

Asbestos Brake Dust Still A Hazard

by [Larry Carley](#) copyright 2019 AA1Car.com



Brake dust from pads that contain asbestos fibers can be hazardous to your health!

Though asbestos brake linings have been mostly phased out, contrary to popular misconception they have not disappeared altogether. According to one original equipment brake supplier, Ford was still using asbestos linings as recently as 1993 on the Crown Victoria to cure a brake noise problem. The same supplier also said asbestos linings are still used on some high end import vehicles such as Land Rover because of their good braking characteristics. What's more, asbestos linings are still readily available in the aftermarket.

Though asbestos linings were one used on virtually all vehicles, the arrival of front-wheel drive in the 1980s required semi-metallic front disc brake pads that could withstand higher operating temperatures. But the vehicle manufacturers continued to use asbestos linings on the rear brakes as well as the front brakes on most rear-wheel drive cars and trucks. Why? Because asbestos was and still is an excellent fiber for brake linings. It offers good strength, temperature and chemical resistance, and is cheap compared to other materials that are used for the same purpose. But the physical properties that make asbestos such a good fiber also make it a hazardous substance.

Asbestos fibers are long, thin and extremely small. Exposed fibers easily shred into thin needle like strands that can drift in the air and be inhaled. The size of the fibers are

such that they are not easily filtered out by the mucus linings in the nose and lungs. Hence, the fibers lodge deep in the lungs where their sharp needle like presence becomes a source of constant irritation. To make matters worse, the human body cannot rid itself of these fibers because they are impervious to biochemical assault. So over time, exposure to asbestos dust may result in lung disease or cancer.

The asbestos hazard is associated primarily with those who work in the asbestos handling and processing industries. But once the asbestos fibers are encapsulated in other materials, they pose little danger to workers in brake, clutch or gasket manufacturing plants.

There is a danger, however, to brake technicians and do-it-yourselfers who change their own brake pads and shoes because of the dust that is generated as brakes wear. As the linings wear, asbestos fibers are exposed and released as dust into the air. Some of the dust clings to brake parts and some of it is blown away. If you use an air hose to blow out a brake drum or to blow dust off brake parts to "clean" them, the only thing you will succeed in doing is blowing billions of asbestos fibers into the air. This will expose not only you to dangerous concentrations of asbestos fibers, but everybody else in your shop or garage, too.

Brake dust fibers can also cling to clothing, posing a possible hazard to other household members when work clothes covered with brake dust are washed with other laundry. Work clothes should be washed separately to prevent the spread of fibers to other clothing.



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The advertisement features a central image of a car's brake assembly, including a disc, caliper, and pads, set against a red background. The text is arranged around this image, with the main headline at the top, a list of services on the left, and a call to action on the right. The Carley Software logo is at the bottom.

ASBESTOS BAN

Back in early 1980s, the health conscious Scandinavians were the first to ban asbestos containing products, including brake linings, clutch linings and engine gaskets. This led to the introduction of nonasbestos substitutes, and the rest is history.

In January 1986, the U.S. Environmental Protection Agency proposed a ban on the production of nearly all products containing asbestos in this country. The rules also banned imported products containing asbestos, and would be a total ban by 1996.

For awhile, it seemed that asbestos was headed for extinction. Friction material and gasket suppliers worked hard to develop nonasbestos substitutes and gradually made the transition to these new materials. Nobody wanted the liability associated with asbestos. But the EPA proposed ban was eventually overturned in the courts. One reason was that the ban would have put a lot of brake rebuilders as well as others out of business (Fact is, brake rebuilding became uneconomical and these people eventually lost their jobs anyway!)

So asbestos is still with us. Though U.S. auto makers say they no longer use brake or clutch linings that contain any asbestos, such is NOT true for many aftermarket suppliers of replacement brake pads and shoes, and clutch linings.

Friction products such as brake pads, shoes and clutch linings containing asbestos are NOT labeled as such because there is no law that requires manufacturers to do so. Consequently, since there is no way to know if a vehicle has asbestos brake linings or not, it is wise to treat every vehicle as though it might have asbestos linings. And even if a vehicle does not have asbestos linings, there are still concerns that other fibers used in NAO linings may pose the same long term health risks as asbestos!

That is why [OSHA](#) recommends using some type of wet cleaning (aerosol or a brake washer) or enclosed high efficiency vacuuming to keep brake dust to an absolute minimum. Wetting down the fibers with a liquid prior to wiping or washing them off prevents them from becoming airborne. The maximum permissible exposure limit (PEL) is now only **0.1 fibers per cubic centimeter of shop air over an 8-hour period.**

Other Hazardous Materials in Brake Linings

New brake regulations that have been passed in Washington and California are calling for a phased reduction of asbestos, copper, cadmium, lead and mercury in brake linings. Copper and other heavy metals are toxic to aquatic life. Brake dust carrying these metals can be washed into lakes and streams near highways. The concentrations are too low to be a danger to humans, but they can harm fish, frogs and other aquatic life. The law requires reducing the copper and heavy metal content in brake pads to 5% or less by 2020, and reducing it even further to 0.5% by 2025.

A number of major brake suppliers have already introduced new brake linings that are either low copper/low heavy metals (5 percent or less) or are copper free.

Brake Pad LeafMark Ratings



The packaging for many brands of brake pads now carry the LeafMark ratings to indicate their toxic metal content.

Pads that meet the new low copper, low heavy metal, low asbestos requirements are being certified by the Automotive Manufacturers Equipment Compliance Agency (AMECA). Ratings include "A", "B" and "N" edge codes. Each edge code represents a different level of compliance for various contaminants in the friction material. These include copper (Cu), asbestos, chromium (Cr), lead (Pb), mercury (Hg) and cadmium (Cd). Those that meet the highest rating "N" contain less than 0.50 percent copper and NO asbestos, chromium, lead, mercury, cadmium or antimony. New "Leaf Marks" are also being used on some brake pad packaging to indicate the compliance level of the product. This mark gives consumers and installers the ability to tell at a glance if the pads are environmentally compliant or not. Three leaves is the best rating and corresponds to the "N" rating.

For EPA guidelines on how to minimize your exposure to brake dust, [Click Here](#).

For help finding a mesothelioma lawyer if you have asbestos cancer, [Click Here](#).



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