

SPECIFICATIONS AND COEFFICIENTS OF U S G ACOUSTICAL PRODUCTS

UNITED STATES GYPSUM COMPANY
300 West Adams Street • Chicago

PLAINTIFF'S EXHIBIT

USG-1440

taken from Official Bulletin of the Acoustical
Materials Association, Bulletin No. III, July, 1935

Material	Thick-ness	Mount-ing (de-scribed below)	Coefficients					Noise Reduction Coefficient	Unit Size Tested	Wt. (lbs.) sq.ft.	Surface
			128	256	512	1024	2048				
ACOUSTONE D	3/4"	1	.19	.39	.66	.78	.68	.60	12"x12"	1.94	Unpainted
ACOUSTONE D	3/4"	1	.24	.52	.69	.66	.66	.60	12"x12"	1.94	Brush painted, priming coat and 2 coats lead and oil paint
ACOUSTONE D	1.08"	1	.37	.65	.84	.79	.72	.75	12"x12"	1.81	Unpainted.
ACOUSTONE D	1.08"	1	.43	.71	.83	.77	.69	.75	12"x12"	1.84	Brush painted, priming coat and 2 coats lead and oil paint
PERFATILE, Pad Encased in Flame-proof mem-brane, plus metal facing and pad supports	1-1/4"	8	.43	.61	.91	.86	.77	.60	12"x14"	Pad 1.76	Perforated baked enamel, 4608 holes per sq.ft., .073" diam.
plus furring	1-5/8"	8									
PERFATILE, Metal wrapped pad, plus metal facing and pad supports	1-1/4"	8	.37	.52	.96	.84	.68	.65	12"x14"	Pad .78	Perforated baked enamel, 4608 holes per sq.ft., .073" diam.
plus furring	1-5/8"	8									
QUIETILE	1/8"	1	.19	.30	.58	.64	.60	.60	12"x12"	.43	Unpainted, sanded.
QUIETILE	1"	1	.30	.52	.73	.68	.75	.70	12"x12"	.67	Unpainted, not sanded.

The noise reduction coefficient is the average of the coefficients at frequencies from 256 to 2048 cycles inclusive, given to the nearest 5%. This average coefficient is recommended for use in comparing materials for noise quieting purposes as in offices, hospitals, banks, corridors, etc.
For auditorium treatment, attention should be directed to the coefficients at 512 cycles and other frequencies as explained elsewhere.

TYPES OF MOUNTING

1. Cemented to plaster board. Considered equivalent to cementing to plaster or concrete ceiling.
2. USG Perfatile. Metal supports applied to 1" x 2" wood furring.

DESCRIPTION

ACOUSTONE A fireproof acoustical tile, made in attractive light-reflective colors. Tiles are integrally colored at the factory; they are available in the more popular pastel shades. If a paintable tile is desired, it is available in "Acoustone D" which can be brush painted with lead and oil to any desired color. Acoustone has the soft pleasing texture of out stone--especially well suited to use in office and bank interiors, restaurants and in typical church architecture where it

harmonizes beautifully with masonry surfaces.

PERFATILE A fireproof perforated metal tile acoustical absorbent. Has the natural advantages of a fireproof material, can be painted, and can be cleaned by washing.

QUIETILE A fiber acoustical tile with high absorption efficiency and an unusually attractive surface texture. Can be had in colors; moderate in cost.

SPECIFICATIONS OF USG ACOUSTICAL MATERIALS

ACOUSTONE

LONG FORM

Note: Notes are explanatory or advisory only and should not be included in the specifications.

(1) WORK INCLUDED

Note: List and locate all walls and ceilings to be covered with Acoustone. If more than one thickness of tile is used, specify the thickness for the various areas.

(2) BASE

Acoustone shall be applied direct to plaster or similar smooth surface.

Note: On existing work Acoustone is applied over any firm, standard plaster finish.

(3) ACOUSTICAL TREATMENT MATERIAL

(3a) Acoustical treatment material shall be 3/4 in. thick Acoustone (A) (D) of colors selected by the architect.

(3b) Joints between tiles shall be (a V formed by accurately beveling the tile edges) (as detailed) (specify).

(3c) Tiles on walls and fields of ceilings shall be of size, shape, disposition and color as shown on the various details and approved shop drawings.

(4) APPLICATION OF ACOUSTONE

(4a) Acoustone shall be completely erected by the UNITED STATES GYPSUM COMPANY or one of its authorized erectors of sizes, colors and pattern shown on the drawings and details.

