

USE USG SOUND CONTROL SERVICE AND USE USG SOUND ABSORBENT MATERIALS

TO ASSURE QUIET
IMPROVE WORKING CONDITIONS
INCREASE EFFICIENCY
AID IN RAISING PROFITS

PLAINTIFF'S EXHIBIT

USG-1120

Office noise costs money.

It is responsible for costly employee errors. These errors add up to form an impressive item of expense—an expense that is unnecessary, because it can be easily eliminated.

USG SOUND CONTROL SERVICE

The easiest, simplest, most economical way to rid your office of racket—and its attendant expense—is to use the sound control service and materials of the United States Gypsum Company.

USG has developed a complete line of materials to handle acoustical problems in office structures.

USG has trained and developed a force of engineers competent to advise office managers and officials with facts and figures as to just what can be done.

RIDDING YOUR OFFICE OF RACKET

There are just three ways to handle noise. The first one is—don't make it; (in this day an impossibility); the second—absorb

it, if it is created in the room which you desire to quiet; the third way is to insulate against it, if it is created outside of the room you are considering.

Sound absorbents of high power, correctly applied to the ceiling of a noisy office, produce the quiet of a drawing room. Telephone messages are correctly understood. Verbal instructions are not twisted and garbled; no one answers his partner's telephone. Each employee is not conscious of the work that is done around him. He tends strictly to business, his production increases; there is nothing to disconcert him. Acoustone, Quietile, and Perfatile, the USG sound absorbent materials for modern offices give to every desk more privacy than is gained with a railing; give to the railed-off space the privacy of a completely enclosed office. They therefore save many dollars in the housing of minor executives, reduce the cost of office rearrangement, and provide ample light and ventilation through the elimination of unnecessary partitions.



A USG Perfatile Ceiling Assures the Quiet Necessary for Efficient and Uninterrupted Work



Quietile Ceiling Absorbing Noise for the Graybar Electric Company in Los Angeles, California.

ACOUSTICAL TREATMENT IMPROVES WORKING CONDITIONS

De managers in larger companies, so are familiar with the quiet obtainable through acoustical treatment, consider such treatment in the same light in which they consider correct lighting, ventilation and sanitary conditions. In a busy office, the tired personnel, fatigued by their efforts to combat, subconsciously, a noise level which is constantly increased by their very efforts to combat it, cannot do good work. Their creative thought is stifled. Work is han-



led without the consideration and thought that is paid for. In a noisy office, workers must raise their voices above the noise level in order to be heard. This takes additional energy, and in the very increase makes the noisy condition worse. The consequent sapping of the workers' energy produces unnecessary fatigue. It is one of the chief reasons for the 11 o'clock drops in efficiency that all business economists have noted.

USG Acoustical Treatment and USG sound absorbent materials defeat noise—assure office quiet—increase profits by making healthier, happier, more efficient workers.

Acoustone Ceiling Used by the Bankers Trust Company, New York to Rid Their Office of Noise.

ERRORS IN WORK REDUCED BY ACOUSTICAL TREATMENT

A large eastern insurance company reports that typists made 29 per cent fewer errors and comptometer operators 52 per cent fewer after the installation of noise absorption in work rooms. As a test, the noise absorbing treatment was covered in a manner to eliminate its effect. There was an immediate increase in errors of 12 per cent among the typists and 37 per cent among the comptometer operators. Such figures have been checked time without end by the hundreds of large offices which are using millions of feet of acoustical treatment to gain the saving afforded by quiet.

Noise, or unwanted sound, is of necessity produced in any business office. The highly sound reflective walls and ceilings of an undraped, uncarpeted business office reflect 97 per cent of the sounds which strike them. That is why every noise which is created in such an office is enhanced by these hard reflecting surfaces. This noise distracts workers—upsets their nerves—cuts down their efficiency—and costs their employer money. These are the reasons why the USG Sound Control Service, and USG Acoustone, Perfatile, and Quietile are being used by more and more progressive employers.

ACOUSTONE

Acoustone, the USG acoustical tile, does its work in an unostentatious way. The inherent beauty of the material enhances any decorative plan.

