



FAST FACTS

Recent IARC Ruling on Occupational
Exposure to Asphalt and its
Emissions during Roofing

DID YOU KNOW?

What information is available about the recent IARC review of asphalt?

- The International Agency for Research on Cancer (IARC) is an arm of the UN's World Health Organization, headquartered in Lyon, France. One of IARC's missions is to develop detailed scientific reviews (called "Monographs") of the potential carcinogenicity of substances.
- Asphalt was reviewed during a meeting that IARC held in Lyon in October 2011.
- To date, IARC has released two short summaries of the meeting:
 - A 1-page statement posted on its web site after the meeting concluded, and
 - A 2-page article in the December 2011 edition of the journal Lancet Oncology.
- According to these announcements, one of IARC's primary findings was that: occupational exposures to oxidized bitumens [asphalt] and their emissions during roofing are probably carcinogenic.
- The meaning and basis for this determination will not be fully understood until IARC publishes the Monograph. IARC has indicated that the Monograph should be published within about a year of the meetings in Lyon – or by late 2012.
- It is understandable that, during this period of uncertainty, the brief IARC releases may cause confusion and undue worry among workers, homeowners and others who use or come in contact with asphalt roofing. This document is intended to provide answers to the most frequently asked questions about the IARC announcements to date.

DID YOU KNOW?

What types of exposures are covered by the IARC finding?

- Even though we have, at the moment, only a glimpse of the scientific evaluation IARC will make in the forthcoming Monograph, the two statements IARC has released to date do provide some useful indications about the meaning and scope of the IARC finding.
- First, the IARC finding by its terms relates only to worker exposures during roofing. That is:

IARC has not classified any asphalt roofing product as a cancer hazard.

- Equally important, IARC's finding does not apply to homeowners, other building owners/managers, building occupants, consumers or the general public who may have contact with or exposure to asphalt roofing products, including:
 - Contact with roofing materials in-place on roofs
 - Contact with manufactured roofing products, such as those in supplier inventories or retail outlets
 - Unpleasant odors experienced by building occupants or others in the vicinity of a roofing job
 - Contact with rain water run-off from roofs
 - Exposure to air emissions from roofing plants
 - Roofing recycling or waste disposal operations

DID YOU KNOW?

Putting Things in Perspective

- IARC Monographs address “hazard,” not “risk.”
 - A “hazard” is something that is capable of causing harm under certain circumstances.
 - “Risk,” in contrast, is the chance (high or low) that the hazard will actually cause harm.
- A good example is electricity. Electricity is a hazard because exposure can result in burns or electrocution. In contrast, in many settings (e.g., the routine use of electricity in today’s homes), the risk is minimal.
- The distinction between hazard and risk matters because IARC findings are typically based on studies – often studies in laboratory animals – involving prolonged exposure to levels far greater than are seen in real-world settings. As IARC puts it, “*Monographs* identify cancer hazards even when risks are very low at current exposure levels.”
- IARC has classified a number of things we encounter daily but generally at levels far below those often involved in the studies IARC reviews. Some examples of everyday exposures IARC has found to be possible, probable or known carcinogens:
 - Coffee
 - Alcohol
 - Gasoline
 - Cell phones
 - Wood dust
 - Exhaust from gas and diesel engines
 - Caffeic acid, a compound present naturally in a wide variety of fruits and vegetables
 - High-temperature frying

DID YOU KNOW?

What are the risks to roofers working with oxidized asphalt?

- Again, IARC evaluates hazards, not risks. Although we must wait for the publication of the Monograph, there is every reason to expect that, even in settings where IARC finds a cancer hazard for roofing with oxidized asphalt products, the risks to workers will be negligible or insignificant.
 - According to industry estimates, 94% of asphalt roofing production today is applied “cold” (i.e., at ambient temperatures, without heating), or is “soft-applied” using torches or hot air welders to heat the material sufficiently to ensure good adhesion to the substrate.
 - The brief announcements IARC has made thus far, and the scientific data we expect to be reviewed in the Monograph yet to come, do not suggest that roofers working with these products are exposed to significant cancer risks.
- For hot-applied roofing jobs representing just 6% of production, the weight of the available scientific evidence does not indicate that asphalt fumes pose a significant cancer risk to exposed workers. Nevertheless, ARMA has long embraced a prudent approach to product stewardship that supports practicable exposure control while scientific research seeks to fill critical data gaps. This approach has yielded a series of National Institute for Occupational Safety and Health (NIOSH) publications, developed in cooperation with industry and labor, that identify work practices, engineering controls, and low-fuming products which, when used, can significantly reduce fume exposures during hot-applied roofing, thus reducing potential cancer risks to roofers. These publications can be viewed [here](#), [here](#), and [here](#).

DID YOU KNOW?

Recap – How does the IARC announcement affect me?

- IARC’s cancer hazard finding – for occupational exposures to oxidized asphalt and its emissions during roofing – applies to roofers, particularly those who do hot asphalt work with oxidized asphalt.
- But for all others, whose contact with asphalt roofing products is briefer and at far lower (or negligible) exposure levels, IARC did not announce a cancer hazard. You are not affected by IARC’s hazard determination if you:
 - Are a homeowner
 - Are a do-it-yourselfer
 - Are a retailer or distributor, or work for one
 - Are a roofing recycler or waste processor, or work for one
 - Have potential contact with rainwater run-off from roofs
 - Have contact with roofing in retail outlets or inventories
 - Are a building occupant or in the vicinity of a hot asphalt roofing job in progress
 - Live near an asphalt roofing plant

The Bottom Line – Will having asphalt roofing products on my home or building pose a health hazard?

- No. Non-occupational exposures to asphalt roofing products have not been identified by IARC to cause cancer.
 - If you are a building occupant and find the smell of asphalt unpleasant, [click here](#) for more information and to read about precautions your contactor can take to minimize odors.
- You should feel comfortable when choosing asphalt roofing products for your home or business.
 - Always review carefully the warnings and precautionary statements on labels, MSDSs and other hazard information provided by the manufacturer of the roofing product in use.
 - For more information, contact ARMA by [clicking here](#) or calling (202) 591-2450.

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