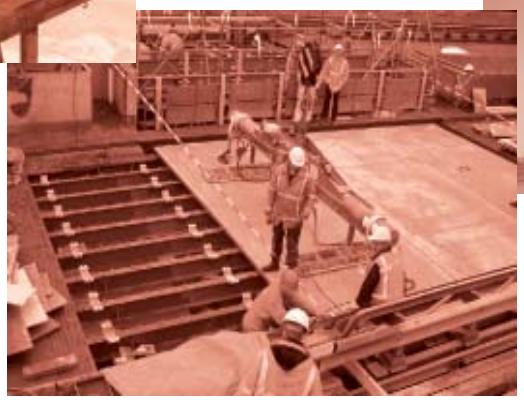

CEMBUREAU

GUIDELINES FOR THE SAFETY DATA SHEET FOR CEMENT

1. Safety Data Sheets under REACH

The REACH regulation (Regulation EC n° 1907/2006) considers the safety data sheet (SDS) as the key element in the hazard and risk management communication from chemical substance suppliers and formulators to Downstream Users (DU): from manufacturers to their professional customers.

When a substance or preparation meets the criteria for classification as dangerous in accordance with Directives 67/548/EEC or 1999/45/EC, ***the person responsible for placing that substance or preparation on the market, whether the manufacturer, importer, downstream user (DU) or distributor, shall supply the recipient, who is a downstream user or distributor of the substance or preparation, with a SDS***.Unless requested by the DU or distributor, a SDS will not have to be supplied for substances or preparations sold to the general public if sufficient information is provided to enable users to take the necessary measures with regard to the protection of the environment and human health.

The SDS shall be supplied in the official languages of the Member States in which the substance or preparation is placed on the market (unless the Member State provides otherwise).The SDS shall be supplied on paper or electronically at the latest at the time of first delivery of a substance following entry into force of the REACH Regulation (1 June 2007). Suppliers shall update it without delay as soon as new information, which may affect the risk management measures, or new information on hazards becomes available. The same applies if an authorisation is granted or refused or a restriction has been imposed. The new dated version of the information identified as “Revision: (date)” shall be provided free of charge to all former recipients who have been supplied with the substance in the preceding 12 months (Article 31 REACH Regulation).Workers or their representatives shall be granted access by their employers to the SDS of the substances or preparations they use or might be exposed to in the course of their work.

2. Scope of SDS - Record keeping – Chemical Safety Report (CSR)

- The SDS is meant for professional cement users and should provide them with useful health and safety (H&S) information.
- However, a SDS may be used as a basis for internal H&S protocols for the cement plant work force. Provided that the required personal protection equipment is correctly used in the cement production plant, then the health impacts for cement plant workers are considered as adequately controlled by what is explained in the SDS for cement.
- The SDS has to be kept on file for 10 years after the last manufacture, import, supply or use of the substance/ preparation (Article 36 REACH) (including information used for its compilation).
- The SDS has to contain an annex with information derived from the Chemical Safety Report (CSR) (exposure scenarios) if a CSR must be compiled (substances produced/imported in more than 10 t per year and subject to registration). Thus, as cement clinker is not subject to registration, the SDS for cement should only contain in annex the exposure scenarios for the components in cement that are subject to registration and for which a CSR must be compiled.

3. Labelling

- In addition to the SDS, information will be supplied by labelling the product containers under Dir. 1999/45. Cement does not require to be labelled under the rules for the transport of dangerous goods.
- If reducing agents are used, the packaging of cement and cement-containing preparations shall be legibly and indelibly marked with information on the packing date, as well as on the storage conditions and the storage period appropriate to maintain the activity of the reducing agent and to keep the content of soluble chromium (VI) below 0.0002% (2003/53/EC).
- The label on the packaging of cements and cement preparations containing more than 0.0002% soluble chromium (VI) of the total dry weight of the cement must bear the inscription:'Contains chromium (VI). May produce an allergic reaction' unless the preparation is already classified and labelled as a sensitiser with phrase R43. (1999/45/EC as amended).
  In addition, CEMBUREAU recommends using the following "voluntary" additional labelling: "cement for controlled closed and totally automated processes only - must not be in contact with human skin because it may contain above 0.0002% soluble chromium (VI)".