Acoustone has none of the appearance of a mechanical device. Its beauty improves the appearance of any room. With a texture similar to travertine stone, Acoustone is available in delicate pastel shades for the enrichment of borders, with fields in efficient light reflecting white shades. It is readily cleanable and eliminates future redecoration expense. Acoustone may be painted when desired. Painting does not affect its sound absorbent qualities.

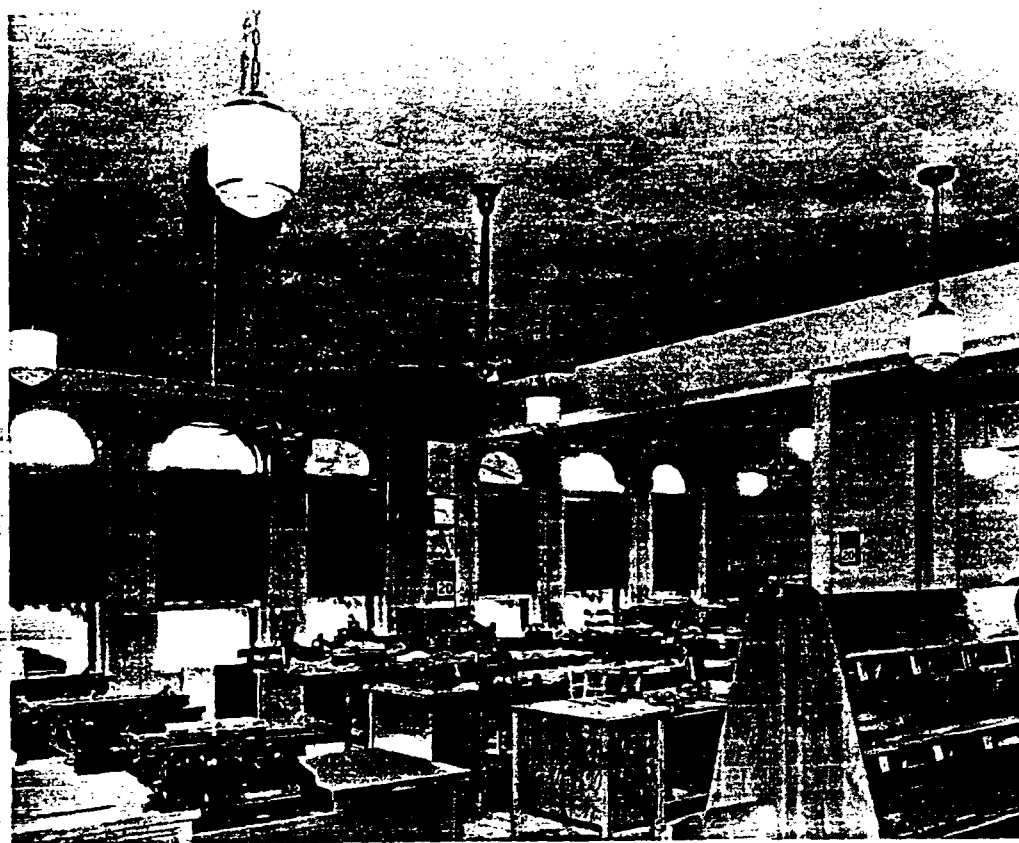
PERFATILE

USG Perfatile has a combination of advantages that make it almost unique as an acoustical absorbent. The USG Perfatile system consists of perforated metal tile with edges beveled and returned

by special tee runners. Within the metal tile and supported on miniature channels is a sound absorbent pad made of mineral wool. Perfatile has exceptionally high sound absorption coefficient. It is fireproof, washable, and paintable. Perfatile may be painted with full bodied paints of lead and oil variety. You may repaint Perfatile many times without affecting the absorption efficiency of the system.

QUIETILE

USG Quietile is a decorative acoustical tile. It is a wood fiber product, but it



differs radically from tiles used primarily for insulating purposes. Quietile has exceptionally high and uniform sound absorption qualities.

Quietile combines high efficiency with low cost. It is so low in cost that it makes possible the use of acoustical treatment in offices where the strictest kind of economy is a necessity. Quietile is made in a sanded and brushed surface texture; it may be tinted at the mill or at the job in pastel shades of rose, cream, blue, buff and green.

