




Baumit VS 60

Safety Data Sheet

As per (EU) no.1907/2006 (EU) NO.453/2010

Revised on: 02/12/2014

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| 1.1 | Product Identifier | |
| 1.0 | Identification of the material or the mixture and the company | |
| | Commercial name: | Baumit VS 60 |
| 1.2 | Relevant identified applications of the material or mixture and applications which are not recommended | |
| | Use of the material/mixture: | Dry mortar to mix with water and then use A mineral primer to improve adhesion and regulation of absorbance capability indoors and outdoors. Any other use is not advised. |
| 1.3 | Details on the supplier which provides the safety data sheet | |
| | Manufacturer: | Baumit GmbH Reckenberg 12 D-87541 Bad Hindelang Tel. + 49 8324 921 1025 Fax + 49 8324 921 1029 email (expert person): sdb@baumit.de |
| 1.4 | Emergency telephone number: | Poison Information Centre at the First University Hospital, Währinger Gürtel 18-20, 1090 Vienna: + 43/1/406 43 43 |

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| 2.0 | Possible hazards | |
| 2.1 | Classification of the material/mixture: | |
| | Classified as per (EU) Directive no. 1272/2008 | Severe eye damage, hazard category 1, severe skin irritation, hazard category 2 H315 Causes skin irritation. H318 Causes severe eye damage. |
| | As per 1999/45/EU Directive | Xi, irritating R 37/38 Irritates the skin and eyes. R 41 Hazard of severe eye damage. |
| 2.2 | Identification items | |
| | Hazard pictogram: | Identification as per (EU) Directive no. 1272/2008  GHS05 |
| | Signal word: | Hazard |
| | Hazard instructions: | |
| | H 315 | Causes skin irritation. |
| | H 318 | Causes severe eye damage. |
| | | Can irritate the respiratory tract. |
| | Safety instructions: | |

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| | P 102 | May not be within the reach of children. |
| | P 280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| | P 305 + P 351 + P 338 + P 310 | IF THERE IS EYE CONTACT: A few minutes' long. Rinse cautiously with water. Remove existing contact lenses if possible. Rinse further. Call a poison information centre/physician. |
| | P 302 + P 352 + P 332 + P 313 | IF THERE IS EYE CONTACT: Wash with lots of water and soap If the skin is irritated: Consult with a physician. Involve a physician. |
| | P 362 | Pull off contaminated clothing and wash before wearing again. |
| | P 501 | Dispose of contents/container as per national rules for waste recycling. |
| | Further information: | Can be retained for at least 3 months from manufacturing date with proper, dry storage, low chromate. |
| 2.3 | Other hazards | Any dust arising from the dry mixture can irritate the respiratory tract. Repeated inhalation of large amounts of dust increases the risk of lung disease. The product creates a strong alkaline reaction with moisture. If the product comes in contact with water, it can lead to severe skin damage with long contact (such as kneeling in moist mortar). The mixture is low chromate, as the effects of sensitising chrome (VI) can be reduced by addition, amounting to less than 0.0002% in the ready-to-use cement. Therefore, there is no danger of sensitisation to chromate. A condition is the effectiveness of chromate reduction is proper, dry storage and adhering to maximum storage time. |
| | Results of the PBT and vPvP assessment | The criteria for the identification of persistent, bioaccumulatable and toxic materials (PBT) and very persistent and very bioaccumulatable materials (vPvB) as per Appendix XIII of (EU) Directive no. 1907/2006 are not fulfilled. |

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| 3.0 | Compound/Information about components | | | | | | | | |
| 3.1 | Materials | | | | | | | | |
| | Not applicable, as this product is a mixture (see Section 3.2) | | | | | | | | |
| 3.2 | Mixtures | | | | | | | | |
| | Mixture of white Portland cement as per Directive 2003/53/EU, calcium hydrate, aggregates and additives. | | | | | | | | |
| | Table of hazardous contents: | | | | | | | | |
| | Description | EU no. | CAS no. | Registration number | Contents [M.-%] | Classification as per 67/548/EEC Directive | | Classified as per (EU) Directive no. 1272/2008 | |
| | White Portland cement clinker | 266-043-4 | 65997-15-1 | deleted | <20 | Xi irritating | R37/38 R41 | Skin Irrit. 2 Eye Dam.1 STOT SE 3 | H315 H318 H335 H317 |
| | The complete text of the H and R sentences can be found in Section 16. | | | | | | | | |

