

Pavement Sealant Bans in the District and beyond: status update



The District's 2008 Coal Tar Pavement Sealant Ban

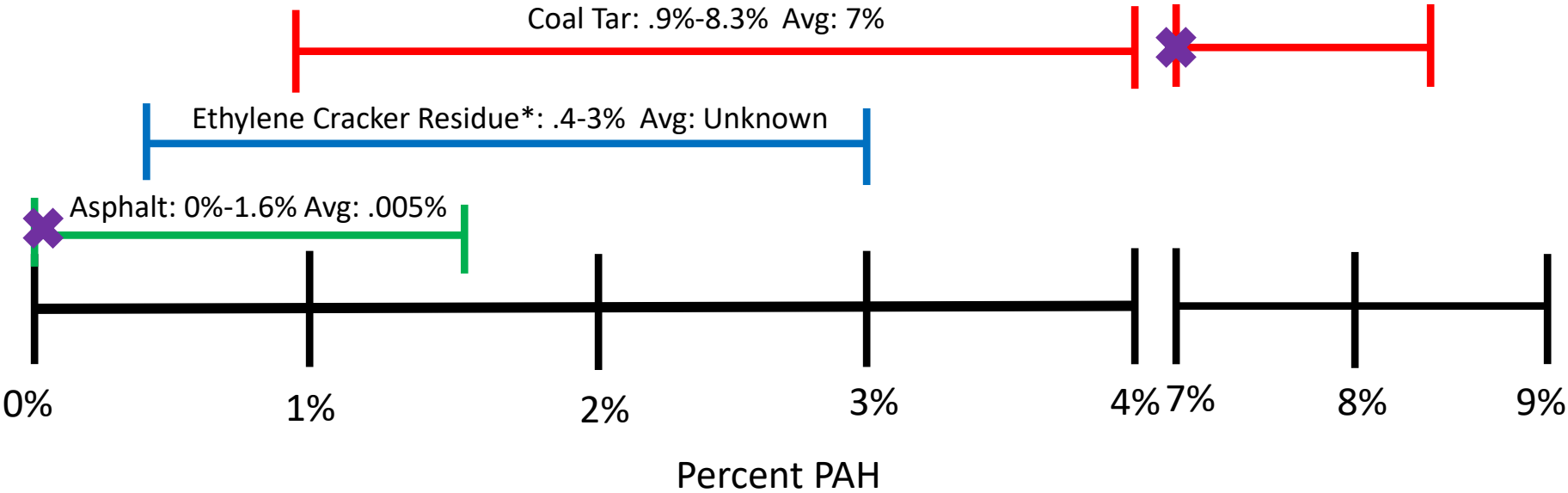
Polycyclic Aromatic Hydrocarbons (PAHs) are ever-present in the urban environment

- Form from the heating or burning of carbon (organic) materials
- U.S. EPA designated 16 PAHs as “priority pollutants”:
 - 6 are “probable carcinogens”
 - 1 is a “known carcinogen”
 - benzo[a]pyrene
- Common sources of PAHs:
 - Tire and brake dust
 - Engine exhaust
 - Used motor oil
- Sealant PAHs in the environment:
 - Sealcoat erosion
 - Stormwater runoff
 - Volatilization in the air

(Mahler & Van Metre 2017)



PAH Concentrations by Sealant Type



*concentration range is an estimate from Minnesota Pollution Control Agency

✕ Average PAH concentration

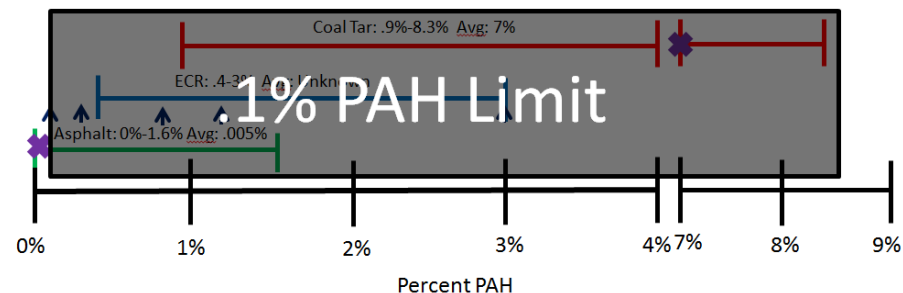
Amendments to District 2008 Ban on Coal Tar Pavement Sealant Products

March 2019, the District's Coal Tar Ban was expanded by DC Council. The amendment:

- **Adds “high PAH sealant products” to the ban, which include:**
 - Coal tar products
 - Coal tar-related products
 - Ethylene cracker residue (ECR) products and their offshoots; and
 - All sealant products over .1% PAH by weight
- **Establishes the authority to create a list of compliant products and certification process in the District**

Solutions: Introduce .1% PAH Limit to Law

Why .1%?