(4b) The tile shall be laid slope, accurately cemented in position in full conformance with the manufacturer's specifications.

SHORT FORM

The contractor shall allow the sum of \$..... to cover the cost of acoustical treatment, using Acoustone to be furnished and erected by the UNITED STATES GYPSUM COMPANY or one of its authorized erectors as directed and approved by the architect.

PERFATILE

1. WORK INCLUDED

Note: List and locate all walls and ceilings to be covered with Perfatile.

2. BASE

A. Where suspended ceiling construction is used. One and one-half inch carrier channels, spaced not to exceed four feet on centers, shall be furnished in place by others. The 1 1/2-inch channels must be hung so as to present a level under-surface. Sufficient cross channels shall be wired in place across the top of the 1 1/2-inch carrier channels to hold them in position and prevent swaying back and forth.

B. Where Perfatile construction is to be held against concrete joist construction.

Wire ties shall be furnished in place by others on not more than four-foot centers along all joist bottoms. These ties shall consist of two No. 10-gauge galvanized wire projecting four inches below joist bottom. The ties must be carefully lined up in lines at right-angles to the joists.

3. ACOUSTICAL TREATMENT MATERIAL

A. Acoustical treatment material shall be Perfatile, a perforated metal tile, 12" x 24" in size, with a center groove, giving the appearance of a 12" x 12" tile, the edges of which are beveled and return vertically to be held firmly in place by special tee runners. The perforated metal tile conceals a mineral wool absorbent pad, held slightly away from the perforated metal surface by means of pad support runners. The absorbent pad shall be completely enclosed and sealed on four edges, face, and back with a

flame-proof membrane. (Or the absorbent pad shall be completely wrapped in flame-proof mullin with a flame-proof membrane backing.)

The perforated metal tile shall have a prime and finish coat of baked enamel.

4. APPLICATION OF ACOUSTICAL TREATMENT

A. Suspended ceiling construction.

The acoustical contractor shall wire or clip the special tee runners to the under-surface of the 1 1/2-inch carrier channels, furnished in place by others, spacing the tee runners on 24-inch centers to hold the perforated metal tile. Perforated metal tile, pad supports, and absorbent pad shall be carefully assembled and pressed into position on the special tee runner. All edges shall be kept in alignment and care must be taken to secure a level under-surface. A suitable moulding shall be furnished in place by the acoustical contractor (or by others) at the junction of the perforated tile ceiling with the walls and columns. Care shall be taken in cutting and fitting the tile around all openings.

B. Plastered Ceiling Construction.

The same as in 'A' except that the special tee runners shall be attached to the present ceiling by means of suitable clips or wires and brought to a level surface.

SHORT FORM

Perfatile treatment shall be furnished and erected by the United States Gypsum Company or one of its authorized erectors on all areas indicated on plans to receive acoustical treatment.

QUIETILE

1. WORK INCLUDED

Note: List here all walls and ceilings to be covered with Quietile. If more than one thickness of material is to be used, specify the thickness for the various areas.

2. BASE

Note: Quietile may be applied to the following surfaces:

2-A. On new work, a good level brown coat of plaster offers the best base for Quietile.

2-B. Quietile may be applied direct to any plastered surface if the plaster is in good condition.

2-C. Quietile may be applied to furring strips. If this method is used with an open air space back of the furring strips, a paper membrane should be stretched over the attached to the furring strips to prevent passage of air through the tile with the resultant deposit of dirt on the tiled surface.

3. ACOUSTICAL MATERIAL

3-A. Acoustical material shall be Quietile one inch thick (or one-half inch thick), in a natural color (or mill

tinted in standard shades of cream, green, rose, buff, or blue) and sanded (or brushed) surface.

3-B. Joints between tile shall be 3/16" "V" formed by accurate beveling.

3-C. Tile shall in general be 12" x 12" with special sizes as shown on the various details and approved drawings.

4. APPLICATION OF QUIETILE

4-A. Quietile may be applied in a diagonal or a straight pattern with a border effect if desired. Other patterns may be worked out but they will require special tile sizes.

4-B. Quietile shall be completely erected by the United States Gypsum Company or by one of its authorized erectors.

4-C. The tile shall be cemented or cemented and nailed in position, care taken to align tile and maintain an even surface in full conformance with the manufacturer's specifications.