

MPA Cement Fact Sheet 10.2

## Chromium (VI) and cement

### Health and safety - Cements, Cr(VI) and reducing agents

#### Why does cement contain chromium?

The chromium in cement comes primarily from some of the naturally occurring raw materials used in the manufacture of cement.

#### What does chromium do?

When cement is mixed with water some of the chromium dissolves (like salt in water) and can cause allergic dermatitis if in contact with skin for prolonged periods of time.

#### What do reducing agents do when added to cement?

When ferrous sulfate, stannous sulfate, or other reducing agents, are added to cement in sufficient quantity they prevent the chromium from dissolving in water thereby removing the risk of allergic dermatitis.

#### Are reducing agents being added to cement in the UK?

MPA Cement's Members have been adding reducing agents, as necessary, to cements since January 2005. This required the installation of dosing equipment at all cement works.

#### Do reducing agents make cement safe enough to handle without personal protective equipment (PPE)?

Reducing agents do not make cement safe to handle without PPE. Cement, when wet, can cause two types of contact dermatitis, *allergic* dermatitis and *irritant* dermatitis. Reducing agents only protect against allergic dermatitis. Irritant dermatitis is much more common and is caused by caustic chemicals in wet cement that irritate and inflame the skin. These caustic chemicals can also cause severe skin burns. The only way to protect against these risks is to prevent skin contact. The same PPE is, therefore, required for handling wet cement now that reducing agents are added as was previously required. Correct PPE would ensure users do not suffer allergic dermatitis, irritant dermatitis or burns. In light of the current level of dermatitis and burns, employers are urged to review their existing safety precautions and to provide correct PPE for their employees.

#### Where can I find out more?

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