

Cement causes skin problems in cement products workers because it is:

- alkaline or caustic
- hygroscopic
- abrasive

The pH of wet cement is 12 to 13 (see back panel) so it's alkaline. It is hygroscopic so it pulls moisture from skin. It is abrasive so its sharp particles scrape and cut skin.



Four main kinds of skin problems are caused by contact with portland cement.

Dry skin may include irritation, scaling, itchiness, burning, and redness.

Irritant contact dermatitis (ICD) can be acute or chronic. Symptoms include stinging, pain, itching, blisters, dead skin, scabs, scaling, fissures, redness, swelling, lumps, rash, and watery discharge.

Allergic contact dermatitis (ACD) includes many of the same symptoms as ICD. Hexavalent chromium in cement is a primary cause. ACD is difficult to cure and may persist for years.

Cement burns produce blisters, dead or hardened skin, or black or green skin. If you think you have a cement burn, go straight to the emergency room. By the time you feel the burn, much damage is already done. A cement burn continues to worsen even after you rinse off the cement.

What Is pH?

pH tells us about the acidity or alkalinity of a material. Pure water has a pH of 7. pH 7 is considered pH-neutral.

The pH scale is like the Richter scale for earthquakes. Each number is many times greater/smaller than the previous number.

ACID	The pH Scale			ALKALI
1	4.5	5.5	7	14
	Normal Skin		Pure Water	Cement

For every whole number, the pH changes 10-fold. The pH of wet cement is up to *one billion times* higher than the pH of skin.

Wet cement makes skin more alkaline. It is then defenseless against chemicals. It can absorb more hexavalent chromium. Skin damage may allow bacterial growth, causing infections that worsen problems.

Control surface skin pH by preventing contact with cement. Consider buffering or neutralizing any residue on the skin.

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Professional Skin Protection for Cement Products Workers



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Best Practices

Protecting skin means more than wearing gloves. These best protective practices are recommended by experts. Maybe you can't do all these practices. But you should do as many as possible, starting with the easiest ones.

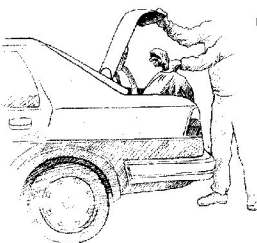
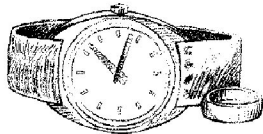
Wash with pH-neutral or slightly acidic soap. Your pharmacist can recommend one. This helps normalize your skin's pH.



Wash before putting on gloves and each time you remove them.

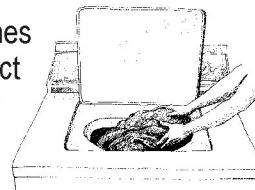
Consider trying a spray-on buffer or neutralizer.

Don't wear jewelry at work. It can trap cement against your skin.



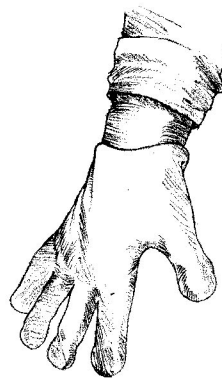
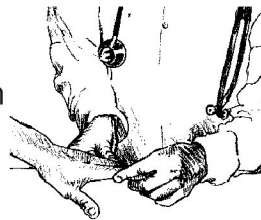
Change out of work clothes at work. Take work clothes home in a separate container, like a trash bag.

Launder work clothes separately to protect your family or your roommates.



Avoid lanolin, petroleum jelly, and other skin softening products at work. These substances can seal cement residue against your skin. These products should be applied only to clean skin in clean environments.

See a doctor for any persistent skin problem, even a minor one. In chrome-allergy dermatitis, early diagnosis and treatment makes the difference in preventing chronic disease. Tell the doctor you work with cement.



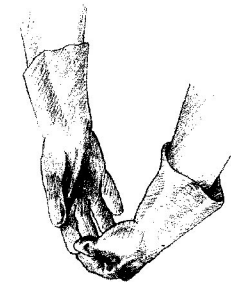
Choose the right gloves. Butyl gloves or cotton gloves dipped in butyl/rubber coating may provide the best protection. Clean gloves daily. When gloves become grossly contaminated, throw them away and get new ones.

HOW TO REMOVE GLOVES

Before removing gloves, always clean off the outsides.

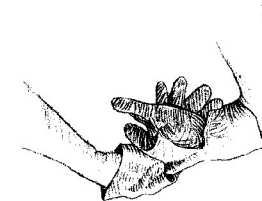
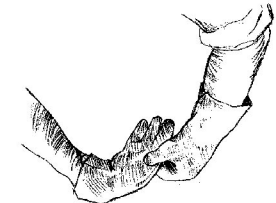


Follow the manufacturer's instructions.



To remove gloves, loosen them on both hands.

Remove the first glove only to the fingers. The cuff will remain over the palm.



Now, grabbing the second glove with the first, remove the second glove.

Try to handle gloves by the insides only.

Don't touch the outsides.

Keep gloves in a bag until the next use.

