

ASPHALT

Asphalt is a black, sticky material that comes from crude oil. It is used in paving, roofing, waterproofing and some glue. Asphalt is often confused with coal tar or pitch. Coal tar and pitch come from coal, not oil. Asphalt is a solid or semisolid substance. It is mixed with solvents to make it more liquid, and easier to work with. Some of the solvents used to mix with asphalt are naphtha, toluene, and xylene. These solvents are hazardous substances, flammable, very smelly and increase the potential hazards of working with asphalt. There are many different types and grades of asphalt in current use.

Who is it estimated that 350,000 workers are exposed to asphalt fumes each year. Workers most likely to be exposed to asphalt fumes are road workers, roofers, employees at hot-mix asphalt facilities and general construction workers.

Breathing asphalt fumes is the most common method of exposure. The acute (immediate) health effects of asphalt fumes include; headache, skin rash, fatigue, eye and throat irritation, and cough. Exposure to asphalt fumes (and the solvents in them) over long periods of time (chronic exposure) may cause lung and stomach cancer. Long-term contact of asphalt with your skin can cause pigment change, which is made worse by sunlight exposure. To find out the specific hazards associated with the type of asphalt you are working with, consult the Material Safety Data Sheet from your employer.

Many forms of asphalt are flammable. This can lead to potential fires and explosions. Sources of ignition (e.g. sparks, flames, cigarettes, etc.) should be kept away from the area where the hot asphalt is being used. Asphalt is almost always used hot, so burns are a common form of injuries. Have a fire extinguisher available, of the correct type, for possible fires. Do not use a fire extinguisher unless you have been fully trained in its use.

Methods of Control

- Substitution – there are many types of asphalt. Some are more hazardous than others are. If possible, substitute a less hazardous form of asphalt in your construction project.
- Isolation – isolating asphalt operations will minimize worker exposure. Where possible, transfer the asphalt automatically by pump to minimize exposures.

- Enclosure – enclose the mixing and stirring operations. Stirring asphalt in an open kettle exposes you to fumes, solvent vapors and possible burns.

Prior to starting any job, discuss with your supervisor/employer the appropriate personal protective equipment necessary for the work being performed:

- Gloves – for the best protection, use thermally insulated gloves.
- Clothes – wear long sleeve shirts and long pants.
- Eye protection – wear indirect vent goggles when working with liquids. If the liquids are corrosive, highly irritating or toxic, wear a face shield along with the goggles.

Safe Work Practices

- Do not eat, smoke or drink where asphalt is handled.
- Wash hands carefully before eating, drinking, smoking or using the toilet.
- If you feel ill while working with asphalt let your supervisor know right away.

