

ASPHALT WORKER SAFETY

Asphalt is used for paving and surfacing roads, roofing, concrete work, and paints. It is made from petroleum products and is usually heated between 150-200 degrees F. Asphalt is often mixed with solvents (diesel, kerosene, naphtha, toluene, and xylene), binders, hardening and bonding agents (resins), crushed rock, sand, and recycled rubber. Exposure to asphalt fumes can cause serious health effects, so get training and use safe work practices.

When asphalt is heated, the fumes can cause coughing, a scratchy throat, or lung irritation. Long term exposure can lead to bronchitis or emphysema. Asphalt additives may create vapors that can cause damage to the liver, kidneys, and nervous system. Hot asphalt can release hydrogen sulfide gas (H₂S) that can cause lung irritation, suffocation, or death. Skin contact with hot asphalt can cause burns while absorbing the chemicals can lead to allergies and rashes. Eyes can be irritated by asphalt fumes or if you touch them with dirty hands.

Find out about the asphalt products you work with. Check the product label or material safety data sheet (MSDS) to get health and safety information about the specific asphalt mix and ingredients that you use. Where possible, choose asphalt products that are safer to use. Rapid cure asphalts contain solvents to help them evaporate faster, but this increases the risk of vapors and fire. Slower cure and lower temperature asphalt applications reduce the fumes and the fire hazard.

Wear personal protective equipment (PPE) when working with asphalt. Thermally insulated gloves prevent asphalt burns and stop solvents from soaking into your skin. Wear long sleeves and pants or coveralls. Safety glasses and a face shield protect your eyes and face. Safety boots protect your feet. If necessary, use respiratory protection to prevent overexposure to asphalt fumes.

Avoid breathing asphalt fumes by staying upwind of application areas and enclosing kettles and mixing operations. Don't stick your head over an open tank or kettle and avoid open stirring to prevent burns and overexposure to fumes. Use your PPE to keep asphalt off of your skin and out of your eyes. Wash your hands frequently and before you eat, drink, smoke, or use the restroom.

Heated asphalt is a fire and explosion hazard. Do not allow water to splash into hot asphalt because it can bubble up explosively. Some asphalt additives can be flammable. Do not smoke around flammable vapors. Avoid heat and sparks around your asphalt work. Do not weld an asphalt tank or kettle unless you are certain that it does not contain flammable vapors. Keep the correct type of fire extinguisher handy when using asphalt.

Content Source: Occupational Safety and Health Administration (OSHA) (Users of Safety Talk are advised to determine the suitability of the information as it applies to local situations and work practices and its conformance with applicable laws and regulations.)