4. Impacts of Globally Harmonised System for Classification and Labelling (GHS)

- In the explanatory memorandum to the draft proposal for a regulation on GHS, the European Commission states that: "As SDS will be used as the main tool for the communication in the REACH Regulation, the provisions on SDS being implemented through REACH will remain in that regulation".
- According to the European Commission draft proposed for the GHS (21 August 2006), the new classification and labelling system under GHS and the current system would coexist for a transitional period.
  Substances may be classified and labelled according to both systems until 1 December 2010 (date at which the classification & labelling of substances must be notified to the Agency under REACH). If the GHS classification is used during this period, SDS must show both current and GHS classification (the label must be GHS compliant only). Once GHS becomes obligatory in 2010, substances must still be classified in accordance with 67/548 as well for an additional 4/5 years and both classifications must be included in the SDS, but the label must be GHS compliant only.
  For preparations, GHS will be mandatory only in 2014/2015. Until then, both systems may be used. In case GHS is used, the label must be compliant with GHS, and SDS must show both classifications.
- Changes to the SDS will be necessary once GHS is implemented in the EU, to adapt it to the modified classification and labelling under the GHS.
  Also, some classifications may change under GHS.

5. Content of the guidelines for a harmonised SDS for cement

- The guidelines are based on the contents of the SDS as required by REACH (Annex II Guide to the Compilation of Safety Data Sheets) and sub-report from the RIP 3.2 Technical Guidance Document "Safety Data Sheet Requirements under REACH".
- The guidelines are intended to assist towards a more harmonised SDS for cement in all CEMBUREAU Member countries. However, the responsibility for the accuracy of the individual SDS remains with the individual cement manufacturer.

6. Comments to some points in the template

Date of SDS
Give either the date the SDS was issued, or give the date it was revised.

1.1 Identification of the substance/ preparation
Trade name and/or cement type according to EN 197-1 (Common cements) and EN 197-4 (Blast furnace cements) - both are recommended.
The name should be identical to the name on the label.

1.3 Company identification
Give the full address and telephone number of the person responsible for placing the substance or preparation on the market within the Community.
Give the e-mail address of the competent person responsible for the SDS.
If this person is not located in the MS where the substance or preparation is placed on the market, give the full address and telephone number of the person responsible in the MS, if possible.

1.4 Emergency telephone
Emergency telephone number of company and/or relevant official advisory body (e.g. body responsible for receiving health and safety information referred to in Art 17 of 1999/45/EC).
It is not mandatory to have the emergency telephone number available outside office hours, but if not, this should be specified.

2.1 Hazard characterisation
Depending on the evaluation by the cement manufacturer of the risk of ocular lesions, he may decide not to use R41 but use R36 instead.

3.1 Chemical composition
Product specific information
The table from the EN 197-1 standard on Common cement types can be adapted to individual needs of the company.

Any further standards applicable to the product (national or for specific cement properties) should be given here as well.

If applicable, also the registration numbers of the ingredients subject to registration should be given.
For other non-common cement types, the template may need further adaptation.

3.2 Components presenting a health hazard
Product specific information
This heading should contain all the components of the specific type of cement produced that present a health hazard (including reducing agents and other chemical additives) and should be adapted to their concentration in the cement. The classification for cement and for Portland cement clinker should be the same, given that there is a lack of testing evidence for the classification of clinker e.g. table below:

Substance	Concentration range (by weight in cement)	EINECS	CAS	Symbol [C&L]	R
Portland cement clinker	5-100%	266-043-4	65997-15-1	Xi	R37 R38 R41* R43
Burnt shale	6-35%	-	-	Xi	R36 R37 R38 R43
…					

* Depending on the evaluation by the clinker manufacturer of the risk of ocular lesions, he may decide not to use R41 but use R36 instead.

7 Handling and storage
The information must be consistent with information given for identified cases and exposure scenarios in the annex to the SDS when CSR or registration is required.

8.1 Exposure limit values
Country specific information
As no harmonised exposure limit values exist at EU level, the national values applicable in the MS where the cement is marketed shall be given, see e.g. table below.
In addition, the national and where applicable Community exposure limit values should also be given for the substances contained in cement that present a health hazard and if they are present in concentrations above the applicable concentration limits (i.e. substances included under heading 3.2).

Name	Limit value for	Limit value type	Value (as 8 h TWA)	Unit
Values applicable in MS, e.g. in Germany				
Portland cement		OEL total inhalable dust	5	mg/m³
Cement	General dust	OEL inhalable	10	mg/m³
		OEL alveolar fraction	3	mg/m³
Values applicable in MS, e.g. in France				
Cement	General dust	OEL inhalable	10	mg/m³
		OEL alveolar fraction	5	mg/m³

8.2 Exposure controls

8.2.1 Occupational exposure controls
Respiratory protection
To be adapted to national standard by the manufacturer if applicable.

