Work Safely with Concrete and Cement Meeting Kit



WHAT'S AT STAKE

Concrete is a common building material that can be used in a variety of ways. It's generally made by combining cement, sand, aggregate (small stones) and water. When these materials are mixed in the correct amounts and if they're further strengthened by adding re-bar, fiberglass strands or plastic rods, the concrete can be used to build roads, bridges, buildings, septic tanks, floors, concrete blocks, and even countertops for homes.

WHAT'S THE DANGER

ADVERSE HEALTH EFFECTS FROM CONCRETE AND CEMENT. Three Ways Workers Exposed.

Skin Contact – getting cement dust or wet concrete on your skin can cause burns, rashes, and skin irritations.

Eye Contact – getting concrete or cement dust in your eyes may cause immediate or delayed irritation of the eyes.

Inhalation – Dust may occur when workers empty bags of cement to make concrete. When sanding, grinding, cutting, drilling or breaking up concrete, the dust generated has the same hazards as the dust from cement. Long term exposure to concrete dust containing crystalline silica can lead to a disabling lung disease called silicosis.

Dry and Wet Concrete Dangers

Dry Concrete. Dry concrete can irritate the eyes, nose, and throat, as well as the skin. When dry concrete makes contact with skin, it can result in minor irritation to cracking of the skin. Those who are exposed to silica dust, a main component in dry concrete, for long periods of time are at risk for developing silicosis or lung cancer.

Wet Concrete. When working with wet concrete the risk of silica exposure decreases, but there are still many hazards to be aware of. An overexposure of wet concrete can result in many adverse health effects.

HOW TO PROTECT YOURSELF

SAFETY MEASURES WORKING WITH CONCRETE

1. Wear These Types of PPE When You Work with Concrete:

Boots and gloves: Boots and gloves prevent the chemicals in the cement used in concrete from causing skin irritation or chemical burns. Alkali-resistant boots and gloves are ideal for resisting these caustic chemicals.

Safety goggles: Safety goggles prevent eye irritation from chemicals and concrete dust. For the best protection, wear shatterproof goggles that can resist heavy impacts.

Face protection: Face protection such as a P-95, N-95 or R-95 mask helps prevent lung problems caused by concrete dust inhalation. Silicosis, for instance, can occur when workers breathe in significant amounts of crystalline silica dust over several years. Breathing in concrete dust can also cause nose and throat irritation, chronic bronchitis and occupational asthma. Using a face mask or respirator helps keep the lungs clear and healthy.

Full-length pants and shirts: Use fully covered to reduce the risk of skin irritation and concrete burns. Full-length clothing helps protect your skin from chemicals.

2. Use the Proper Tools

Use tools designed specifically for dusty work environments. Whenever possible, use exhaust-ventilated tools, such as hand-held cutting saws or concrete hammer drills, that can remove dust at the source. You can also employ tools fitted with a water supply to help tamp down dust and reduce inhalation.

3. Employ The Proper Techniques

If you can’t adequately ventilate dust at the source, you will need to ventilate the larger workspace to prevent dust inhalation. Use proper lifting and handling techniques to avoid injury. Bending over and lifting heavy concrete slabs can hurt your back. Be sure to squat and lift with your legs to keep the spine and back muscles in the right positions. Never twist your back while you are carrying a heavy load.

4. Have Washing Stations Available

Any location where concrete mixing or pouring occurs should have eyewash and general washing up stations available. This way, workers can rinse their eyes out immediately if they get concrete dust or debris in them.

SAFETY PRECAUTIONS FOR WORKING ON A CONCRETE CONSTRUCTION SITE

1. Wear Additional PPE. When you’re working with concrete, you’ll probably already be wearing essential PPE like gloves, goggles and a face mask. On a construction site, consider adding additional pieces of equipment like these:

- A hard hat or helmet
- Steel-toed boots
- Earplugs

2. Exercise Caution Around Concrete Buckets and in Mixers. Workers should not ride in concrete buckets or stand underneath buckets being raised or lowered. Teams should

also route buckets in a way that exposes the smallest number of people to hazards.

You'll also want to use extra caution when you work in or near concrete mixers. Be alert and aware when around mixers to avoid these potential hazards.

3. Communicate Proactively with Your Team. Insufficient communication is one common way for accidents and injuries to occur on a construction site. If you need to pour or move concrete, be sure to clear people from the area first. If you need to perform work activities that could injure nearby workers or generate substantial volumes of dust, let your coworkers know so they can step away.

4. Stay Alert and Vigilant. Always try to remain focused on the job at hand. Refrain from getting drawn into conversation while you work with hazardous machinery and be sure to take your breaks in a safe area, away from accumulated dust.

A SAFETY REVIEW OF HAZARDS WHEN WORKING WITH CONCRETE

- **Mixing risks.** Concrete dust can cause breathing problems. Concrete is composed of small pieces of stone, called aggregate. When these stones are mixed with cement, the tiny particles of aggregate dust can be dispersed into the air and inhaled.
- **Pouring risks.** Concrete can be slippery until it dries. If any bit of the wet mixture gets on a worker's boots or the ground, it can cause the worker to slip and fall. Furthermore, the alkaline properties of wet cement can be caustic. If the cement splashes on the skin and isn't removed quickly, the chemicals in the mixture can lead to third-degree burns.
- **Drying risks.** Concrete slabs can weigh more than 800 pounds and are at risk for tipping, shifting, and falling on those around them.

FINAL WORD

Many business owners fail to take all the necessary precautionary steps to protect their employees. While the liability of a workplace accident may vary depending on the circumstances, the general rule is that if someone else's negligence caused an injury, the injured person deserves compensation.