

CEMENT SAFETY GUIDELINES



Use of Cement – Safety Guidance

This note provides summary guidance to users on the safe use of cements manufactured to EN 197, Please refer to the Cement Safety Data Sheet (SDS) where required for further extended information.

PHYSICAL AND CHEMICAL PROPERTIES

This information applies to the whole mixture.

- 1. APPEARANCE:** Dry cement is a finely ground solid inorganic material (grey or white powder). Main particle size: 5 -30 µm
- 2. ODOUR:** Odourless
- 3. PH:** (T = 20°C in water, water – solid ratio 1:2): 11 – 13.5
- 4. MELTING POINT:** > 1250°C
- 5. FLAMMABILITY (SOLID, GAS):** Not applicable as is a solid which is non-combustible and does not cause or contribute to fire through friction
- 6. RELATIVE DENSITY:** 2.75–3.20; Apparent density: 0.9–1.5 g/cm³
- 7. SOLUBILITY(IES) IN WATER:** (T = 20°C): slight (0.1-1.5 g/l)

REGULATORY INFORMATION

Cement is a mixture according to REACH and is not subject to registration under REACH.

The marketing and use of cement is subject to a restriction on the content of soluble Cr (VI) (REACH Annex XVII point 47 Chromium VI compounds): Cement and cement-containing mixtures shall not be placed on the market, or used, if they contain, when hydrated, more than 2 mg/Kg (0.0002 %) soluble chromium VI of the total dry weight of the cement. Cement that has exceeded its shelf life may exceed limits for Cr (VI) and should 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.

FIRE

Cements are non-combustible and non-explosive and will not facilitate or support combustion of other materials.

STORAGE

Bulk cement should be stored in silos that are waterproof, dry (i.e. with internal condensation minimised), clean and protected from contamination. Avoid entering confined spaces such as silos without adequate safety training.

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.

DISPOSAL

Disposal of unused cement residue or dry spillage:

Reuse if possible depending upon shelf life considerations and the requirement to avoid dust exposure. In case of disposal, harden with water and dispose of as hardened product.

To water: Do not wash cement or concrete sludge into sewage systems or into bodies of water, to avoid increased pH loadings. Above pH 9, negative ecotoxicological impacts are possible.

To soil and terrestrial environment: No special emission control measures are necessary for the exposure to the terrestrial environment.

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HAZARD AND RISK INFORMATION RELATING TO CEMENT

Hazard statements

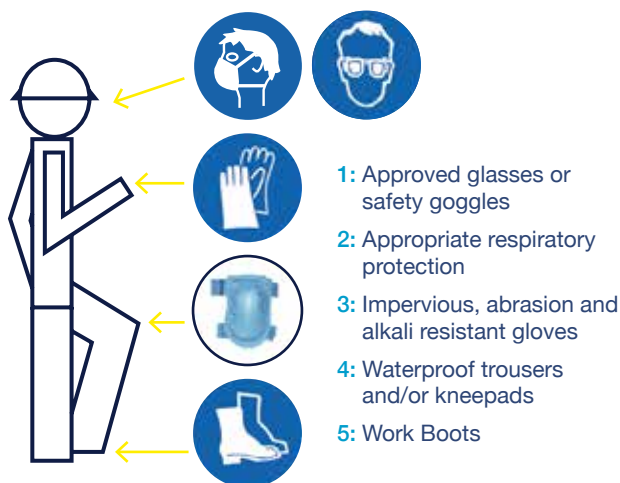
- H318 Causes serious eye damage
- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H335 May cause respiratory irritation

Risk Phrases relating to cement

- Irritating to respiratory system and skin
- Risk of serious damage to eyes
- May cause sensitisation by skin contact
- Keep out of reach of children
- Do not breathe dust
- Avoid contact with skin and eyes



- ! In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- ! Wear suitable protective clothing, gloves and eye/face protection
- ! If swallowed, seek medical advice immediately



FIRST AID MEASURES

Eyes

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

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

Following contact with eyes: Do not rub eyes in order to avoid possible cornea damage as a result of mechanical stress. Remove contact lenses if any. Incline head to injured eye, open the eyelid(s) widely and flush eye(s) immediately by thoroughly rinsing with plenty of clean water for at least 20 minutes to remove all particles. Avoid flushing particles into uninjured eye.

Skin

Hazard: Cement may have an irritating effect on moist skin (due to sweat or humidity) after prolonged contact or may cause contact dermatitis after repeated 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).

Protection: Use watertight, wear, and alkali resistant protective gloves (e.g. nitrile soaked cotton gloves with CE marking) internally lined with cotton, boots, closed long-sleeved protective clothing as well as skin care products (e.g. 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. Regarding gloves, investigations have proven that nitrile impregnated cotton gloves (layer thickness of c. 0.15 mm) provide sufficient protection over a period of 480 minutes, subject to normal wear and tear which can be task dependant. Change soaked gloves. Always have spare gloves in ready supply. In some circumstances, such as when laying concrete or screed, waterproof trousers or kneepads are necessary.

Following skin contact: For dry cement, remove and rinse abundantly with water. For wet cement, wash skin with plenty of water. Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before reuse. Seek medical treatment in all cases of irritation or burns.

Inhalation

Hazard: Repeated inhalation of dust of common cements over a long period of time increases the risk of developing lung diseases.

Protection: When a person is potentially exposed to dust levels above exposure limits, use appropriate respiratory protection (FFP2 or FFP3 type recommended – see SDS for further details). The type of respiratory protection should be adapted to the dust level and conform to EN 149 and other relevant EN standards; EN 140, EN 14378, EN 1827.

Following inhalation: Move the 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 persist.

Ingestion

Hazard: Swallowing large quantities of cement may cause irritation to the gastrointestinal tract.

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