *reveal edge*—acoustical lay-in panels with step-down edge are intended for use in direct hung exposed suspension systems.

3.2.14 *square edge*—acoustical lay-in panels with square edges are intended for use in direct hung exposed suspension systems.

3.2.15 *Discussion*—Reveal, flush reveal, and square edged panels are laid in place and can easily be pushed upward for removal or access to the plenum above.

3.2.16 *textured pattern*—granular or raised (fine, coarse, or a blend), felted or matted surface as an integral part of the basic product or superimposed on the product surface.

3.2.17 *tongue and groove*—joint detail for acoustical tile. Tile with tongue and groove edges are intended for stapling, concealed suspension system, or adhesive bonding.

4. Significance and Use

4.1 This classification is used to classify and aid in the selection of acoustical ceiling products.

5. Basis of Classification

5.1 Acoustical ceiling products described using this classification may be of one or more of the following types, forms, patterns, acoustical ratings, light reflectance values, and fire classes, as specified.

5.2 Ceiling Types:

5.2.1 *Type I*—Cellulose base with painted finish.

5.2.2 *Type II*—Cellulose base with membrane-faced overlay.

5.2.3 *Type III*—Mineral base with painted finish.

5.2.3.1 *Form 1*—Nodular.

5.2.3.2 *Form 2*—Water felted.

5.2.3.3 *Form 3*—Dry felted.

5.2.3.4 *Form 4*—Cast or molded.

5.2.4 *Type IV*—Mineral base with membrane-faced overlay.

5.2.4.1 *Form 1*—Nodular.

5.2.4.2 *Form 2*—Water felted.

5.2.4.3 *Form 3*—Dry felted.

5.2.4.4 *Form 4*—Cast or molded.

5.2.5 *Type V*—Perforated steel facing (pan) with mineral or glass fiber base backing.

5.2.6 *Type VI*—Perforated stainless steel facing (pan) with mineral or glass fiber base backing.

5.2.7 *Type VII*—Perforated aluminum facing (pan) with mineral or glass fiber base backing.

5.2.8 *Type VIII*—Cellulose base with scrubable pigmented or clear finish.

5.2.9 *Type IX*—Mineral base with scrubable pigmented or clear finish.

5.2.9.1 *Form 1*—Nodular.

5.2.9.2 *Form 2*—Water felted.

5.2.9.3 *Form 3*—Dry felted.

5.2.9.4 *Form 4*—Cast or molded.

5.2.10 *Type X*—Mineral base with plastic or aluminum membrane-faced overlay, or both.

5.2.11 *Type XI*—Mineral base with fabric-faced overlay.

5.2.11.1 *Form 1*—Nodular.