15.1 Classification and labelling of cement according to 1999/45/EC
Depending on the evaluation by the cement manufacturer of the risk of ocular lesions, he may decide not to use R41 but use R36 instead.

15.2 The marketing and use of cement is subject to a restriction on the content of soluble Cr (VI)
As of 1 June 2009, (when the "Restrictions Annex" of REACH enters into force), the following text should be included:
"*The restriction on marketing and use of cement is subject to the requirements from REACH Annex XVII point 47*".
A description of the national implementation requirements of 2003/53/EC in the Member State where the cement is put on the market has to be given under heading 15.3:

- Prior to 1 June 2009
- Prior to 1 June 2013 (if the Member State has been allowed to continue to use its own more stringent restrictions adopted for the implementation of Directive 2003/53/EC in that Member State).

15.3 National legislation/requirements
Country specific information
Prior to 1 June 2009 (or to 1 June 2013 see Heading 15.2), and if applicable, describe the national transposition of Directive 2003/53/EC in the Member State where the cement is put on the market.

List any other legislation/requirements in force in the MS where the cement is marketed.

16 Other information
For a revised SDS, indicate clearly the information that has been deleted, added or revised (unless this has been indicated elsewhere).

7. Template for the SDS for cement

Template Safety Data Sheet for Common Cements	
Date issued	DD/MM/YYYY

1. IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY/ UNDERTAKING

1.1 Identification of the substance/preparation

To be completed by the manufacturer

1.2 Use of the substance/preparation

Common cement is used as an hydraulic binder for the production of concrete, mortars, grouts, etc.

1.3 Company identification

To be completed by the manufacturer

Company name:
Address:
Telephone number:
E-mail of responsible person for SDS:

1.4 Emergency telephone

To be completed by the manufacturer

Emergency telephone number:
Available outside office hours?

❑ **Y** ❑ **N**

2. HAZARD IDENTIFICATION

When cement reacts with water for instance when making concrete or mortar, or when the cement becomes damp, a strong alkaline solution is produced.

2.1 Hazard characterisation

Xi Irritant
R37/38 Irritating to respiratory system and skin
R41 Risk of serious damage to eyes
R43 May cause sensitisation by skin contact

2.2 Primary route(s) of entry

Inhalation: Yes
Skin - eyes: Yes
Ingestion: No, except in accidental cases

2.3 Human health

Inhalation: Frequent inhalation of large quantities of cement dust over a long period of time increases the risk of developing lung diseases.

Eyes: Eye contact with cement (dry or wet) may cause serious and potentially irreversible injuries.

Skin: Cement may have an irritating effect on moist skin (due to transpiration or humidity) after prolonged contact.
Prolonged skin contact with wet cement or wet concrete may cause serious burns because they develop without pain being felt (for example when kneeling in wet concrete even when wearing trousers).
Repeated skin contact with wet cement may cause contact dermatitis.

For more details see Reference (1).

2.4 Environment

Under normal use, the product is not expected to be hazardous to the environment.

2.5 Further information

Cement is poor in chromate by itself or by reducing the content of sensitising soluble chromium (VI) to below 0.0002% in the cement ready for use according to legislation specified under heading 15.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical composition

Common cement types according to the EN 197-1 (Common cements) and EN 197-4 (Blast furnace cements) standards:

To be completed by the manufacturer

3.2 Components presenting a health hazard

To be completed by the manufacturer

4. FIRST AID MEASURES

When contacting a physician, take this SDS with you.

4.1 After significant accidental inhalation

Move person to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops or if discomfort, coughing or other symptoms subside.

4.2 After contact with eyes

Do not rub eye as additional cornea damage is possible by mechanical stress.
Remove any contact lenses and open the eyelid(s) widely to flush eye(s) immediately by thoroughly rinsing with plenty of clean water for at least 45 minutes to remove all particles. If possible, use isotonic water (0,9% NaCl).
Contact a specialist of occupational medicine or an eye specialist.

4.3 After skin contact

For dry cement, remove and rinse abundantly with water.
For wet cement, wash skin with water.Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before re-using them.
Seek medical treatment in all cases of irritation or burns.

4.4 After significant accidental ingestion

Do not induce vomiting. If person is conscious, wash out mouth with water and give plenty of water to drink. Get immediate medical attention or contact anti poison centre.

