Asphalt Worker Safety Meeting Kit

INDUSTRIES THAT REGULARLY USE ASPHALT

Asphalt is primarily used for infrastructure and construction purposes. It's estimated that road construction accounts for the majority of asphalt use, where it is mixed with other aggregates to create the asphalt concrete roads that North Americans drive on every day. To put this further into context, it's estimated that about 95 percent of the 2.6 million miles of paved roads in the United States were created with asphalt – and this doesn't include roads that are repaved or replaced each year. That accounts for a total of 18 billion tons of asphalt pavement. Asphalt is also used to create waterproofing products, roofing felt and roofing materials, and it's used as a sealant for flat roofs.

HAZARDS OF WORKING WITH ASPHALT

- **Fire/explosion:** There's a significant fire hazard associated with asphalt due to the high temperatures that it's stored and handled at, and because it's composed largely of crude oil. Because of these high temperatures, it could ignite – especially if it comes into contact with a spark, open flame, or another source of ignition.
- **Fume inhalation:** Though no OSHA standard exists for asphalt fumes, breathing in asphalt fumes can irritate the nose, throat and lungs, potentially leading to a sore throat or cough, or more long-term health complications, such as emphysema. Certain asphalt mixes can also lead to dizziness and internal organ damage if they're inhaled. Asphalt inhalation has also been linked to some cancers.
- **Bodily exposure (skin burns):** Since asphalt is stored and handled at high temperatures, it's important to keep the substance off of your skin. Failure to do so can lead to serious burns and other skin defects. Additionally, your eyes may also become irritated by asphalt fumes or from asphalt particulate. If asphalt were to come into contact with the eyes, workers should locate the on-site eyewash station and flush the eyes for at least 15 minutes.

ASPHALT PPE: WHAT WORKERS NEED TO KNOW

Minimize or eliminate any health risks by ensuring workers don the appropriate PPE.

- **Gloves:** Gloves should be thermally insulated to ensure that no asphalt comes into contact with your skin and risks burning or irritating it. For example, cloth or leather gloves won't do the trick, as asphalt can potentially penetrate these permeable materials.
- **Coveralls:** Coveralls get their name because they "cover all." And this is important for ensuring that no asphalt comes into contact with any part of your body. If you don't have coveralls on hand, make sure you're wearing a long sleeve shirt and pants to cover as much of your body as possible.
- **Face shield or safety glasses**: Eye protection is essential as well when you're working with asphalt. Safety glasses do a nice job of protecting the eyes, but if you want to ensure your entire face is protected, you may consider wearing a full-face shield.
- **Respirator:** The best way to avoid breathing in any of the potentially hazardous asphalt fumes is to wear a fit-tested respirator. Dust masks typically do not provide adequate protection, but a respirator will. It's especially important to have the right respiratory protection when working with asphalt in confined or enclosed areas.

SAFETY MEASURES FOR WORKERS

- **Know your job site:** Any job site orientation should include a review of where to find certain emergency safety devices. For instance, you'll want to know where the fire extinguisher is located in the event of asphalt ignition. It's also important to note where the eyewash station is should you need to access it to flush out your eyes. Being prepared and knowing how to react to any potential issue with asphalt is important to ensuring that your site stays as safe as possible.
- **Understand the MSDS / SDS:** The Material Safety Data Sheet, or MSDS, helps inform workers of the ingredients of a product as well as the potential health hazards associated with it. This is important to understand for a few reasons. One, asphalt is blended with a solvent in order for it to take on more of a liquid form. However, the solvent(s) that it is blended with often range in toxicity. It's crucial to know what your asphalt mix has been "cut" with, so you know the potential health hazards. The MSDS can help you understand these hazards.
- **Mix in an enclosed space:** Try not to mix asphalt in an open kettle. This potentially exposes workers to fumes and increases the risk of a fire.
- **Don't eat or drink anything around asphalt:** Have a designated area well away from where asphalt is being mixed and applied so that anything workers consume is unlikely to be contaminated with asphalt or asphalt byproducts. It's also important to ensure that workers wash their hands properly prior to eating anything. Smoking should also not be done around asphalt.
- **Cut asphalt with more health-friendly aggregates:** If you're able to, consider mixing asphalt with more friendly aggregates that don't generate toxic fumes. Combined with wearing the proper PPE, the asphalt will pose even less of a risk.

FINAL WORD

Using proper PPE is considered the "last line of defense" in the hierarchy of controls to protect workers from injury. This is particularly evident in industrial and commercial asphalt tasks and operations.