Quietile Ceiling Improving Office Working Conditions for the American Ammonia Co., St. Louis, Mo.

The efficiency of Quietile is secured by the natural porosity of the tile combination with a low and accurate controlled density. The result is an appearance as pleasing as if the tiles were designed primarily for a decorative rather than an acoustical effect.

SOUND CONTROL ESSENTIAL TO THE MODERN OFFICE

Modern, progressive employers realize the importance of providing better working conditions by ridding their offices of racket. They know how much this costs them if it is allowed to go unchecked. That is why so many of them use the USG Sound Control Service, and USG Acoustone, Perfatile and Quietile.

The practical utility of these USG materials and constructions has been proved. Their cost is low. They are an essential to the modern office as the calculators and other equipment whose noises they eliminate.

USG sound absorbent materials and constructions are installed only after a very careful survey and analysis of the conditions they are obliged to correct. Recommendations covering their installation are not made unless engineering calculations show conclusively that the desired results will be secured. These USG constructions and materials are all manufactured and installed by United States Gypsum Company or by approved USG district contractors. Purchasers are assured of getting exactly what they want when they use the USG Sound Control materials.

On request and without obligation of any sort an Acoustical Engineer will be pleased to survey your office and report what can be done to quiet it. He will work with you in developing harmonious interiors whose quiet beauty will be your pride and boast. USG Acoustone, Perfatile, Quietile, and USG Sound Control Systems are always on the job. Once you install these quieting treatments they work for you constantly—go on piling up dividends for years.

When you have an Acoustical problem consult USG or the USG approved district contractor whose name is printed on the back of this folder.

USG SOUND CONTROL SERVICE

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TECHNICAL DATA

1. ACOUSTONE

Tested and approved as a sound absorbent of high efficiency by recognized acoustical laboratories. The coefficients of absorption shown below are from tests made by the Acoustical Materials Association Laboratories:

	UNPAINTED					Noise Reduction Coeff.
Pitch Frequency	C2	C3	C4	C5	C6	
128	256	512	1024	2048		
4 In. Thick	.19	.39	.66	.78	.65	.60
1 In. Thick	.37	.65	.84	.79	.72	.75

BRUSH PAINTED WITH LEAD AND OIL PAINT

4 In. Thick	.24	.52	.69	.66	.58	.60
1 In. Thick	.43	.71	.83	.77	.69	.75

Made of filaments of specially processed tone. Integrally tinted to produce any color and shade.

Easily cut to irregular sizes and shapes. Fits all decorative interiors and particularly adaptable to modern motifs. Sanitary and easily cleaned. Need not be decorated although it may be painted if desired. Highly light reflecting.

Erected by USG mechanics according to definitely established specifications and quieting needs of individual cases.

2. PERFATILE

A sound absorbent of the highest type.

The coefficients shown below are the results of tests conducted by the Acoustical Materials Laboratories. The table indicates two sets of absorption coefficients, the first for a tile unit with an absorbent pad completely encased in a flame proof membrane, and the second for a unit with a pad encased in a flame proof muslin with a flame proof membrane backing.

	C2	C3	C4	C5	C6	Noise Reduction
Pitch Frequency	128	256	512	1024	2048	
Pad encased in flame proof membrane	.43	.61	.91	.88	.77	.80
Muslin wrapped pad	.37	.52	.96	.94	.88	.85

The pad completely encased in a flame proof membrane uses a new principle of sound absorption. A method has been found to enclose the pad completely with this flame proof membrane so that excellent acoustical results are obtained without the porosity of the muslin facing.

The advantages are quite apparent. Infiltration of air and dirt into the pad is prevented, and an accumulation of dirt in the pad does not take place.

The muslin wrapped pad permits the sound waves to enter the pad through the open mesh of the muslin.