5. FIRE-FIGHTING MEASURES

5.1 Flashpoint and method

Cements are non-combustible and non-explosive and will not facilitate nor support combustion of other materials.

5.2 Extinguishing media

All types of extinguishing media are suitable.

5.3 Fire fighting equipment

Cement poses no fire-related hazards. No need for specialist protective equipment for fire fighters.

5.4 Combustion products

None.

5.5 Flammable limits: Lower explosion limit LEL – Upper explosion limit UEL

Not applicable.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal protective measures

Wear protective equipment as described under Heading 8 and follow the advice for safe handling and use given under Heading 7. Emergency procedures are not required.

6.2 Environment protection measures

Do not wash cement down sewage and drainage systems or into bodies of water (e.g. streams).

6.3 Methods for cleaning up

Recover the spillage in a dry state if possible.

Dry cement

Use dry cleanup methods that do not cause airborne dispersion, e.g.:

- Vacuum cleaner (Industrial portable units, equipped with high efficiency particulate filters (HEPA filter) or equivalent technique)·
- Wipe-up the dust by mopping, wet brushing or water sprays or hoses (fine mist to avoid that the dust becomes airborne) and remove slurry.

If not possible, remove by slurrying with water (see wet cement).
When wet cleaning or vacuum cleaning is not possible and only dry cleaning with brushes can be done, ensure that the workers wear appropriate personal protective equipment and prevent dust from spreading.
Avoid inhalation of cement and contact with skin. Place spilled materials into a container. Solidify before disposal as described under Heading 13.

Wet cement

Clean up wet cement and place in a container. Allow material to dry and solidify before disposal as described under Heading 13.

7. HANDLING AND STORAGE

Do not handle or store near food and beverages or smoking materials.

7.1 Handling

Follow the recommendations as given under Heading 8.

Avoid dust development:·

- For (bagged) cement used in open-ended mixers: first add the water and then carefully add the cement. Keep the height of the fall low. Start the mixing smoothly. Do not compress empty bags, except when contained in another clean bag.
- To clean up dry cement See heading 6.3.

Carrying cement bags may cause sprains and strains to the back, arms, shoulders and legs. Handle with care and use appropriate control measures.

7.2 Storage

Bulk cement should be stored in silos that are waterproof, dry (internal condensation minimised), clean and protected from contamination.
Engulfment hazard: To prevent burial or suffocation, do not enter a confined space, such as a silo, bin, bulk truck, or other storage container or vessel that stores or contains cement without taking the proper security measures. Cement can build-up or adhere to the walls of a confined space. The cement can release, collapse or fall unexpectedly.
Packed products should be stored in unopened bags clear of the ground in cool, dry conditions and protected from excessive draught in order to avoid degradation of quality.
Bags should be stacked in a stable manner.

7.3 Control of soluble Cr (VI)

For cements treated with a Cr (VI) reducing agent according to the regulations given in Heading 15, the effectiveness of the reducing agent diminishes with time. Therefore cement bags and/or delivery documents will contain information on the period of time ('shelf life') for which the manufacturer has established that the reducing agent will continue to maintain the level of soluble Cr (VI) below the imposed limit of 0.0002% , according to EN 197-10. They will also indicate the appropriate storage conditions for maintaining the effectiveness of the reducing agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure limit values

To be completed by the manufacturer in line with national provisions in place

8.2 Exposure controls

8.2.1 Occupational exposure controls

General: During work avoid kneeling in fresh mortar or concrete wherever possible. If kneeling is absolutely necessary then appropriate waterproof personal protective equipment must be worn.
Do not eat, drink or smoke when working with cement to avoid contact with skin or mouth.

Immediately after working with cement or cement-containing materials, workers should wash or shower or use skin moisturisers.
Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before re-using them.

Respiratory protection: When a person is exposed to dust above exposure limits, use appropriate respiratory protection. It should be adapted to the dust level and conform to the relevant EN standard.

To be adapted by the manufacturer in accordance with national standards if applicable

Eye protection: Wear approved glasses or safety goggles according to EN 166 when handling dry or wet cement to prevent contact with eyes.

Skin protection: Use impervious, abrasion and alkali resistant gloves (made of low soluble Cr (VI) containing material), internally lined with cotton, boots, closed long-sleeved protective clothing and additionally skin care products (including barrier creams) to protect the skin from prolonged contact with wet cement. Particular care should be taken to ensure that wet cement does not enter the boots.
In some circumstances such as when laying concrete or screed, waterproof trousers or kneepads are necessary.