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| 4.0 | First aid measures | |
| 4.1 | Description of first aid measures | |
| | General instructions: | No special personal protective equipment is needed for first aid assistants. First aid assistance should, however, avoid contact with moist mortar. |
| | Inhaling: | Remove dust sources and provide fresh air or move the victim to fresh air. If there are symptoms such as malaise, coughing or persistent irritation, seek the advice of a physician. |
| | Skin contact: | Wash the affected skin with a lot of water in order to remove all product remnants. Take off and remove wet gloves, clothing, shoes, watch, etc. Thoroughly wash or clean clothing, shoes, watches, etc. before reuse. Consult a doctor if there are skin symptoms. |
| | Eye contact: | Do not rub the eyes dry, as mechanical pressure could cause additional eye damage. If relevant, remove contact lenses and rinse the eyes with open eyelids under flowing water for at least 20 minutes in order to remove all particles. If possible, use isotonic eye rinse solution (such as 0.9% NaCl). Always consult an occupational physician or ophthalmologist. |
| | Swallowing: | Do NOT induce vomiting. If conscious, rinse the mouth with water and drink a lot of water. Consult with a physician or a poison control centre. |
| 4.2 | Most important acute or delayed symptoms and effects | |
| | Eyes: | Eye contact with dry or moist product can cause severe and possibly permanent damage. |
| | Skin: | The product can also have an irritating effect on moist skin even in the dry state (as a consequence of perspiring or relative humidity). Contact with moist skin can cause skin irritation, dermatitis or other severe skin damage. |
| | Additional advice: | Cement can worsen existing diseases of the skin, eyes or respiratory tract, such as with emphysema or asthma. |
| 4.3 | Advice for immediately doctor assistance or special treatment. | |
| | | If a physician is consulted, this Safety Data Sheet should be presented to him, if possible. |

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| 5.0 | Firefighting measures | |
| 5.1 | Extinguishing material: | The preparation is not flammable either as delivered or when mixed. Extinguishing material and firefighting must be adapted to the environment of the fire. |
| 5.2 | Special hazards from the mixture: | None. The product is neither explosive nor flammable, and also has no fire-promoting effect with other materials. |
| 5.3 | Instructions for firefighting: | No special measures needed for firefighting. Do not drain the remains into the sewers. Cool closed containers near the fire in water. |

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| 6.0 | Measures for unintended release | |
| 6.1 | Personal precautionary measures: | |
| 6.1.1 | Staff not trained for emergencies: | Wear protective equipment as described in Section 8. Avoid dust. Provide sufficient ventilation. Follow the instructions for safe handling as described in Section 7. Emergency plans are not required. |
| 6.2 | Deployment forces: | Protective equipment as described in Section 8.2.2 is required if there is high dust exposure. |
| 6.3 | Environmental protection measures: | Keep the mixture dry and covered in order to prevent dust. Do not drain into the sewers, surface water or groundwater (increases pH). If rivers, lakes or sewage lines are contaminated, inform the responsible authorities as per local regulations. |
| 6.4 | Methods and materials for containment and cleaning: | Protect against spilled material with a tarpaulin against moving, take dry, and use again if possible. Note the wind direction and height when stacking (such as with shovels) should be as low as possible. To clean, use at least industrial vacuum cleaners/de-dusters for dust class M (DIN EN 60335-2-69). Do not sweep dry. Never use compressed air for cleaning. If dust arises during dry cleaning, one must wear personal protective equipment. Inhaling any dust and contact with the eyes and skin must be avoided. Let the mixed mortar harden, and remove (see Section 13.1). |
| 6.5 | Reference to other sections: | Sections 8 and 13. |

