

Safety Alert

ARTC No. 88
Issued 21/07/2016

Concrete Burns

Incident

This safety alert has been issued following an incident where two workers in the Hunter Valley sustained chemical burn injuries caused by skin contact with wet concrete. The workers entered a trench in order to place concrete. The depth of the concrete was greater than anticipated and it entered their gumboots over the top edge. The workers felt no discomfort at that time subsequently finishing the task and their shift as planned. One worker changed his boots immediately after completing the concrete placement activity (Worker 1) and one did not (Worker 2).

The following day both workers commenced their shifts as planned, however part way through the shift Worker 2 began feeling discomfort with both feet and reported this to site management. Skin damage to his feet was evident and he was taken immediately to hospital for treatment. The injuries were evaluated as chemical burns and Worker 2 was taken to Royal North Shore Severe Burns Unit (Sydney) for treatment. Worker 1 received medical treatment locally for his injuries.



Worker 2 injury - one day after exposure



Worker 2 injury - five days after exposure



Worker 1 injury - one day after exposure



Worker 1 injury - four days after exposure

Concrete is commonly used across many construction sites and is (incorrectly) often not considered a particularly dangerous substance or used with any great caution. Concrete is however an extremely alkaline substance and prolonged exposure to wet concrete, especially on broken skin, can cause chemical (caustic) burns and other long term effects. The abrasive nature of concrete can further contribute to the potential for skin damage. Specialist medical treatment following exposure is required – the foreign material (that permeates the skin) must be physically removed from the wound to prevent further damage, which can continue long after the initial exposure with this type of burn.

When concrete is being used on construction sites, the following should be noted:

- Consider ways to avoid need to handle wet concrete e.g. use precast elements or use plant to place the concrete
- Have a Safety Data Sheet (SDS) for premixed concrete on site and review with workers to determine appropriate controls. Use the information in the SDS to inform preparation of Work Method Statements
- Use appropriate PPE – impervious gloves and gumboots are required. If the concrete has a potential to enter gumboots (i.e. could be deeper than approx. 300mm) consider waders
- If skin contact occurs:
 - remove boots and socks and/or contaminated clothing
 - wash skin thoroughly to remove all concrete, dry and replace with clean / dry footwear.
 - thoroughly clean boots and any contaminated clothing before using again
- Seek medical attention if:
 - concrete has contacted an open wound or skin abrasion, or if unbroken skin remains red and/or irritated
 - if seeking medical attention, try to keep the burn cool (for example, use wet sterile gauze with icepack where appropriate)
- Do not use burn creams unless directed by a medical practitioner

For your action

1. Place Safety Alert on display and make copies of this alert available to people who report to you (without regular email access) and ensure that the contents of the safety alert are discussed/explained to your staff
2. If engaging contractors, ensure they are made aware of current ARTC Safety Alerts
3. Ensure a method of sign-off is obtained (e.g. via tool-box/safety meetings/morning briefings etc.) to verify that the Safety Alert has been distributed and discussed
4. If you have any safety concerns with this Safety Alert please speak directly to your supervisor

Further information

- All Safety Alerts issued can be found at www.artc.com.au/work/contractors/safety-alerts/
- Please contact – Will Headon, Project Manager, Hunter Valley (02) 4952 0282