

Identifying Coal Tar Based Asphalt Sealcoats- A Guide for Applicators

There are several types of asphalt sealcoat products available to professional applicators. The most commonly used are: coal tar-based, asphalt emulsion-based, Gilsonite (bitumen)-based, or acrylic-based. Of these, coal tar-based products or blends contain the greatest amounts of Polycyclic Aromatic Hydrocarbons (PAHs), which have been found to cause cancer.

The table below¹ shows the amount of PAHs typically found in one brand of coal-tar (RT-12) used for blending asphalt sealcoats. The PAHs that have been highlighted are "reasonably anticipated to be human carcinogens" according to the *12th Report on Carcinogens* by the National Toxicology Program².

CAS	Component	Percent (weight)
65996-93-2	HIGH TEMPERATURE COAL TAR PITCH	100
-	The above listed complex substance contains the constituents listed below	-
85-01-8	PHENANTHRENE	1.85-2.7
206-44-0	FLUORANTHENE	1.50-2.35
129-00-0	PYRENE	1.02-1.59
91-20-3	NAPHTHALENE	0.87-1.32
120-12-7	ANTHRACENE	0.75-0.99
56-55-3	BENZO(A)ANTHRACENE	0.65-0.84
193-39-5	INDENO(1,2,3-CD)PYRENE	0.48-0.81
83-32-9	ACENAPHTHENE	0.47-0.74
218-01-9	CHRYSENE	0.56-0.73
205-99-2	BENZO(B)FLUORANTHENE	0.30-0.70
86-73-7	FLUORENE	0.50-0.70
192-97-2	BENZO(E)PYRENE	0.40-0.70
50-32-8	BENZO(A)PYRENE	0.47-0.69
132-64-9	DIBENZOFURAN	0.49-0.68
191-24-2	BENZO(G,H,I)PERYLENE	0.37-0.68
86-74-8	CARBAZOLE	0.40-0.60
90-12-0	1-METHYLNAPHTHALENE	0.00-0.60
189-64-0	DIBENZO(A,H)PYRENE	0.27-0.58
205-82-3	BENZO(J)FLUORANTHENE	0.22-0.56
207-08-9	BENZO(K)FLUORANTHENE	0.21-0.52
243-17-4	BENZO(B)FLUORENE	0.20-0.50
238-84-6	BENZO(A)FLUORENE	0.30-0.40
192-65-4	DIBENZO(A,E)PYRENE	0.00-0.30
217-59-4	TRIPHENYLENE	0.10-0.20
92-52-4	DIPHENYL	0.00-0.20
224-42-0	DIBENZ(A,J)ACRIDINE	0.07-0.19
91-22-5	QUINOLINE	0.00-0.16
53-70-3	DIBENZO(A,H)ANTHRACENE	0.07-0.11
226-36-8	DIBENZ(A,H)ACRIDINE	0.00-0.06
208-96-8	ACENAPHTHYLENE	0.01-0.04
194-59-2	7H-DIBENZO(C,G)CARBAZOLE	0.00-0.01

Products with PAH containing coal tar should have Material Safety Data Sheets (MSDS), container labels or technical bulletins that reference Chemical Abstracts Service (CAS) numbers 65996-93-2, 65996-89-6 or 8007-45-2, and/or use the words: coal tar; refined coal tar; refined tar; refined coal tar pitch; coal tar pitch volatiles; and/or RT-12.

Coal tar-based sealant producers/distributors

This is a partial list of companies that produce or distribute asphalt sealcoats that are coal tar-based or coal tar blended. These companies may also produce or distribute asphalt sealants that do not contain coal tar.

Bonsal American - Chicago, IL

Brewer Co. - Cincinnati, OH

Distributed by: American Asphalt Materials, Menomonee Falls, WI; Valley Sealcoat, Appleton, WI

STAR Inc.- Columbus , OH

Distributed by: Sherwin Industries - Milwaukee, WI; Star Seal of Minnesota, Shakopee, MN

Surface Coatings Co. - Pontiac, MI

Vance Brothers Asphalt Mfg. & Supply - Kansas City, MO

Distributed by: Vance Brothers Inc, Minneapolis, MN

VelveTop Products - Long Island, NY

SealMaster - Sandusky, OH

Distributed by: SealMaster-Milwaukee, WI; SealMaster-ST Paul, MN

Neyra - Cincinnati, OH

Western Colloid - Oakland, CA

Coal tar-based sealcoat brand names and manufacturers

This is a partial list of sealcoat brand names that may contain coal tar.

GemSeal - Bonsal American

BrewerCote - Brewer Co.

StarSeal - STAR Inc.

Seal-Pave - Surface Coatings Co.

VelveTop - VelveTop Products

SealMaster - SealMaster

Notes:

1. Source: Koppers Inc.- Material Safety Data sheet #00228325, *Pavement Sealer Base PSB*; K-364; RT-12
2. [12th Report on Carcinogens, National Toxicology Program](http://ntp.niehs.nih.gov/ntp/roc/twelfth/roc12.pdf), <http://ntp.niehs.nih.gov/ntp/roc/twelfth/roc12.pdf>

DSL 11/8/12

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