



Hazards	silica exposure, splattering concrete, skin irritation, chemical burns
Tools/Equipment	
Employee Group(s)	Facilities Management - Carpentry

Required PPE:



Safety Shoes



Ear Protection



Eye Protection



Protective Suit



Respirator

SAFE WORK PRACTICES

- Do not perform the procedure or operate the equipment until you have been appropriately trained and authorized to do so by your supervisor.
- Inspect required personal protective equipment (PPE) and replace if required.
- Do not wear loose-fitting clothing, dangling jewelry, etc.

Protect Your Eyes:-

- Proper eye protection is essential when working with cement or concrete. Eyes are particularly vulnerable to blowing dust, splattering concrete, and other foreign objects. On some jobs it may be advisable to wear full-cover goggles or safety glasses with side shields. Sight is precious. Protect your eyes by using proper safety equipment and remaining alert.

Protect Your Back:-

- All materials used to make concrete - portland cement, coarse aggregate, sand, and water - are quite heavy even in small quantities. When lifting heavy materials, your back should be straight, legs bent, and the weight between your legs as close to the body as possible. Do not twist at the waist while lifting or carrying these items. Rather than straining your back with a heavy load, get help. Remember to use your head, not your back.
- Let mechanical equipment work to your advantage by placing concrete as close as possible to its final position. After the concrete is deposited in the desired area by chute, pump, or wheelbarrow, it should be pushed - not lifted - into final position with a shovel. A short-handled, square-end shovel is an effective tool for spreading concrete, but special concrete rakes or come-alongs also can be used. Excessive horizontal movement of the concrete not only requires extra effort but may also lead to segregation of the concrete ingredients.

Protect Your Skin:-

- When working with fresh concrete, care should be taken to avoid skin irritation or chemical burns. Prolonged contact between fresh concrete and skin surfaces, eyes, and clothing may result in burns that are quite severe, including third-degree burns. If irritation persists, consult a physician. For deep burns or large affected skin areas, seek medical attention immediately.

NOTE: All PPE, tools and equipment shall be used in accordance with provincial OH&S legislation, manufacturer's specifications, applicable standards and codes of practice.



The A-B-Cs of Effect on Skin of Fresh Concrete:-

- Abrasive Sand contained in fresh concrete is abrasive to bare skin.
- Basic and portland cement is alkaline in nature, so wet.
- Caustic concrete and other cement mixtures are strongly basic (pH of 12 to 13). Strong bases, like strong acids, are harmful, or caustic to skin.
- Drying portland cement is hygroscopic - it absorbs water. In fact, portland cement needs water to harden. It will draw water away from any material it contacts-including skin.

- ❖ Clothing worn as protection from fresh concrete should not be allowed to become saturated with moisture from fresh concrete because saturated clothing can transmit alkaline or hygroscopic effects to the skin.
- ❖ Waterproof gloves, a long-sleeved shirt, and long pants should be worn. If you must stand in fresh concrete while it is being placed, screeded, or floated, wear rubber boots high enough to prevent concrete from getting into them.
- ❖ The best way to avoid skin irritation is to wash frequently with pH neutral soap and clean water.

Placing and Finishing:-

- Waterproof pads should be used between fresh concrete surfaces and knees, elbows, hands, etc., to protect the body during finishing operations.
- Eyes and skin that come in contact with fresh concrete should be flushed thoroughly with clean water.
- Clothing that becomes saturated from contact with fresh concrete should be rinsed out promptly with clear water to prevent continued contact with skin surfaces.
- For persistent or severe discomfort, consult a physician.

Protect Your Breathing /Control Silica Dust:-

- Silica dust and particles are a hazard on many jobsites. Silica dust and particles are generated from:
 - Cutting and drilling concrete
 - Sandblasting concrete
 - Cutting and drilling masonry
 - Grinding concrete and masonry
 - Sanding drywall.
- If we breathe silica dust and particles into our lungs often enough and long enough, we can get a disease caused silicosis. Silicosis is a disabling, progressive, non-reversible, and often deadly lung disease. You may show no symptoms in the early stages and severe breathing problems in the later stages. Many workers with silicosis can develop other health problems such as tuberculosis and lung cancer. They can also develop complications such as heart disease.
- There are three basic ways to control silica dust on a site:
 - Prevent silica dust from getting in the air
 - Remove silica dust from the air
 - Prevent workers from inhaling silica dust.



- When you're doing a job that generates silica particles, or working close by, you need protection.
 - Wear a particulate respirator if no other control methods are available. Minimum protection is a half-facepiece air-purifying respirator with an N95 filter. As silica dust increases, you'll need more protection.
 - An N95 filtering facepiece respirator may be appropriate when doing short duration tasks, when local exhaust ventilation is available on tools, or when working outside.
- Required personal protective equipment also includes eye protection and clothing that covers the body. Gloves or barrier cream is recommended for workers with sensitive skin. •
- Use WATER whenever possible to control dust. Wet cutting and other wet methods can keep dust levels very low.
- If water isn't practical, attach a dust collector to the tool or equipment.
- Use a HEPA vacuum to clean the work area and your work clothes. Do not allow silica dust to accumulate. Never use dry sweeping methods or compressed air to remove dust.
- Turn off heating and air-conditioning units to reduce the spread of silica dust to other parts of the workplace.
- Warn other trades about the risk of silica exposure and limit entry into the work area. Post warning signs if necessary.
- Ventilate the area when cutting, drilling, and sanding.
- Always wash your face and hands before eating, drinking, smoking, and going home.