The Hanover Insurance Group™

Hanover Risk Solutions

Concrete Product Manufacturing —Worker Safety Issues

According to the Occupational Safety and Health Administration (OSHA), of the hundreds of thousands who work in concrete product manufacturing, tens of thousands have experienced a job-related injury, illness or death. Some of the hazards these workers face include: eye and skin irritation and chemical burns; respiratory irritation and disease; inadequate safety guards and lockout/tagout systems on machinery; overexertion and awkward postures; and slips, trips and falls.

Below are some hazards and solutions that OSHA has highlighted for concrete manufacturers to help them create a safer working environment.

Inhalation Hazard

Exposure to cement dust can irritate the eyes, nose, throat and upper respiratory system. Over-exposure to trace amounts of hexavalent chromium present in cement can cause lung cancer. Silica dust from aggregates can lead to lung injuries including silicosis and lung cancer. Fumes from welding rebar, and chemicals used for form release, sealing finished products, and other purposes can also cause respiratory problems.

Solutions—Provide local ventilation systems. Wear a P-, N- or R-95 respirator to minimize inhalation of dust. Other chemicals may require different types of respirators. Eat and drink only in dust-free areas to avoid ingesting cement dust.

Skin/Eye Hazard

Exposure to cement dust or to wet concrete can result in skin and eye irritation, thickening/cracking of skin, or even first-, second- or third-degree chemical burns. Hexavalent chromium can cause severe allergic contact dermatitis.

Solutions—Wear alkali-resistant gloves, coveralls with long sleeves and full length pants, and waterproof boots. Wear eye protection when chipping and cleaning mixers, forms or finished products; when dumping cement and aggregate; and when pouring concrete. Wash contaminated skin areas with cold, running water as soon as possible. Rinse eyes with water for at least 15 minutes and seek medical attention.

Machine Guarding Hazard

Unguarded machinery can lead to worker injuries.

Solutions—Maintain equipment to avoid jamming and use proper controls (guarding or lockout/tagout) in clearing jams. Ensure that guards are in place to protect workers using mixers, block makers, conveyors, cubers, rebar benders and cutters, prestressing tendons, etc.. Protect prestressing tendons from damage. Prevent

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employees from placing any part of their body in line with tendons being stressed. Establish and follow effective lockout/tagout procedures when servicing equipment Be sure appropriate guards are in place on power tools before using them.

Falling Object Hazard

Workers may be hit by falling or flying objects from conveyor belt systems, elevators, overhead hoists, concrete block stacking equipment, etc.

Solutions—Guard areas beneath elevators, conveyor belts and other machinery from which material can fall, to prevent access to these areas by workers and/or to catch falling material. Avoid overloading cranes and hoists, and do not allow loads to pass over employees. Wear hard hats when appropriate.

Ergonomics Hazard

Improper lifting, awkward postures and repetitive motions can lead to sprains, strains and other musculoskeletal disorders.

Solutions—Use forklifts, hand trucks, and other material handling equipment when possible. Lift properly and get a coworker to help if a product is too heavy. Avoid twisting while carrying a load. Shift your feet and take small steps in the direction you want to turn. Keep floors clear to avoid slipping and tripping hazards. Avoid working in awkward postures.

Confined Space Hazard

Mixers and ready-mix trucks have confined spaces.

Solutions—Follow established procedures for confined space entry and lockout/tagout. Guard against heat stress when cleaning mixer drums. Wear appropriate protective equipment to avoid silica and noise exposure when removing concrete residues from inside mixer drums.

Vehicle Hazard

Poorly maintained or improperly handled vehicles can lead to crushing injuries.

Solutions—Make sure back-up alarms on all vehicles are functioning. Use care with the load-out chute on concrete mixers to avoid injuries to hands and fingers. Beware of hot surfaces on equipment and truck components. Wear eye protection against splashes during loading and unloading. Use hearing protection if needed to guard against excessive noise exposure during concrete loading/unloading.

To learn more about Hanover Risk Solutions, visit hanoverrisksolutions.com

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