



CEMBUREAU

The European
Cement Association

Rue d'Arlon 55
B-1040 Brussels



BIBM

The International Bureau for
Precast Concrete

Rue Volta 12
B-1050 Brussels



ERMCO

The European Ready Mixed
Concrete Organisation

Rue Volta 8
B-1050 Brussels



FIEC

The European Construction
Industry Federation

Av. Louise 66
B-1050 Brussels

Joint approach concerning Health & Safety when working with wet cement preparations

23 December 2003

On 17 July 2003, the European Directive 2003/53/EC on the restrictions to the marketing and use of cement with more than 0.0002 % (2 ppm) soluble Chromium VI was published in the Official Journal of the Commission. In this context CEMBUREAU, BIBM, ERMCO and FIEC, representing, at European level, respectively the producers of cement and concrete and the contractors (employers), have developed the following approach, which goes beyond the scope of this Directive, vis-à-vis this issue of health & safety when working with wet cement preparations.

It is the common aim of the four organisations, further to the efforts already undertaken by the industry and workers organisations in various Member States, to reduce the health risks for construction workers, namely of contracting eczema when working with wet cement preparations on construction sites, in precast concrete or ready mixed concrete factories.

The facts are:

1. The term "cement eczema" covers two distinct types of dermatitis:
 - a. irritant dermatitis, caused by the alkaline nature of cement mixed with water
 - b. allergic dermatitis, caused by water soluble Chromium VI in the cement.
2. The alkaline nature of cement mixed with water is a natural fact and cannot be avoided. The producers already clearly indicate the potential risk (in Material Safety Data Sheets and labelling according to Directive 1999/45) and the means of protection against irritant dermatitis.
3. Allergic dermatitis is linked to the presence of Chromium VI in cement. Since cement is produced from natural raw materials its Chromium content may vary considerably but is, depending on the circumstances, unavoidable.
4. By adding a reducing agent the content of water soluble Chromium VI in cement preparations may be lowered. Adding for instance ferrous sulphate is a current common practice in some European countries (e.g Finland, Sweden, Norway, Denmark and Germany). Under warm and humid conditions, however, ferrous sulphate degrades in time (from a few weeks to two months) and does, therefore, not provide the definitive solution under all circumstances. This problem needs further study.
5. The causal relationship between the presence of water soluble Chromium VI in cement and this allergic dermatitis among construction workers is well-known and has recently been confirmed in a study by the National Institute of Occupational Health in Oslo. It is noted, however, that during the last two decades a marked decrease in the number of cases of

allergic dermatitis has been observed in some countries (e.g. France, Belgium, Switzerland) where Chromium VI reduction has **not** been applied. This observation might explain the second conclusion of the study by the National Institute of Occupational Health in Oslo¹ that the available **epidemiological** literature is not sufficient to conclude that there is a causal association between the **reduction** of Cr VI in cement and the reduced occurrence of allergic dermatitis, notwithstanding that such a relation seems to be plausible. The four organisations took note of the results of this epidemiological research and will also in the future monitor the findings of other studies and use the results for further improvement of the handling of wet cement.

Therefore, in order not to create a false feeling of safety and in order to achieve real progress in diminishing the number of workers suffering from any such cement dermatitis, it is necessary to tackle the problem from all angles in a co-ordinated manner. Limiting the efforts to one issue only, viz. the reduction of the Chromium VI content, could only produce part of the envisaged result, this being the reduction of cement dermatitis amongst construction workers on sites, in precast concrete or ready mixed concrete factories.

Consequently,

- the producers should clearly indicate the potential risk and the means of protection against cement dermatitis by appropriate labelling and Material Safety Data Sheets.
- the contractors (employers) should provide adequate information and related operational instructions to workers about potential risks when dealing with cement preparations
- the contractors (employers) should provide adequate protective equipment (e.g. special Chromium VI-free gloves, boots etc.)
- the workers should effectively follow the instructions received and use the protective equipment correctly.

In other words: only by taking a joint responsibility in this matter the level of cement dermatitis among workers may be managed in a satisfactory manner.

Finally CEMBUREAU, BIBM, ERMCO and FIEC ask the Member States:

- to take these aspects into consideration in the implementation of an effective protection of workers against cement dermatitis.
- to take notice of recent scientific analysis of the causes, impacts and potential remedies;
- to participate with the social partners in industry's awareness raising campaigns and to monitor future developments.

23 December 2003



Jean-Marie Chandelle
Chief Executive
CEMBUREAU



Eddy Dano
Secretary General
BIBM



Francesco Biasioli
Secretary General
ERMCO



Ulrich Paetzold
Director General
FIEC

¹ National Institute of Occupational Health, STAMI-report 4, nr 2- 2003, ISSN: 1502-0932: "Epidemiological assessment of the occurrence of allergic dermatitis in workers in the construction industry related to the content of Cr(VI) in cement" by Helge Kjuus, Kare Lenvik, Kristina Kjaerheim and Joar Austad.