



## Eye exposure to Portland cement and similar products can cause severe burns

A worker at a cement plant was carrying an 18-litre pail half full of Portland cement powder – known to be corrosive – down a flight of stairs. The pail did not have a lid on it. While switching the pail from one hand to the other, the worker accidentally dropped it. A cloud of cement powder engulfed him, getting in under his loose-fitting safety glasses and into his eyes. The cement powder got caked in his eyes.

A co-worker helped him to the emergency eyewash station about 180 metres (600 feet) away. The worker's eyes were flushed for 30 minutes before paramedics were called. By the time the worker received medical treatment in hospital, he had suffered a serious injury to one eye.

### How dangerous is eye exposure to Portland cement?

Portland cement powder is corrosive. Similar building products are also corrosive: concrete, masonry, mortar, and concrete patching and levelling mixes. Eye contact with these powders can cause irritation, chemical burns, and even blindness. The treatment must be immediate and effective to prevent serious eye injuries.



*WHMIS symbol for corrosive material*

### Protecting your eyes from exposure to Portland cement

Prevent your eyes from being exposed to cement – and similar corrosive building materials – with these safe work practices:

- Wear tight-fitting goggles, not just safety glasses, when you are handling or exposed to Portland cement.
- Tilt your head down to remove your safety goggles. Remove your safety goggles over your head so that any corrosive dust on the top of the goggles falls away from your eyes.

- Do not wear contact lenses while handling cement.
- Use containers with securely fitting lids when transporting cement powder.
- Avoid methods of handling cement powder – like sweeping – that allow it to become airborne and come in contact with your eyes.

### Safe workplace procedures

Employers must warn their workers about the corrosiveness of Portland cement. They must make sure that their workers review the material safety data sheet (MSDS) on Portland cement and similar corrosive materials. They must also conduct risk assessments for jobs that expose workers to Portland cement and implement the appropriate control measures.

Employers must also have specific written safety procedures for handling Portland cement and similar corrosive materials. The procedures should include the following instructions:

- Keep exposure to Portland cement and other corrosive materials to a minimum.
- When cleaning up spilled or accumulated Portland cement or other corrosive materials, use a vacuum to eliminate or minimize airborne powder.
- Don't allow cement powder to build up so that it poses an increased risk of eye injuries. Conduct regular cleanups.

## What to do if your eyes have been exposed to Portland cement

- Begin emergency flushing of your eyes immediately and call for first aid. Immediate treatment is important to avoid severe burns to the cornea of the eye.
- If you are wearing contacts, try to remove them as soon as possible, but do not delay flushing.
- Rinse eyes thoroughly with water for at least 30 minutes – including under lids – to remove all particles.



*Flushing the eyes*

## First aid for eye exposures to Portland cement

Employers must keep up-to-date written first aid procedures for treating corrosive eye injuries. They must inform their workers about these procedures in training sessions and regular safety meetings. The written procedures must include instructions to the first aid attendant for responding correctly to a first aid call.

Employers are also responsible for providing the following:

- Emergency eyewashing facilities where there's a risk of exposure to Portland cement. The eyewash station must be no more than 6 metres (20 feet) from the hazard area. It must have a tempered continuous flow of at least 30 minutes.
- A properly trained first aid attendant who can respond immediately to a first aid call to treat eyes exposed to Portland cement.
- The information and training first aid attendants need to properly treat workers.
- Regular practice sessions – at least once a year – with first aid attendants to review effective emergency eyewashing.

## What the first aid attendant should know and do

Eye exposure to Portland cement requires immediate first aid attention. A trained first aid attendant must be familiar with the material safety data sheet (MSDS) for Portland cement and similar products. It is the attendant's responsibility to follow the treatment procedures in the *Occupational First Aid Training Manual* for eye exposures to corrosive materials.

First aid attendants must follow these steps when treating someone whose eyes have been exposed to Portland cement or similar corrosive materials:

- Start eye-flushing right away and continue flushing for 30 minutes by the clock.
- Conduct the primary survey – to determine if there are any life-threatening injuries – while continuing to flush.
- If the worker is wearing contact lenses, try to remove them, but do not let this step delay eye-flushing.
- Call 9-1-1 and describe the injury as a chemical burn to the eyes.
- Examine the eyes and remove any remaining particles from behind the eyelids with a moist applicator.
- Continue to flush until emergency medical services arrive or while on the way to medical aid.

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