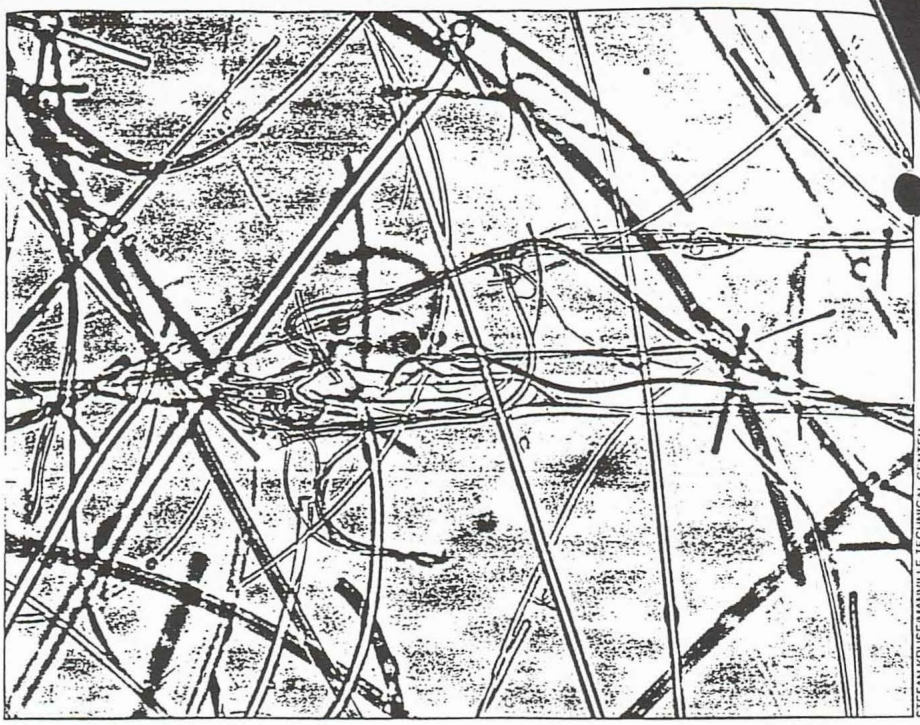
Hi There —

I need construction hints for the newsletter, all write ups, sketches are very appreciated. Also articles if they apply to composite aircraft.

Thanks

Phil Mancini
7/18/92



STEFAN KRUSE/MANVILLE TECHNICAL CENTER

Researchers are raising questions about the health effects of fiberglass (shown magnified 200 times) when its fibers are inhaled and become lodged in the lungs.

Fiberglass: cancer threat?

Asbestos and fiberglass have some things in common: They're both made up of tiny fibers that can be inhaled and lodged in lungs. But unlike asbestos, health officials don't want to see a delay in efforts to protect workers from fiberglass exposure.

Evidence that asbestos posed a health threat appeared as far back as the 1930s, but it wasn't until the 1970s that efforts were taken to reduce exposure to asbestos in the work environment. By then it was too late: Many of those exposed to the material developed lung cancer; asbestos exposure is now linked to 9,000 premature cancer deaths yearly.

Now public-health officials, unions, manufacturers, and others are questioning the safety of fiberglass, a synthetic insulating material used in ceilings, floors, walls, and air ducts in both homes and offices. The concern is that glass fiber in lungs will cause cancer, especially tumors called mesotheliomas.

Worries about fiberglass have been heightened by a recent large-scale epidemiologic study of workers involved in fiberglass production. The study found an excess mortality rate of 12 percent among the workers compared with the general population. However, the leader of the study, Gary Marsh, an associate professor in the department of biostatistics at the University of Pittsburgh Graduate School of Public Health, points out that "an excess in the range of 10 to 12 percent would have very little practical significance, because it could easily be due to factors over which we had very little control, such as the smoking habits of the workers or the fact that they were exposed to other things in addition to the fibers." Mortality increases of 50 to 100 percent would be needed to show a meaningful association between fiberglass and cancer, adds Marsh.

Meanwhile, the Occupational Safety and Health Administration has cited the study as a basis for requiring all glass-fiber products, such as insulation, to carry labels warning users of a possible cancer risk. A similar label was already required in California.

Researchers have also tested the effect of fiberglass exposure on animals. When fiberglass was inserted directly into the lungs of rats in some studies, it was found to produce tumors. But in studies in which animals inhaled fibers —conditions closer to those encountered by humans—the cancer threat is not as clear. "There is no definitive evidence that breathing fiberglass is associated with disease either in humans or animals," says Dr. Frank J. Rauscher, executive director of TIMA, Inc., the trade group that represents fiberglass producers.

Rauscher, a former director of the National Cancer Institute, stresses that studies have demonstrated a fundamental difference between asbestos and fiberglass: Asbestos fibers stay in the lungs, while fiberglass fibers do not. "Thirty to sixty days after exposure, virtually all of the fiberglass found in the lungs of experimental animals is gone, whereas asbestos persists in the same amount for a year or more."

To reduce potential risks, a mask, long-sleeved shirt, long pants, gloves, and goggles should be worn when removing or installing fiberglass. After working with fiberglass, don't rub or scratch your skin, but wash it gently with warm water and soap. Launder work clothes separately, and rinse the washing machine before using it again. To prevent airborne particles from installed fiberglass, seal the insulation off from airflow and cover open fiberglass with plastic sheets; edges or tears in the paper or foil that covers fiberglass should be taped closed.

—*Oliver Fultz*

A/M/J'92
pg' 10