

## Special Issue on Chromium (VI) Directive

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### features

### Background

### Implementation and Enforcement in the UK

### HSE Chromium (VI) Communications Task Force

### Implications for Cement Manufacture

### Implications for the supply and use of cement and cement containing preparations

### Protecting Yourself

### Communicating the Chromium (VI) Directive

### Further Information

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[Back to top](#)

## Background

Significant reductions in allergic contact dermatitis were reported in European countries that only permit the supply of cement with a low soluble chromium (VI) content. Consequently, European Directive 2003/53/EC, commonly referred to as the 'Chromium (VI) Directive', was introduced to control chromium (VI) levels in cement and cement-containing preparations. This Directive comes into effect in the United Kingdom on 17 January 2005.

Allergic contact dermatitis may occur when the skin of susceptible people comes into contact with wet cement. Chromium (VI) in dry cement poses little risk and concrete, once hardened, becomes and remains safe to touch, even in wet conditions. The Health and Safety Executive (HSE) report that research has shown that between 5% and 10% of construction workers may be sensitised.

The Directive restricts the use or placing on the market of cement and cement containing preparations if they contain, when hydrated, more than 0.0002% [2 parts per million (ppm)] soluble chromium (VI) of the total dry weight of the cement, (except for use in controlled closed and totally automated processes where there is no possibility of skin contact).

Soluble chromium (VI) levels are typically controlled by adding reducing agents, such as ferrous sulfate or stannous (tin) sulfate that reduce chromium (VI) when water is added. These reducing agents have a limited life span, after which they become ineffective. Hence the Directive requires that where reducing agents have been used, packaging shall be marked with packing date, storage conditions and the storage period for which the reducing agent remains effective

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[Back to top](#)

## Implementation and Enforcement in the UK

The Control of Substances Hazardous to Health Regulations (COSHH) protects people from the harmful health effects of substances used at work. They require employers to carry out risk assessments and take resulting action to prevent exposure or control risk. The regulations also impose restrictions on the supply or use of substances, for which the risks are higher or more difficult to control.

The HSE intends to implement the Chromium (VI) Directive by amending the COSHH Regulations to enforce the 2 ppm soluble chromium (VI) limit. The HSE also intends to amend the Chemicals (Hazard Information and Packaging for Supply) Regulations to enforce the packaging/labelling requirements set out in the Directive.

Producers and suppliers, such as distributors, merchants and retailers, have received a sympathetic hearing from the HSE and it has been agreed that for a reasonable period of time after implementation, enforcement will be subject to a 'light touch' given the practicalities of achieving full compliance. Compliance itself will be regarded, in principle, as a largely 'self-regulating' activity for producers, in most cases through their existing Quality Management Systems. Independent certification and the additional assurance that this can bring, will be at the discretion of the producer, as will the frequency of any reassurance-sampling. In any event, enforcement proceedings are likely to arise primarily in response to an incident and enforcement action would only be taken where there has been a substantial failure to comply.

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[Back to top](#)

## HSE Chromium (VI) Communications Task Force

The HSE has set up a joint working group with industry with a remit to develop a communications strategy for informing relevant stakeholders about the forthcoming UK regulations to implement the Chromium (VI) Directive and to encourage compliance. The interests of consumers, retailers, industry by way of trade associations, employees/operatives by way of unions and trading standards officers by way of local authority coordinators, are represented on the Task Force.

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[Back to top](#)

## Implications for Cement Manufacture

Most cements manufactured by BCA Member Companies will require the addition of reducing agents to achieve the 2 ppm soluble chromium (VI) limit. Consequently, BCA Member Companies have already invested more than £10 million in new equipment and the modification of their processes so as to enable the accurate dosing of reducing agents.

Further costs will arise from:

- additional work on the chromium (VI) test method
- write-off of old bag stocks
- ongoing addition of reducing agents
- ongoing testing and sampling costs
- reduced shelf life of product
- tighter stock control

All BCA Member Companies will be fully compliant with the new legislation from 17 January 2005.

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[Back to top](#)

## Implications for the supply and use of cement and cement containing preparations

- The Directive restricts the supply and use of cement and cement preparations which contain, when hydrated, more than 2 ppm of soluble chromium (VI).
- When adding reducing agents, legislation requires that delivery documents and cement bags should be marked with information on the period of time for which the reducing agents remain effective (e.g. packaging date and suggested storage conditions and period). Initially, BCA Member Companies are declaring a shelf life of 61 days.
- Cement and cement preparations not meeting the two

requirements above should only be placed on the market when destined for use in totally automated and fully enclosed processes, where there is no possibility of contact with the skin.

- The HSE Communications Task Force advises that suppliers, such as distributors, merchants and retailers do not need to dispose of all stock manufactured before 17 January, but good stock control and rotation will be necessary to ensure that untreated cement is moved off the market as soon as practicable.

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[Back to top](#)

## Protecting Yourself

In the interests of safety, it is very important that the addition of reducing agents by the manufacturer does not lead to a false sense of security amongst users. Wearing the appropriate waterproof personal protective equipment when handling cement is still necessary to avoid all kinds of dermatitis and cement burns.

HSE, Construction Information Sheet No 26 (revision 2), provides advice on all the risks from cement and how to control them. A link to this document can be found at the end of this update. BCA Member Companies also provide safety advice in their Material Safety Data Sheets and on cement bag labels.

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[Back to top](#)

## Communicating the Chromium (VI) Directive

The British Cement Association has been raising awareness of the new directive by providing information, including:

- Various [information sheets](#) on the BCA website, [www.cementindustry.co.uk](http://www.cementindustry.co.uk).
- A feature in the [September issue](#) of Cement Industry Update
- Sending a letter to all stakeholders in the customer/user supply chain

The four Member Companies have also publicised the Directive extensively, including:

- Rugby Cement had a special feature in Packed News (Issue 1) outlining the new legislation and highlighting some of the Questions & Answers from the BCA website.
- Castle Cement article in the autumn issue of *Red* magazine (p3), Counting the cost of EU legislation. They also have a special section on their website dedicated to it – [Link to Castle website](#)

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[Back to top](#)

## Further Information

- BCA [website](#)
- BCA [information sheets](#)
- [Questions and Answers](#) on the new Chromium (VI) Directive
- HSE Consultative Document: [Consultative Document](#)
- HSE [information sheet](#) on the safe use of cement.

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Please visit [www.cementindustry.co.uk](http://www.cementindustry.co.uk) <<http://www.cementindustry.co.uk/>> for all the latest news and updates from the industry.

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