8.2.2 Environmental exposure controls

According to available technology.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information

Dry cement is a finely ground inorganic material (odourless, grey or white powder)

9.2 Physical data

Main particle size: 5-30 µm
Solubility in water (T = 20 °C): slight (0.1-1.5 g/l)
Density: 2.75-3.20 g/cm³
Apparent density (ES): 0.9-1.5 g/cm³
pH (T = 20°C in water): 11-13.5
Boiling/melting point: > 1 250 °C
Vapour pressure, vapour density, evaporation rate, freezing point, viscosity: Not relevant

10. STABILITY AND REACTIVITY

10.1 Stability

Dry cements are stable as long as they are stored properly (see Heading 7) and compatible with most other building materials. When mixed with water, cements will harden into a stable mass that is not reactive to normal environments.

10.2 Conditions to avoid

Humidity during storage may cause lump formation and loss of product quality.

10.3 Materials to avoid

Uncontrolled use of aluminium powder in wet cement should be avoided as hydrogen produced.

10.4 Hazardous decomposition products

Cements will not decompose into other hazardous by-products and do not polymerise.

11. TOXICOLOGICAL INFORMATION

11.1 Acute effects

***Eye contact*:** Direct contact with cement may cause corneal damage by mechanical stress, immediate or delayed irritation or inflammation. Direct contact by larger amounts of dry cement or splashes of wet cement may cause effects ranging from moderate eye irritation (e.g. conjunctivitis or blepharitis) to chemical burns and blindness.

Skin contact: Dry cement in contact with wet skin or exposure to moist or wet cement may cause thickening, cracking or fissuring of the skin. Prolonged contact in combination with abrasion can cause severe burns.

Acute dermal toxicity: Limit test, rabbit, 24 hours contact, 2 000 mg/kg body weight – no lethality [Reference (2)].

***Ingestion*:** Swallowing large quantities may cause irritation to the gastrointestinal tract.

***Inhalation*:** Cement may irritate the throat and respiratory tract. Coughing, sneezing, and shortness of breath may occur following exposures in excess of occupational exposure limits.

11.2 Chronic effects

***Inhalation*:** Chronic exposure to respirable dust in excess of occupational exposure limits may cause coughing, shortness of breath and may cause chronic obstructive lung disease (COPD).

***Carcinogenicity*:** a causal association between cement exposure and cancer has not been established [Reference (1)].

***Contact dermatitis/Sensitising effects*:**
Some individuals may exhibit eczema upon exposure to wet cement, caused either by the high pH which induces irritant contact dermatitis, or by an immunological reaction to soluble Cr (VI) which elicits allergic contact dermatitis [Reference (4)]. The response may appear in a variety of forms ranging from a mild rash to severe dermatitis and is a combination of those two mechanisms. An exact diagnosis is often difficult to assess. If the cement contains a soluble Cr (VI) reducing agent and as long as the mentioned period of effectiveness of the chromate reduction is not exceeded, a sensitising effect is not expected [Reference (3)].

11.3 Medical conditions aggravated by exposure

Inhaling cement dust may aggravate existing respiratory system disease(s) and/or medical conditions such as emphysema or asthma and/or existing skin and/or eye conditions.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity
The product is not expected to be hazardous to the environment (LC50 aquatic toxicity not determined). The addition of large amounts of cement to water may, however, cause a rise in pH and may therefore be toxic to aquatic life under certain circumstances.

12.2 Mobility
Dry cement is not volatile but might become airborne during handling operations.

12.3 Persistence and degradability/Bio accumulative potential/Results of PBT assessment/Other adverse effects
not relevant as cement is an inorganic material. After hardening, cement presents no toxicity risks

13. DISPOSAL CONSIDERATIONS

13.1 Product - cement that has exceeded its shelf life
(and when demonstrated that it contains more than 0.0002% soluble Cr (VI)): shall not be used/sold other than for use in controlled closed and totally automated processes or should be recycled or disposed of according to local legislation or treated again with a reducing agent.

13.2 Product - unused residue or dry spillage
Pick up dry. Mark the containers. Possibly reuse depending upon shelf life considerations and the requirement to avoid dust exposure. In case of disposal, harden with water and dispose according to 13.4.

13.3 Product – slurries
Allow to harden, avoid entry in sewage and drainage systems or into bodies of water (e.g. streams) and dispose of as indicated in 13.4.

