

# Banned Chemical Makes Streets Unsafe

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A toxic chemical from coal-tar-based sealant was found in urban rainwater runoff, street dirt and stream beds in both Madison, Wi., where the sealant was banned in 2007, as well as Milwaukee, Wi., where it is still allowed.

Coal tar sealant, or seal coat, is a black liquid sprayed on roadways, driveways, parking lots, and other surfaces to protect and give them a shiny finish. However the sealant contains polycyclic aromatic hydrocarbons (PAHs). PAHs are suspected to cause cancer in people, as well as being toxic to wildlife, according to the U.S. Geological Survey. Sealants made with coal tar contain approximately 1,000 times more PAHs than seal coats made with asphalt.

In Wisconsin, PAHs seem to be making their way through filtration systems that only catch larger materials, according to the U.S. Geological Survey study. The highest levels of PAHs were found in the sediments left by storm runoff. The levels were high enough to be potentially toxic to wildlife and people. The USGS used the chemical structure of the PAHs they found to trace them back to coal-tar-based seal coats.

Direct exposure comes from simply breathing in the chemical. Airborne PAH concentrations spike to 30,000 times normal levels after being applied, according to a USGS fact sheet. Even after the sealant has dried, dust in surrounding residences can contain PAH levels 25 times higher than dust from areas where coal-tar sealants were not used. A Baylor University study found that exposure to this dust can result in people ingesting doses of PAH 14 times higher than people who didn't live near coal-tar sealed surfaces.

Besides inhalation, the USGS fact sheet noted that skin contact is another means of contamination. Parents may wish to contact the owners of playgrounds and other black-topped areas to check for coal-tar sealant before letting children play on the surfaces.

IMAGE: A professional applies coal-tar-based seal coat to a test plot used to measure emission of polycyclic aromatic carbons into the air. (Pete V PHOTOS: The Stinkiest Places on Earth/Metre, USGS)