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| 7.0 | Handling and storage | |
| 7.1 | Protective measures for safe handling: | <p>Do not eat, drink or smoke in areas which will be worked. Avoid dust. When using bags and open mixers, fill first with water, then carefully pour in the dry product. Keep the height low. Set the stirrer on 'slow'. Do not press together empty bags, such as in a larger bag. Avoid contact with the eyes and skin with personal protective equipment as per Section 8.2.2. Ensure sufficient ventilation; if needed, use respiratory protection as per Section 8.2.2. Do not kneel in fresh product when handling.</p> <p>For machine handling (such as with cleaning machines or continuous mixers), dust should be minimised through careful laying, opening end emptying the bags as well as the use of special additional equipment.</p> <p>Do not use products after the expiration of their given storage duration, as the effect of the reduction materials is reduced and the contents of soluble chrome (VI) can exceed the limit value set forth in Section 2.3. In these cases, due to the water-soluble chromate in the product, the product can cause allergic chromate dermatitis with prolonged skin contact.</p> <p>For packages from 10 kg: Minimise the lifting and carrying of packages by using mechanical assistance.</p> |
| 7.2 | Conditions for safe storage in regards to incompatibility: | Store dry, not together with acids, and separated from foods. Avoid entry of water and moisture. Always store in original packages. The effect of the chromate reducer can be reduced with improper storage (entry of moisture) or exceeding the maximum storage time (see Section 7.1). |
| 7.3 | Specific final uses: | <p>This product is classified under GISCODE ZP 1 (cement-containing product, low chromate). Further information on safe handling, protective means and behavioural rules can be found in GISCODE ZP 1. It is available as a part of the hazardous materials information of the Construction Professions Association at www.gisbau.de.</p> <p>Further information on safe handling are contained in the hazard assessment delivered with the product as per § 6 para. 7 of the Regulation to Protect against Hazardous Materials (Gefahrstoffverordnung – GefStoffV).</p> |

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| 8.0 | Limitation and monitoring exposure / personal protective equipment | | | | | | | |
| 8.1 | Parameters to monitor: | | | | | | | |
| | Components of the space-related monitoring limit value: | CAS no. | Type of assess - Value | Assessment value [mg/m³] | Peak limit [mg/m³] | | Origin | Monitoring procedure, such as |
| | General dust limit value | deleted | AGW | 1.25 (A) 8h 10 (E) | 2 (II) 15 min | 2.5 A) 20 (E) | TRGS 9001 | TRGS 402 |
| | 1 Reference (2) (A) = alveoli penetrating dust fraction (E) = inhalable dust fraction | | | | | | | |
| 8.2 | Limitation and monitoring exposure: | | | | | | | |
| 8.2.2 | Suitable technical control equipment: | | | Closed systems (such as silos with conveyors), local suction or other technical control devices, such as polishing machines or continuous mixers with special additional equipment to capture dust should be used. | | | | |
| | Individual protective measures, such as equipment: | | | Do not eat, drink or smoke when working. Before breaks and at the end of work wash the hands and face and shower if necessary, in order to remove remaining dust. Avoid contact with the eyes and skin. Skin Use skin care materials. Wet gloves, clothing, shoes, watches, etc. should be taken off immediately or removed. Clothes, shoes, watches, etc. should be washed/cleaned thoroughly before reuse. General information on the use of protective clothing can be found in the professional organization rules BGR 189. | | | | |
| | Face / eye protection: | | | If there is dust or a spray hazard, wear sealed protective goggles as per EN 166 (provide eye washes). General information on the use of protective clothing can be found in the professional organization rules BGR 192. | | | | |
| | Skin protection: | | | Wear waterproof, wear- and alkali-resistant gloves with CE mark. Leather gloves are not suitable due to their water permeability, and could release chrome-containing compounds. Investigations have shown that nitrile-soaked cotton gloves (layer thickness about 0.15 mm) offer adequate protection over a 480-minute period. Change wet gloves. Provide gloves for changing. General information on the use of protective clothing can be found in the professional organization rules BGR 195. Wear closed, long-armed protective clothing and sealed shoes. Protective clothing should also be waterproof if contact with fresh mortar cannot be avoided. Ensure that no fresh mortar penetrates from above into the shoes or boots. Note the skin protection plan. In particular, use skin care products after work. | | | | |
| | Respiratory protection: | | | If there is a danger that the exposition limit values could be exceeded, such as with open fiddling with the powder, dry product, one must wear a suitable respiratory protective mask. <p>Mixing and refilling dry mortar into open systems, such as mixing by hand, entering bagged goods in polishers: Ensure adherence to working limit values through effective dust measures, such as local vacuum equipment. If this is not possible, particle-filtering half-masks (FFP2 type, tested as per EN 149) must be used.</p> <p>Manual handling of ready-to-use mortar: No respiratory protection required.</p> <p>Machine handling of mortar: No respiratory protection required.</p> | | | | |

