

Creosote - ToxFAQs™



What is creosote?

Creosote is the name used for a variety of products: wood creosote, coal tar creosote, coal tar, coal tar pitch, and coal tar pitch volatiles. These products are mixtures of many chemicals created by burning of beech and other woods, coal, or from the resin of the creosote bush. Wood creosote is a colorless to yellowish greasy liquid with a smoky odor and burned taste. Coal tar creosote is a thick, oily liquid typically amber to black in color. Coal tar and coal tar pitch are usually thick, black, or dark-brown liquids or semi-solids, with a smoky odor.

Wood creosote has been used as a disinfectant, a laxative, and a cough treatment, but has since been replaced by better medicines. Coal tar products are used in medicines to treat skin diseases such as psoriasis, and as animal and bird repellents, insecticides, animal dips, and fungicides. Coal tar creosote is the most widely used wood preservative in the United States. Exposure to coal tar pitch and coal tar pitch volatiles may occur in asphalt workers; in rubber, aluminum, iron, steel, and tire factory workers; and in coke-producing industries.

What happens to creosote in the environment?

Coal tar creosote is released to water and soil mainly as a result of its use in the wood preservation industry. Components of creosote that do not dissolve in water will remain in place in a tar-like mass. Some components of coal tar creosote dissolve in water and may move through the soil to groundwater. Once in groundwater, it may take years for it to break down. Coal tar creosote can build up in plants and animals. We do not know what happens to wood creosote when it enters the environment.

How can I be exposed to creosote?

You could be exposed by using products that contain creosote to improve skin problems such as eczema or psoriasis. Exposure can occur by eating herbal remedies containing the leaves from the creosote bush, which are sold as dietary supplements. Exposure to creosote compounds can occur in workers in various industries, including asphalt, rubber, aluminum, iron, steel, tire and, coke-producing. Exposure can also occur by using creosote-treated wood in building fences, bridges, or railroad tracks, or in installing telephone poles. Communities located near creosote facilities that may be exposed via the air may notice creosote odors. Additionally, exposure to creosote compounds may occur in people living in treated-wood houses that may result in air or skin contact with creosote, or drinking water contaminated by a hazardous waste site.

Creosote is a mixture of many chemicals.

How can creosote affect my health?

Some studies in workers and laboratory animals show that breathing problems and irritation to the respiratory tract can happen following breathing coal tar in the air. In pregnant laboratory animals, eating coal tar or having coal tar applied to the skin has been shown to damage the fetus. Studies in laboratory animals show that eating wood creosote damages the liver. Skin and eyes may also become irritated when exposed to creosote compounds. Skin rashes, severe irritation to the skin, and chemical burns to the surface of the eye have been seen in workers and laboratory animals. Longer direct skin contact with low levels of creosote mixtures or their vapors can result in increased light sensitivity, damage to the cornea, and skin damage.

Creosote

Can creosote cause cancer?

Long-term exposure of workers to creosote has been shown to increase cancer in several tissues, including the respiratory tract, skin, lung, pancreas, kidney, scrotum, prostate, rectum, bladder, and central nervous system. Animal studies have also shown skin cancer from skin exposure to coal tar products.

The [U.S. Department of Health and Human Services \(HHS\)](#) has classified coal tars, coal-tar pitches, and coke-oven emissions as carcinogenic to humans.

The [U.S. Environmental Protection Agency \(EPA\)](#) has classified coke oven emissions (coal tar pitch volatiles) as carcinogenic to humans and creosote as probably carcinogenic to humans.

The [International Agency for Research on Cancer \(IARC\)](#) has classified creosotes as probably carcinogenic to humans. Additionally, IARC has classified the carcinogenicity of creosote compounds for specific occupational settings and cancer types, including during coke production (lung cancer), coal gasification (lung cancer), aluminum production (lung and bladder cancer), coal-tar distillation (skin cancer), and roofing and paving (lung and bladder cancer), all of which are considered to be carcinogenic to humans.

Can I get a medical test to check for creosote?

There is no medical test to determine if you have been exposed to creosote. Some components of creosote mixtures can be measured in body tissues, urine, or blood after exposure to creosote. These tests cannot tell whether harmful health effects will occur. The tests are not routinely available at the doctor's office because they require special equipment. However, tests to detect exposure may be available for specific constituents of creosote (e.g., naphthalene). If you are sick or concerned about exposure to creosote, please see your doctor or health care provider.

How can I protect myself and my family from creosote?

If you live in a residential area that used to have a wood preservation facility or gas manufacturing plant nearby, avoid areas that have known contamination. Educate children about creosote and how to identify creosote-treated wood. Avoid using herbal remedies containing the leaves of the creosote bush and seek alternatives to skin remedies containing creosote. If you are exposed to creosote in the workplace, make sure you do not carry the chemical home on your clothing, skin, hair, tools, or other objects from the workplace (shower before going home).

For more information:

Call **CDC-INFO** at 1-800-232-4636, or submit your question online at <https://wwwn.cdc.gov/dcs/ContactUs/Form>

Go to ATSDR's Toxicological Profile for Creosote: <https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=66&tid=18>

Go to ATSDR's Toxic Substances Portal: <https://wwwn.cdc.gov/TSP/index.aspx>

Find & contact your ATSDR Regional Representative at http://www.atsdr.cdc.gov/DRO/dro_org.html

For more information on creosote odors: <https://www.atsdr.cdc.gov/odors/>

