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Insulation Peril?

Health Studies Suggest Asbestos Substitutes Also Pose Cancer Risk

While Data Aren't Definitive, Some Fine-Fiber Products Have Scientists Concerned

Companies Question Findings

By Barry Meier
Staff Reporter of The Wall Street Journal

Two decades and thousands of deaths after asbestos insulation was found to be a killer, recent health studies suggest that certain other insulation products, sometimes used as substitutes for asbestos, may also present a lung cancer threat.

A blue ribbon scientific panel assembled by the World Health Organization is set to consider next month whether these materials—glass fibers, mineral wool and ceramic-based fibers—pose a cancer threat to tens of thousands of workers world-wide. A decision that any or all of them do would force the affected manufacturers to label their products as possible cancer risks. It would also doubtless trigger regulatory action in the U.S. and elsewhere and spark lawsuits against a $2 billion domestic industry that now gets little oversight.

Just how such fibers might cause cancer—and at what exposure levels—is unclear. But "if the question is, Do other insulation fibers besides asbestos cause cancer?" the answer is yes," says Philip Enterline, a University of Pittsburgh epidemiologist hired by U.S. insulation producers several years ago to study their products' hazards.

Mineral-Wool Workers

His studies show, Mr. Enterline told an international scientific conference last October, that mineral-wool factory workers have an increased lung cancer risk. He also found a recent spate of lung cancer deaths among glass fiber workers exposed to fine-diameter fibers, but he said such data were too preliminary to draw any scientific conclusions. Mr. Enterline says he is also concerned about ceramic fibers for which health data are sparse.

Makers of the materials under scrutiny all defend their products' safety. And researchers such as Mr. Enterline believe that most currently used insulating products don't appear to threaten homeowners and are less toxic than asbestos. Because of improved plant controls, some independent scientists say, any danger to current plant workers may also be low.

Nonetheless, the specter of a health crisis even vaguely resembling the asbestos disaster is sparking a furor in the insulation industry. Company scientists are scrambling for evidence to defuse Mr. Enterline's findings; some insulation producers are building defenses against future damage claims; and the safety issue is at the heart of a battle between producers of competing types of insulation.

Manville 'Concerned'

"There's no question we're concerned," says William Reitze, a health official for Denver-based Manville Corp. Bankrupted by asbestos-related death claims and punitive damage awards, Manville recently ordered its salesmen of glass-fiber products to certify in writing that they have divulged Mr. Enterline's findings to customers.

Exposure to asbestos has been linked to fatal lung cancers and other disabling respiratory diseases. Some 40,000 death and injury claims have been filed against Manville and other asbestos producers by plant workers, insulators and others. Most uses of asbestos are currently banned by federal regulations.

Glass-fiber and some other insulation products have long been known to cause skin rashes and respiratory irritation. But such materials and asbestos, several scientists say, also share a potentially fatal trait. All contain masses of small, rod-like fibers that can edge in human lungs. Under one current scientific theory, the [illegible] function of its size rather than its chemistry. The most suspect fibers are thin, long and durable.

Scientific concern about such fibers in insulation fibers is growing. Hans Weill, a pulmonary specialist at Tulane University, says chest X-rays of insulation-plant workers exposed to fine fibers exhibit more minor abnormalities than do X-rays of workers exposed to larger fibers. Fine-fiber workers are also showing a pattern of decreased lung capacity, says Dr. Weill, who cautions that his work is preliminary.

[redacted]

Such warnings come as insulation producers increase fine-fiber output largely for products blown under pressure into walls and ceilings of homes and commercial buildings. Use of fine fibers is growing because they provide greater insulation than larger-sized fibers, and at lower cost, says William Sells, president of Manville's glass-fiber division.

The safety debate is putting glass-fiber producers on the defensive. At a tense two-hour meeting last month with Mr. Enterline, health officials from Manville, Owens-Corning Fiberglas Corp. and CertainTeed Corp. challenged the scientist's methods and facts. They said they hope to prove that workers' deaths from lung cancer aren't related to fiber exposure, that they may instead have resulted from other toxic compounds in the workplace or the environment.

"That is what we are trying to accomplish. Whether that turns out or not we have to see," says Robert Dobak, a select

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Insulation Peril? Studies Suggest a Lung-Cancer Risk From Some Products Being Used in Place of Asbestos

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vice president at Owens-Corning, the nation's largest glass-fiber producer.

The company's response to Mr. Enterline's findings is exemplified by measures it has taken at its Newark, Ohio, glass-fiber plant. Mr. Enterline had found that workers and former workers at the plant—and at a few other plants among 11 he studied in the glass-fiber industry—had a higher-than-expected lung-cancer rate 20 years or more after their first exposure. In recent months, Mr. Doban says, a team of company engineers has scoured Newark-plant records going back four decades in an effort to determine what cancer-causing agents might have been used at the facility. Retired plant personnel were questioned for the same purpose, Mr. Doban says.

Armed with their own findings regarding the Newark plant, Owens-Corning officials challenged Mr. Enterline's findings when they met with the scientist last month. Mr. Doban said company records showed sporadic use of asbestos at the Newark plant. Jon Konzen, the company's medical director, said the Newark plant had frequently been used to test glass-fiber manufacturing techniques involving any number of potentially toxic compounds.

"There were things that went on at Newark that never saw the light of day anywhere else," Dr. Konzen said.

'They're in a Jam'

The ruddy-faced Mr. Enterline isn't deterred. After the meeting, he noted that mineral-wool producers were raising similar objections to his work, but he said they hadn't supported their objections scientifically. Of the insulation industry's current plight, he remarked, "They're in a jam and they just don't know what to do."

