

Skin Related Issues in the Precast Industry

- Each day our skin can be exposed to the harmful UV rays of the sun, wet cement, cement dust and chemicals. Some thing to consider...
 - Are employees wearing proper PPE? (including shirts and pants)
 - Are outside workers wearing sunscreen?
 - Are you providing soap with warm or hot water?
 - Are employees going home clean?
 - Please review the following information to help reduce your employees' chance of skin-related issues in your precast facility.
- The skin is the single largest organ of the body. The skin, when healthy, protects us from chemical, physical and biological hazards. Skin weighs about 10% of our total body weight and is approximately one eighth of an inch thick. The skin is made up of two layers, the epidermis (outer layer) and the dermis (inner layer). The outer layer of skin is only 1/250th of an inch thick, and is the part of our skin that forms the protective barrier.

Personal Hygiene

- Personal hygiene is the basic concept of cleaning, grooming and caring for our bodies. While it is an important part of our daily lives at home, personal hygiene isn't just about combed shiny hair and brushed teeth; it is important for worker health and safety in the workplace. Workers who pay attention to personal hygiene can prevent the spread of germs and disease, reduce their exposures to chemicals and contaminants, and avoid developing skin allergies, skin conditions and chemical sensitivities.
- The first principle of good hygiene is to avoid an exposure by forming a barrier over the skin with personal protective equipment (PPE) such as gloves, coveralls and boots. It is important to check the PPE often for excessive contamination, wear, tears, cuts or pinholes. Workers should clean, decontaminate or replace protective equipment frequently to make sure it doesn't collect or absorb irritants. If protective equipment becomes too soiled during the job, the worker should stop and replace it with clean equipment.
- Basic hand washing and skin care can prevent work exposures and disease. Good washing and scrubbing with water and soap helps to remove germs contaminants, and chemicals. It can also prevent exposure by ingestion and cross-contamination of the surfaces and objects we touch.
- Hand washing involves more than a quick rinse under a faucet. To wash hands properly, workers should first wet them under the faucet and then use liquid or bar soap.



- At the end of the employee's day, a good practice is to leave all soiled uniforms at work to reduce any further contact with their body. If showers are available employees should shower before leaving or at a minimum employees should bring a clean change of clothes to wear home. For those facilities without regular showers employees should shower as soon as possible to further remove any possible contaminants from their skin.
- Proper personal hygiene can help keep workers productive and on the job. Be safely clean with good hygiene.

Protecting Your Skin

- There are many skin irritants that employees may be exposed to in the workplace. One out of every four workers may be exposed to something that will irritate the skin. Many different things may cause skin damage. When something penetrates through the outer layer, the inner layer of skin reacts to it. Strong or regularly repeated irritations of the skin may lead to skin diseases.
- The skin contains oil glands, hair follicles and sweat glands. These are like tiny holes, so the skin can be like a sponge when it contacts something. Skin also contains blood vessels, and some chemicals can penetrate the outer layer and enter the blood stream.
- Your environment can cause skin problems directly or can combine with other factors to increase skin problems. These factors include:
 - Heat – causes sweating. Sweating may dissolve chemicals and bring them into closer contact with the skin. Heat increases the blood flow at the skin surface and may increase the absorption of substances into the body.
 - Cold – dries the skin and causes microscopic cracking. This cracking allows substances to cross the outer layer of the skin, thus entering the body.
 - Sun – burns and damages the skin. Sun can increase absorption of chemicals. Sun reacts with some chemicals to enhance their negative affects on the body.

How to Protect Your Skin

- Wear long sleeve shirts and pants, to minimize the amount of skin exposed.
- Wear gloves when handling chemicals.
- Wash your hands regularly during and after work.
- When working outdoors, wear a hat with a brim.
- Use a high sun protection factor (SPF) sunscreen.
- Where possible, use tools to handle hazardous substances instead of your hands.



- Be careful removing PPE so that you do not contaminate yourself.
- If a worker is exposed, or thinks he/she may have been exposed to a hazardous substance, the area should be rinsed for at least 15 minutes. If a worker is accidentally contaminated, he or she should get under a shower immediately and remove the clothing while showering. Certain substances can be absorbed quickly across the skin. Time is critical. Medical help should be obtained immediately.

Dermatitis

- Once the protection our skin gives us is gone, we risk increased sensitivity to chemicals and exposure to diseases and infections.
- Dermatitis can be a serious skin disease we can get when working with cement, oils, solvents, plaster, insulation, paint, dusts, infected water or wastes. Our skin's exposure to any of the chemicals in these products can result in no effects, mild effects or severe effects. Some signs of dermatitis are dry, red, sore, itchy skin; tight, brittle, cracked skin; or bleeding, painful skin.
- Preventing dermatitis is simple enough:
 - Wear the right PPE correctly. Protect your skin from cement, oils and wet concrete. Wear long sleeves and pants as extra protection.
 - Keep PPE clean. Throw away oil soaked gloves.
 - Keep your skin clean. Wash off cement, concrete and oils from your skin as soon as possible.
 - Keep the work area clean. Prevent contact by removing contaminants to the extent possible.
 - Keep your uniform clean and change clothes often. Do not continue to wear clothes soaked with oil or covered in cement.
- It's important to note that dermatitis is similar to an allergic reaction. Some employees are more likely than others to get the illness. However, once you've had it, each time you get it again will be worse than before. Personal hygiene and cleanliness are the best ways to prevent contact dermatitis. If you develop the signs of contact dermatitis, notify your supervisor immediately.
- Even with all these precautions and the proper PPE, some employees may be prone to dermatitis, so it may be necessary to relocate an employee to another area of the plant to reduce or prevent exposure.



Additional Resources

- NPCA Precast Inc. Magazine - Preventing Cement Burns
- <http://precast.org/2016/01/preventing-cement-burns/>
- OSHA Protecting Yourself in the Sun
- <https://www.osha.gov/Publications/OSHA3166/osha3166.html>
- OSHA Preventing Skin Problems from Working with Portland Cement
- <https://www.osha.gov/dsg/guidance/cement-guidance.html>
- OSHA Industrial Hygiene
- https://www.osha.gov/dte/library/industrial_hygiene/industrial_hygiene.html