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| | | <p>General information on the use of protective clothing can be found in the professional organization rules BGR/GUV R 190.</p> <p>Employees must be trained in the correct use of personal protective equipment in order to ensure the required effectiveness.</p> |
| 8.2.3 | Limitation and monitoring environmental exposure: | |
| | | Avoid release into the environment. Use the remaining amounts, or properly dispose of them. |
| | Air: | Adhere to the dust emission limit values as per the Technical Instructions for Keeping the Air Clean (TA Luft). |
| | Water: | Do not Ecological-toxicological effects can occur with a pH greater than 9. One must observe wastewater and groundwater regulations. |
| | Soil: | Adhere to the Bundes-Bodenschutzgesetzes [Federal Soil Protection Law] (BBodSchG) and Bundes-Bodenschutz- und Altlastenverordnung [Federal Soil Protection and Contamination Regulation] (BBodSchV). No special monitoring measures necessary. |

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| 9.0 | Physical and chemical properties | |
| 9.1 | Information on the basic physical and chemical properties: | |
| a) | Appearance: | Power |
| | Aggregate status: | Solid |
| | Colour: | Grey |
| b) | Odour | Odourless |
| c) | Odour threshold | None, as it is odourless |
| d) | pH value (20 °C): | At 20 °C, mixed ready-to-use in water: 11.5-13.5 |
| e) | Melting / freezing point: | Not applicable |
| f) | Boiling point, boiling range: | Not applicable |
| g) | Flashpoint: | Not applicable |
| h) | Vapour speed: | Not applicable |
| i) | Flammability: | Not applicable |
| j) | Upper/lower ignition or explosion limits | Not applicable |
| k) | Vapour pressure: | Not applicable |
| l) | Vapour density: | Not applicable |
| m) | Relative density: | Not applicable |
| n) | Bulk density: | 1400-1600 kg/m ³ (20 °C) |
| o) | Solubility in water: | In water: low |
| p) | Distribution coefficient n-octanol/water: | Not applicable |
| q) | Self-ignition temperature: | Not self-igniting |
| r) | Decomposition temperature | Not applicable. |
| s) | Viscosity | Not applicable |
| t) | Explosive properties: | Non-explosive |
| u) | Oxidising properties | Non-oxidising |
| 9.2 | Other information: | None |

10.0 Stability and reactivity

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| 10.1 | Reactivity: | Reacts in an alkaline manner in water In contact with water, an intended reaction takes place. When the product is hardened and forms a solid mass, it no longer reacts with its environment. |
| 10.2 | Chemical stability: | The product is stable (assuming proper and dry storage). |
| 10.3 | Possible hazardous reactions: | No hazardous reactions (see also Section 10.5). |
| 10.4 | Conditions to avoid: | Avoid water entry and moisture during storage (the mixture reacts in an alkaline manner with humidity and hardens). |
| 10.5 | Incompatible materials: | Reacts exothermically with acids: the moist product is alkaline and reacts with acids, ammonium salts and base metals such as aluminium, zinc and brass. Hydrogen is produced when reacting with base metals. |
| 10.6 | Hazardous decomposition products: | No hazardous decomposition products are known for this mixture. |

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| 11.0 | Toxicological information | |
| | Information about toxicological effects: | The mixture was not investigated for toxicology in its mixed state. Information about toxicological effects results from the relevant information for cement and calcium dihydroxide. Portland cement (normal cement) and Portland cement clinker, and have the same toxicological and ecological-toxicological properties. |
| | Acute toxicity: | Cement is classified as not acutely toxic. Dermal Limit test, rabbits, 24-hour exposure, 2000 mg/kg body weight - no lethality. [Reference (4)] The classification criteria are not fulfilled in light of the data presented. Inhalation Limit test, rats, at 5 g/m ³ , no acute toxicity Studies were performed with Portland cement clinker, the main cement component. [Reference (10)] The classification criteria are not fulfilled in light of the data presented. Oral No acute oral toxicity was found in animal studies with cement kiln dust. The classification criteria are not fulfilled in light of the data presented. |
| | Irritation to the skin: | Cement has an effect which irritates the skin and mucous membranes. Dry cement in contact with moist skin or skin in contact with moist or wet cement can lead to various irritating and inflammatory skin reactions, such as reddening and forming cracks. Constant contact in connection with mechanical friction can lead to severe skin damage. [Reference (4)] |
| | Severe eye damage/irritation: | Portland cement clinker (the main component in cement) showed varied severe effects on the cornea in an in-vitro test. The calculated irritation index is 128. Direct contact with cement can lead to corneal damage, on the one hand due to mechanical penetration, and on the other due to immediate or later irritation or inflammation. Direct contact with larger volumes of dry cement or sprays of wet cement can have effects which range from moderate eye irritation (such as conjunctivitis or lid border inflammation) to severe eye damage or blindness. [Reference (11), (12)] |
| | Sensitisation of the respiratory tract: | There is no evidence of sensitisation of the respiratory tract. The classification criteria are not fulfilled in light of the data presented. [Reference (1)] In some individuals, contact with wet cement can lead to skin eczema. These are either triggered by the pH (irritating contact dermatitis) or immunological reactions with water-soluble chrome (VI) (allergic contact dermatitis). [Reference (5), (13)] |

