Concrete Work – The Hazards of Working with Concrete Stats and Facts



FACTS

1. **Chemical Burns & Skin Irritation:** Wet concrete is highly alkaline and can cause severe dermatitis or chemical burns if it remains in contact with unprotected skin—necessitating waterproof gloves and long-sleeve clothing.
2. **Silica Dust Inhalation:** Cutting, grinding, or mixing concrete releases crystalline silica dust, which can lead to silicosis or lung cancer unless workers use N95 respirators or better.
3. **Eye Injuries:** Concrete particles and splashes can cause serious eye damage; ANSI-certified safety glasses or goggles are essential
4. **Respiratory Damage:** Besides silica, exposure to cement dust exacerbates respiratory issues—requiring proper respirators and ventilated environments.
5. **Musculoskeletal Strain:** Heavy lifting of concrete forms or screed requires ergonomic support; lack of back braces and proper technique often causes strain.
6. **Struck-by Hazards:** Working around mixers, pumps, and forms exposes workers to falling tools or wet concrete—hard hats, steel-toed boots, and high-visibility vests are crucial.
7. **Slip/Trip Falls:** Wet, uneven surfaces around concrete pours are slippery—non-slip footwear and fall prevention are key to avoiding falls.

STATS

- BLS 2023 data recorded 174,100 non-fatal injuries in construction, with concrete workers facing risks of skin burns (20%), respiratory issues from silica dust (15%), and foot injuries (10%) from tasks like pouring or grinding. Inadequate PPE contributed to 25% of these incidents.
- In 2024, Respiratory Protection (29 CFR 1926.1153) was the 5th most cited OSHA violation in construction, with 2,500 citations, often due to inadequate respirators for silica dust exposure during concrete cutting. PPE violations (29 CFR 1910.132) ranked 6th, with 1,876 citations.
- A 2022 NIOSH study found that 30% of concrete workers exposed to respirable crystalline silica lacked proper respiratory protection, increasing risks of silicosis and lung cancer.
- CCOHS 2023 data showed that workplaces enforcing respiratory protection and chemical-resistant gloves reduced concrete-related injuries by 22%, especially in tasks like mixing or finishing.
- In 2024, Ontario introduced fines up to $500,000 for repeat OHS violations, including PPE non-compliance, impacting concrete contractors failing to provide respirators or proper gloves.