

Coal Tar Sealants—Sudbury Takes the Lead

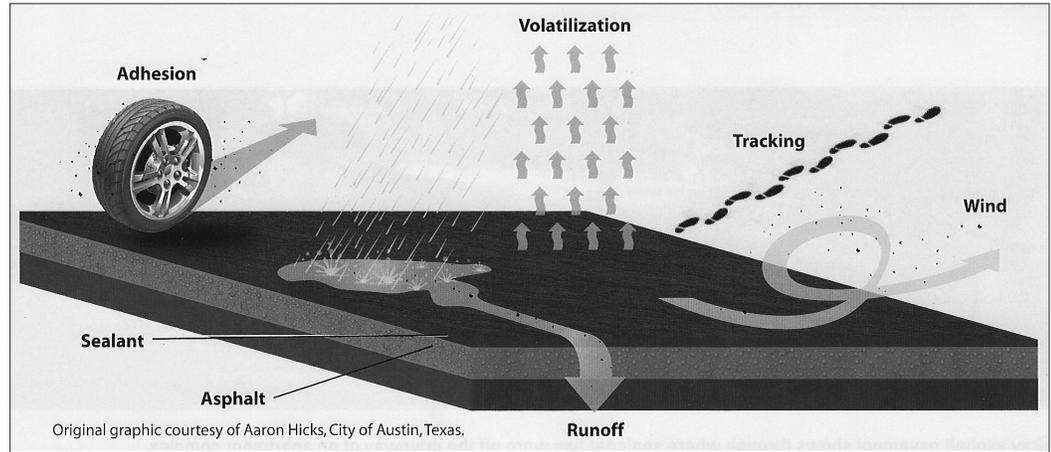
Debbie Dinneen, Conservation Coordinator, Sudbury

Driveway sealant, also known as sealcoat, has been used for more than 50 years. It is marketed to keep driveways and parking lots from cracking, and to restore that smooth black look. Industry representatives say that their products are safe but recent studies by the U.S. Geological Survey (USGS), Baylor University, the U.S. Environmental Protection Agency (EPA), and University of New Hampshire indicate otherwise. These studies all show that coal-tar-based sealants contain high levels of toxic compounds called PAHs (polycyclic aromatic hydrocarbons). According to USGS: “Parking lots and driveways with coal-tar-based sealcoat have concentrations of PAHs hundreds to thousands times higher than those with asphalt-based sealcoat or no sealcoat.”

PAHs are toxic to fish with a number of the compounds deemed hazardous to humans and are probable human carcinogens. These compounds are known pollutants to waterways. The sealant wears off driveway or parking lot surfaces and the PAHs enter our homes as a dust. This dust can be inhaled and be tracked inside on our shoes. When it rains, the stormwater carries the PAHs into our rivers and streams via the storm drains.

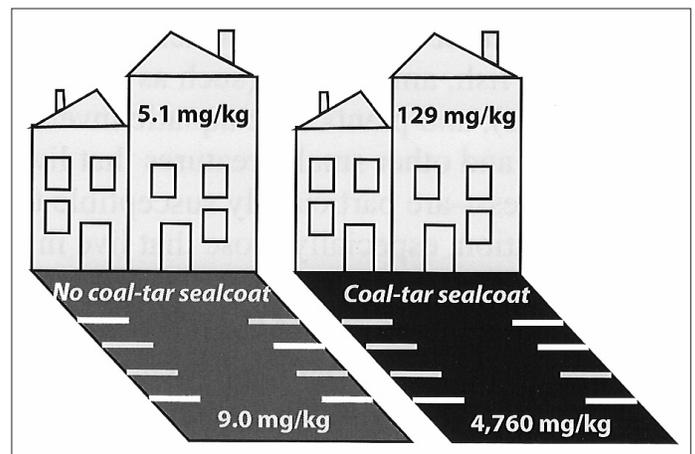
Two types of sealant are available—those containing asphalt and those containing coal tar. Which one you chose makes a big difference. Coal tar is a by-product of coke ovens used in the steel manufacturing industry. Coal-tar-based sealants contain 20-35% coal tar pitch; coal tar pitch contains 50% or more PAHs by weight. The alternative, petroleum (asphalt) based sealants, contain only 0.7% PAHs and use very little or no coal tar. Petroleum-based sealants are not without environmental consequences but are not nearly as toxic as the coal-tar-based products.

It is for these reasons that the Town of Sudbury has adopted wetlands permitting conditions and stormwater bylaw regulations banning the use of coal-tar sealants within areas subject to wetland jurisdiction and on sites where a local stormwater management permit is required. This includes any repaving or resurfacing projects that exceed 500 sq.ft. In Sudbury, as is the case in many of our



surrounding towns, we depend on public or private groundwater wells for our drinking water. Reducing the amount and type of pollutants, including PAHs, that enter our groundwater and surface waters is important for the health of all our human, fauna, fish, and avian residents.

Is that black driveway really worth the harm? To help keep your family and the local wildlife safe, before sealing your driveway hire only a contractor who provides a MSDS (material data safety sheet) for the intended product. Check to see that it does not contain this CAS number for coal tar: 65996-93-2. If doing the work yourself, buy only products with a “coal tar free” logo.



Apartments with coal-tar-based sealcoat on the parking lot had much higher concentrations of PAHs than apartments with an unsealed asphalt or concrete parking lot or with a parking lot with asphalt-based sealcoat. (USGS Fact Sheet, February 2011)

To learn more:

Coal-Tar-Based Pavement Sealcoat, Polycyclic Aromatic Hydrocarbons (PAHs), and Environmental Health, USGS Fact Sheet 2011-3010, Feb. 2011 (pubs.usgs.gov/fs/2011/3010/pdf/fs2011-3010.pdf).

Pavement Sealcoat a Source of Toxins in Stormwater Runoff, UNH (seagrant.unh.edu/news/pavement-sealcoat-toxins).