Some companies are shoring up legal defenses. Besides requiring salesmen to disclose Mr. Enterline's findings on glass fiber, Manville recently ordered the destruction of all outdated insulation safety pamphlets, says Mr. Sells, the company official. In asbestos-related cases, large punitive damage awards had been meted out against Manville for failing to publicly disclose its up-to-date knowledge of asbestos hazards.

Industry workplace practices are also changing. For instance, Chicago-based USG Corp., the nation's largest producer of mineral-wool products, recently banned cigarette smoking by insulation-plant workers. The move, says a USG spokesman, reflects scientific concern that smoking might intensify any lung-cancer threat posed by mineral wool. Plant workers have also been issued uniforms, the spokesman says, to prevent workers from carrying insulation fibers home on their clothing. Lung-cancer deaths in asbestos workers' families have been linked to such exposure.

Quandary for Union

The lack of definitive health data on insulation hazards is creating a quandary for workers and product users. "At this point we haven't taken any position on glass fiber because we feel the jury is still out," says James Golden, a health official with the Sheet Metal Workers International Association. On the other hand, Mr. Golden says, union officials are concerned by the lack of data. The reason: Most scientists believe that cancers develop 20 years or more after the first exposure to a carcinogen. "Some of these fibers haven't been around long enough to study their effects on humans," Mr. Golden says.

Ceramic fibers are a case in point. Sales of products using the durable fibers have boomed since the mid-1970s, reaching an estimated $100 million last year, according to industry officials. They are used mainly in linings for industrial furnaces and as asbestos substitutes.

Health research, however, has lagged behind sales. Thus far, the two major animal studies of the materials' cancer-causing hazards have yielded mixed results. Moreover, given the latency period for lung cancer, industry scientists acknowledge that it may be too early to detect developing cancers in workers through traditional X-ray screening tests.

"The latency issue is one that has to be addressed," says Edward Horvath, medical director of occupational health for Standard Oil Co., the nation's largest maker of ceramic-based fiber products. Dr. Horvath estimates it may take several years for such cancers, if any, to develop in exposed workers.

Banned by Navy

Some major users of such products aren't waiting. The U.S. Navy, for example, recently banned shipboard use of ceramic fibers, according to a Navy spokesman. The move, says the spokesman, came after manufacturers voluntarily relabeled products to note that in an animal study, some ceramic fibers had produced cancerous tumors.

Along with a possible cancer threat, ceramic-based fibers pose other health problems. In a published 1986 study by Browning-Ferris Industries, for instance, the Houston-based waste-management concern warned that ceramic-based fibers used to line industrial furnaces quickly break down into cristobalite, a form of silica linked to silicosis, a fatal lung disease common among quarry and tunnel workers. Charles E. Fryman, Standard Oil's manager of industrial hygiene, says ceramic-fiber producers are aware of the cristobalite hazard and have long urged workers to use masks when removing ceramic insulation from furnaces. They have also called attention to the cristobalite risk on their labels.

Mr. Fryman acknowledges, however, that the cristobalite levels detected in the Browning-Ferris study exceeded levels predicted by manufacturers. As a result, he says, Standard Oil recently urged that improved face masks be used by workers.

Concerns over insulation safety are also fueling a war between makers of competing products. Take the case of Richard Munson, president of National Consumer Products Marketing Inc., an Auburn, Calif.-based company that sells cellulose-based insulation, a competitor to glass fiber in the home-insulation market.

Mr. Munson founded and sponsors a group called Victims of Fiberglass, which recently placed advertisements in several U.S. newspapers carrying bold headlines that read: Consumer Warning — Manmade Asbestos (Fiberglass) Insulation in Your Attic Will Cause Lung Cancer.

Mr. Munson is also publicizing the work of a consultant he hired to measure fiber sizes contained in a blown-insulation product sold by the Valley Forge, Pa.-based CertainTeed. The consultant found that most of the products' fibers were small enough to be inhaled.

CertainTeed officials say that insulation workers are only briefly exposed to such fibers and thus don't face a health danger. Glass-fiber company officials also charge Mr. Munson with running a scare campaign. "It's obvious he has a conflict of interest," says Mr. Sells, the Manville official.

"There's no question that I have a conflict of interest," Mr. Munson says, "but so does Manville." As for any lung-cancer threat from cellulose-based insulation, epidemiologist Enterline says he isn't aware of any evidence suggesting one.

Several independent scientists say that current health data don't indicate that the insulation materials under study pose a lung-cancer threat to homeowners. "The unstudied population I'm most concerned about are people putting in insulation," says Ernest E. McConnell, a toxicologist with the federal National Toxicology Program.

Regulatory Action Likely

Whatever the case, U.S. regulatory action on glass and other insulating fibers is likely. Richard Lemen, a top official at the federal National Institute for Occupational Safety and Health, says the agency, based on Mr. Enterline's report, is reviewing whether to recommend stricter workplace exposure limits. Sir Richard Doll, a leading British epidemiologist, says he believes exposures to all insulating fibers should be held to the same level as exposure to as-

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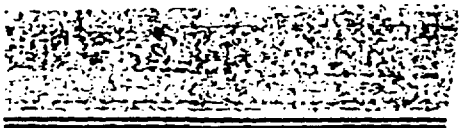

bestos. Glass and other insulating fibers are currently regulated in the U.S. as so-called "nuisance" or nonhazardous dusts.

Both industry and academic institutions are planning new studies of insulation-fiber safety. Scientists who witnessed the asbestos disaster are intent on averting any similar tragedy. Says Irving Selikoff, a leading asbestos expert at New York's Mount Sinai School of Medicine: "All the resources we built to study asbestos should be drawn on now."

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