- PAH-specific limit protects against the potential for new, non-asphalt/ECR/coal tar, high PAH products to be introduced and used in the District
- Products are currently available with PAH concentrations well below the .1% limit (asphalt-based average is .005%) (Mahler & Van Metre 2017)
- Legislative precedent:
 - European Union classifies road waste with .1% PAHs or higher as hazardous waste (Vansteenkiste & Verhasselt 2004)
 - 13 townships in southern Michigan currently have PAH bans with limit set at .1%

Legislation in Other Jurisdictions

Proposed legislation that includes a PAH Limit

State	Year Proposed	PAH Threshold
Illinois	2017	0.10%
Michigan	2017	0.10%
Massachusetts	2015	1%
New York	2017	1%
Maine	2017	1%
Indiana	2018	1%
Virginia (withdrawn)	2018	1%
Maryland	2020	0.10%
Wisconsin	2020	0.10%

Existing bans*

Municipality	Year Passed	Coal Tar, ECR, or PAH Limit	PAH Threshold
Austin, TX	2005	Coal Tar, PAH Limit	0.10%
Anne Arundel County, MD	2015	Coal Tar	N/A
Connecticut	2017	Coal Tar	N/A
District of Columbia	2009	Coal Tar	N/A
Milwaukee, WI	2017	Coal Tar, PAH Limit	1%
Minnesota	2013	Coal Tar	N/A
Montgomery County, MD	2012	Coal Tar, PAH Limit	0.10%
Prince George's County, MD	2015	Coal Tar	N/A
Van Buren Township, MI and 14 other southern Michigan municipalities	2017	Coal Tar, PAH Limit	0.10%
Washington	2011	Coal Tar	N/A

*7 states have coal tar bans within their boundaries in addition to 3 states with state-wide bans. Not all bans included on this list.

MD HB0077: Safer Sealant Act of 2021

MD HB77 | 2021 | Regular Session



Maryland House Bill 77

[MD State Legislature page for HB77](#)

Summary

Sponsors

Texts

Votes

Research

Comments

Track

Status

Spectrum: Partisan Bill (Democrat 1-0)

Status: Engrossed on February 16 2021 - 50% progression

Action: 2021-03-10 - Hearing 3/24 at 1:00 p.m.

Pending: [Senate Education Health and Environmental Affairs Committee](#)

Hearing: Mar 24 @ 1:00 pm Senate Education, Health, and Environmental Affairs Hearing

Text: [Latest bill text \(Engrossed\) \[PDF\]](#)

Summary

Prohibiting, on or after October 1, 2022, a person from supplying, selling, offering for sale, or manufacturing a high-PAH driveway sealer for use in the State; prohibiting, on or after October 1, 2022, a person from applying or soliciting the application of a high-PAH driveway sealer to pavement in the State; requiring the Department of the Environment to develop labeling requirements for a person supplying, selling, offering for sale, or manufacturing a driveway sealer for use in the State; etc.

Legislation PASSED- now what?

PAHs are not routinely tested, publicly provided by pavement sealant manufacturers. How to provide guidance to regulated community on what can and can't be used in DC?

Chesapeake Bay Program Goal Implementation Team Project Support- Toxic Contaminants Work Group


- \$85,000 to fund contractor to:
 - Create standard testing protocol to test for PAHs in pavement sealant
 - Test products using protocol to create “low-PAH product” lists:
 - Gold: Product $\leq 0.1\%$ (1,000 ppm) PAHs
 - Silver: Product $\leq 1\%$ PAHs (10,000 ppm)



Project Steering Committee

- Chesapeake Bay Program (co-chair)
- DOEE (co-chair)
- Sitelab (contractor)
- Maryland Dept. of Env.
- Montgomery County Dept. of Environmental Protection
- Austin, TX (gov)
- Huron River Watershed Council (nonprofit)
- USGS (unofficial representation)


Project Status

-  Task 1: Develop protocol
 - Contractor tested 6 products (2 ECR, 2 CT, 2 asphalt) using EPA analysis methods **8270D**, 8270D-SIM, EPH, on dried and **wet** samples

Findings:

- ECR, Coal Tar products reported high PAH concentrations (above 1%) regardless of analysis method, sample preparation
- 8270D sufficient for determining accurate concentrations PAHs, most economical option (EPH not accurate enough, 8270D-SIM expensive)
- Testing wet samples most replicable, consistent, doable for labs

Project Status

-  Task 2: Validate protocol and quality control/quality assurance mechanisms
 - QAPP developed and approved by EPA
 - Additional testing done using 4 different labs with various sample extraction techniques to confirm protocol consistency, quality
 - Protocol drafted, reviewed by EPA Region 3 Quality Assurance Officer
- Samples must be analyzed by NELAP-accredited lab with 8270D/ waste sample experience
- Data packages must include QA reporting for DOEE/regulator review

Project Status

- Task 1: Develop protocol
- Task 2: Validate protocol
- **(Now-summer)** Task 3: Engage regulated and associated community with protocol
 - Protocol open for review from manufacturers, accredited labs, regulators, stakeholders
- **(Summer-early fall)** Task 4: Test sealant products with protocol to create Gold and Silver “Low-PAH Products” Lists

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Final protocol and Low-PAH lists will be made publicly available for use by any interested party at doee.dc.gov/coaltar

Interested in supporting PAH-limit laws?

- **SUPPORT** PAH-limit legislation in your town, county, state.
 - Maryland Senate hearing 3/24 1:00 PM

- **SPREAD** the word about the testing protocol project as a publicly available resource

- **SHARE** the draft protocol (when ready), DOEE contact information, resources, information about pavement sealants as emerging threats
 - Lillian Power (202)671-0080 and lillian.power@dc.gov
 - doee.dc.gov/coaltar