13.4 Product - after addition of water, hardened
Dispose of according to the local legislation. Avoid entry into the sewage water system. Dispose of the hardened product as concrete waste. Due to the inertisation, concrete waste is not a dangerous waste.

***EWC entries**:* 10 13 14 (waste from manufacturing of cement – waste concrete or concrete sludge) or 17 01 01 (construction and demolition wastes - concrete).

13.5 Packaging
Completely empty the packaging and process it according to local legislation.

***EWC entry**:* 15 01 01 (waste paper and cardboard packaging).

14. TRANSPORT INFORMATION

Cement is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID), no classification is required.
No special precautions are needed apart from those mentioned under Heading 8.

15. REGULATORY INFORMATION

15.1 Classification and labelling of cement according to 1999/45/EC

Xi Irritant

R37/38 Irritating to respiratory system and skin
R41 Risk of serious damage to eyes
R43 May cause sensitisation by skin contact
S2 Keep out of reach of children
S22 Do not breathe dust
S24/25 Avoid contact with skin and eyes
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
S46 If swallowed, seek medical advice immediately and show this container or label

15.2 The marketing and use of cement is subject to a restriction on the content of soluble Cr (VI)

To be completed by the manufacturer

15.3 National legislation/requirements

To be completed by the manufacturer

16. OTHER INFORMATION

Abbreviations

- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transport Association
- ADR/RID: Agreement on the transport of dangerous goods by road/Regulations on the international transport of dangerous goods by rail
- LC50 Lethal Concentration where 50% of the test animals dies.
- OEL : occupational exposure limit
- TWA: Time Weighted Averages

References

(1) Portland Cement Dust - Hazard assessment document EH75/7, UK Health and Safety Executive, 2006. Available from: http://www.hse.gov.uk/pubns/web/portlandcement.pdf

(2) Observations on the effects of skin irritation caused by cement, Kietzman et al, Dermatosen, **47**, 5, 184-189 (1999).

(3) European Commission's Scientific Committee on Toxicology, Ecotoxicology and the Environment (SCTEE) opinion of the risks to health from Cr (VI) in cement (European Commission, 2002).

(4) Epidemiological assessment of the occurrence of allergic dermatitis in workers in the construction industry related to the content of Cr (VI) in cement, NIOH, Page 11, 2003.

To be completed by the manufacturer: information about revision of SDS

The information on this data sheet reflects the currently available knowledge and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product, including the use of the product in combination with any other product or any other process, is the responsibility of the user.
It is implicit that the user is responsible for determining appropriate safety measures and for applying the legislation covering his own activities.

8. Optional part in the SDS for cement

11.2 Chronic effects·

- In the rare cases where crystalline silica containing constituents are used in the cement (e.g. siliceous limestone); and if·
- It has been evaluated that under normal conditions of use of the cement, there is a risk of exposure to crystalline silica;

the following optional paragraphs can be added:

[Silicosis may result from exposure to respirable crystalline silica dust for prolonged periods. Not all individuals with silicosis will exhibit symptoms. Silicosis is progressive and symptoms can appear at any time, even after exposure has ceased. Symptoms may include shortness of breath, coughing, or right heart enlargement and/or failure. Persons with silicosis have an increased risk of pulmonary tuberculosis infection.

The European Commission's Scientific Committee for Occupational Exposure Limits (SCOEL)[1] concluded, interalia "*that the main effect in humans of the inhalation of respirable crystalline silica is silicosis. There is sufficient information to conclude that the relative lung cancer risk is increased in persons with silicosis (and apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk. Since a clear threshold for silicosis development cannot be identified, any reduction of exposure will reduce the risk of silicosis*."]

If these paragraphs are added, then the exposure limits (if available) have to be added under "Heading 8.1 Exposure limit values".

[1] *SCOEL SUM Doc 94-final on respirable crystalline silica, June 2003.*

9. Disclaimer

These guidelines for SDS and the SDS template have been assembled by CEMBUREAU on the basis of information and documentation supplied by CEMBUREAU Members. CEMBUREAU Members may wish to use the guidelines and the template as a guidance and basis for the creation of SDS for their products. CEMBUREAU cannot represent, warrant or guarantee the accuracy, reliability or completeness of these documents to either CEMBUREAU Members or third parties. It is the user's responsibility to satisfy itself as to the suitability, correctness and completeness of such information for its purpose, and it is the manufacturer's, importer's and distributor's responsibility to provide accurate SDS for the cement and cement products they market.

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