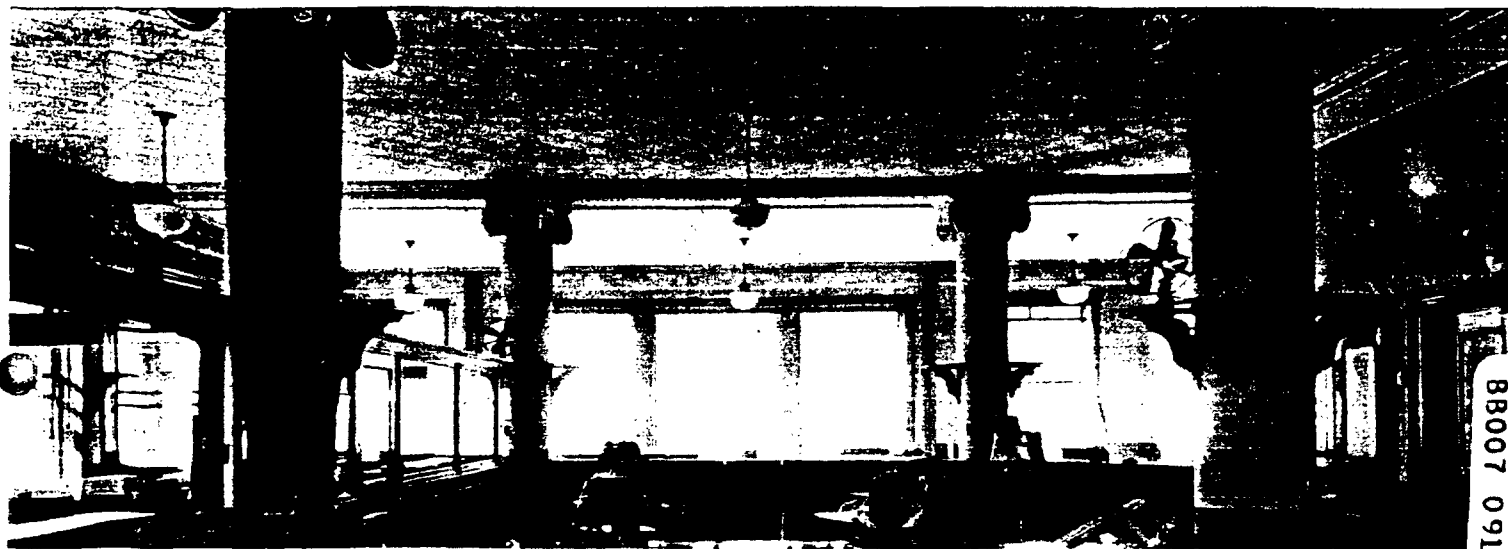
3. QUIETILE

A high efficiency absorbent at a low cost, so low cost that it makes possible the use of acoustical treatment in almost any type of building where noise is a problem. It produces the quietness that one finds in a thick carpeted room. Obtainable in two thicknesses— $\frac{1}{2}$ " and 1".

The following absorption coefficients are from the Laboratories of the Acoustical Materials Association:

	C2	C3	C4	C5	C6	Noise Reduction Coeff.
Pitch Frequency	128	256	512	1024	2048	
1 In. Thick	.30	.52	.73	.82	.75	.70
$\frac{1}{2}$ In. Thick	.19	.30	.58	.64	.80	.60

Cemented to your present ceiling in tile form with beveled edges in standard sizes of 12 in. x 12 in., 6 in. x 12 in. and 9 in. x 18 in. Either brushed or sanded surface. The natural color of brushed is a Light Cream; the natural color of sanded is a Light Buff. Either of these surfaces can be mill tinted in high light reflecting shades of Rose, Cream, Blue, Buff and Green.



USG INSTALLATIONS



Acoustic Ceiling in the Bridgeton, N. J. Offices
of Owens-Illinois Glass Company.



Perfatile Ceiling in Office of Rogers & Tracy Inc.,
Chicago, Illinois

USG



Acoustone Ceiling in a Private Office.

... folder refers only to USG Sound Control in offices. There
many other places where USG acoustical treatment has
ved to be a paying investment. In restaurants, schools,
pitals, churches, auditoriums, theatres and broadcasting
lios USG Acoustone, Perfatile, Quietile, and USG Sound

Control System are doing an outstanding job of banishing
racket. An up-to-date list of USG Sound Control installations
is prepared periodically. Send for it today and see for yourself
how the USG Sound Control Service can improve working
conditions in your office—and make money for you.

UNITED STATES GYPSUM COMPANY

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SALES OFFICES IN PRINCIPAL CITIES

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