The Mortile Insert

A New Product for the Retrofit Market

Perhaps the greatest innovation in office design has been the acoustical tile ceiling. It is estimated that one billion square feet of tile will be sold this year and that, of the 20 billion square feet already installed in North America, half will need to be replaced in the near future.

Designed as a sound absorbant, aesthetic alternative to the plaster ceiling, acoustical tile can be attached directly to an existing ceiling or installed as a “drop ceiling,” which creates a plenum, or space, which may house plumbing or electrical wiring.

Although acoustical tile dampens room noise and provides a visually interesting alternative to chipping plaster, it is by no means without its share of problems. In fact, standard mineral board tile is quite limited in three areas-ability to be cleaned, acoustical value and health and safety.

A conventional mineral board tile ceiling does not permit efficient cleaning. Companies have emerged claiming to effectively clean a tile ceiling. But the methods they use-they either vacuum or bleach the tiles-are costly and inefficient and can even damage the ceiling and interior. Bleaching agents have been known to damage broadloom, furniture and drapes while having little positive effect on the tiles. Painting, also, is not a viable alternative to cleaning since paint retains the dirt in the ceiling and destroys the sound-absorbing characteristics of the tile.

However, a product is now on the market which can be easily, and cost-effectively, cleaned with just soap and water, add up to 20 percent to an existing tile’s acoustical value and eliminate the threat of OIS (Office Ill-
“It includes a patented vapor barrier, effectively sealing out moisture and dust, which can also increase the acoustical value of the ceiling system by up to 20%.”

ness Syndrome), which causes workers in high-rise office buildings to experience nausea, fatigue and light-headedness.

The “Mortile Insert,” a tile layer inserted between the original acoustic tile and the “T” bar ceiling frame, is the result of extensive research and development. The insert is made from a specially formulated, fire-retardant modified polymer (MPE-FR-1030) developed by Du Pont Canada Inc. for Mortile Acoustic Industries Ltd., Toronto, Canada, a wholly owned subsidiary of Technical Ventures Inc., New York. The polymer has sufficient stability to withstand repeated cleanings without becoming detached, allows the tile to maintain or improve its acoustic values, and guarantees fire-retardancy. Du Pont Canada has granted Mortile exclusive worldwide rights to the modified polymer for ceiling tiles.

Installation of the “Mortile Insert” is quick and easy. The installer just slips in the insert face down, bonding it to the existing tile, and letting it rest on the “T” bar ceiling frame. If there is no “T” bar frame, a “T” bar effect can be achieved using metal stripping. Thus, installation is fast and clean-and provides a fresh, new, cost-effective surface.

Maintaining the tile insert is also a simple task. Any accumulated dirt will easily come off with just a gentle wipe of a soapy cloth. With occasional cleaning the insert can stay new looking for as long as 20 years.

Increases Acoustical Value . . .

The “Mortile Insert” also makes great strides in the area of acoustics. A patented vapor barrier, attached to the back of each insert, can increase the acoustic value of an existing tile by up to 20 percent while effectively sealing out moisture and dust. The vapor barrier produces a “diaphramatical action,” which is responsible for its sound-dampening ability. In cases where the vapor barrier has been attached to conventional mineral board tile, the noise reduction coefficient has gone from .55 to as high as .95. Anything above a noise reduction coefficient of .70 is considered acceptable in terms of an aural comfort factor.

Quiet rooms and clean ceilings are two prime advantages of the “Mortile Insert.” These, however, may be outweighed for some companies by the recently discovered environmental benefits of the tile insert. High-rise buildings and hospitals with air-borne contaminants are experiencing environmental problems, particularly in those buildings with repeated circulation. Dust control in ceiling tiles has long been a problem that has plagued the industry. The increasing number of outbreaks of OIS (Office Illness Syndrome), which causes workers in high-rise office buildings to experience nausea, fatigue and dizziness, has made finding a solution an issue of utmost importance.

It is a well-established fact that germs are transported by dust and water. Water-carried germs can be controlled by chlorination, but dust is extremely difficult to control. Conven-
tional mineral board tile attracts dust which settles in the crevices and holes. Mortile’s vapor barrier acts as a gate which repels potentially harmful dust. This breakthrough technology not only eliminates the threat of OIS but, more importantly, it permits hospitals to fully sterilize their rooms. Furthermore, the threat of outbreaks of serious epidemics, such as Legionnaire’s Disease, can be greatly reduced in both hospitals and hotels.

The “Mortile Insert” has a Class “A” fire rating and meets all national building codes. Most importantly, in a fire, no toxic gases are given off.

**Vast Potential . . .**

The potential for the “Mortile Insert” is vast. Although the company is currently aiming its tile insert at the high-volume, low-priced, “no frills” customer, it is also eyeing the lucrative custom design segment of the market. The company can provide those in the retrofit market with inserts bearing the exact pattern as their existing tile, while giving them the added benefits of easy cleaning, improved acoustics and a healthful, safe environment under a fire-retardant ceiling.

For those requiring elaborate custom styles, Mortile offers a line of designer tile inserts, including tegular
Ease of installation of the “Mortile Insert” is shown as installer tucks the insert into the T-bar assembly under the old fiber tile.

(molded), textured and color patterned. The “Mortile Insert” surface can be printed in almost any pattern desired by customers—a facet being warmly received by national brand name companies, particularly those with extensive franchise units where a uniform corporate symbol on the tiles can be inexpensively supplied to every outlet. In addition, Mot-tile has a broad range of designs available in its normal inventory.

Several independent testing and engineering firms have tested and issued positive reports on the “Mortile Insert.” Among these are Warnock Hersey on its acoustic values; Underwriters’ Laboratories on its meeting building code requirements; and Rolf Jensen & Associates on its meeting all fire code requirements in the United States and Canada.

Mortile has a modern plant on the outskirts of Toronto that has a capacity to produce approximately 50 million square feet of “Mortile Insert” annually. The facility contains custom-designed equipment to make the patented process product and has already produced quantities of tile for evaluation and field testing.

For more information about the “Mortile Insert,” write to Frank Mor-timer, president and CEO, Mortile Acoustic Industries Ltd., 3411 McNicoll Avenue, Scarborough, Ontario, Canada M1V 2V6, or call (416) 299-9280.