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| Nuclear mutagenicity: | No evidence of nuclear mutagenicity. The classification criteria are not fulfilled in light of the data presented. [Reference (14), (15)] |
| Carcinogenicity: | No causal connection has been found between cement and cancer. Epidemiological studies have found no conclusions about a connection between exposure to cement and cancer. [Reference (1)] Portland cement is not classified as a human carcinogen as per ACGIH A4. "Materials which concern human carcinogenicity cannot be conclusively assessed due to inadequate data. In-vitro tests and animal studies have shown no sufficient evidence of carcinogenicity in order to assign another classification to this material." [Reference (16)] The classification criteria are not fulfilled in light of the data presented. |
| Reproductive toxicity: | The classification criteria are not fulfilled in light of the data presented. |
| Specific target organ toxicity with single exposure: | Long-term exposure to cement dust which enters the lungs which is above workplace limits can lead to coughing, shortness of breath and chronic, obstructive changes in the respiratory tract. No chronic effects have been observed at low concentrations. [Reference (17)] The classification criteria are not fulfilled in light of the data presented. |
| Aspiration hazard: | Not applicable, as cement is not present in aerosol form. |

12.0 Environmental information

12.1 Toxicity

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| Cement | Ecological-toxicological investigations with Portland cement on Daphnia magna (U. S. EPA, 1994a) [Reference (6)] and Selenastrum coli (U. S. EPA, 1993) [Reference (7)] have shown only a slight toxic effect. Thus the LC50 and EC 50 values cannot be determined [Reference (8)]. Also no toxic effects could be determined for sediment [Reference (9)]. The release of larger volumes of cement in water can, however, lead to an increase in pH, and therefore be toxic to aquatic organisms under special circumstances. |
| 12.2 Persistence and degradability: | Not applicable. |
| 12.3 Bioaccumulation potential: | No information available. |
| 12.4 Soil mobility: | No information available. |
| 12.5 Results of the PBT and vPvP assessment: | No information available. |
| 12.6 Other hazardous effects: | The mix includes Portland cement clinker. The release of larger volumes in water leads to an increase in pH. The pH sinks quickly through dilution (inorganic-mineral construction material). |

13. Instructions on disposal

Waste treatment procedures

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| Unused product remnants: | May not be disposed together with house rubbish. Do not drain the remains into the sewers. Take up dry, store in labelled containers and, reuse or mix the remnants with water while avoiding skin contact and dust exposure, and after hardening, dispose in accordance with local and official regulations as possible, with consideration of the maximum storage time. |
| Wet product and product muds: | Wet product and product muds should be left to harden, and not put into the drains or waters. Dispose as described under “hardened product.” |
| Hardened product: | Dispose of hardened product in observance of local official provisions. Do not drain the remains into the sewers. Disposal of the hardened product as per the AVV such as 17 01 01 concrete rubble 17 09 04 (mixed construction and rubble waste, with exception of that which falls under 17 09 01, 17 09 02 and 17 09 03). |
| Packaging: | Completely empty the packaging and put into recycling. Instead of disposing of completely emptied packages, as per the type of packaging in accordance with AVV for example 15 01 01, packaging made of paper and cardboard, 15 01 05, compound packaging) |
| AVV waste key: | The listed waste numbers are only examples. The actual waste number depends upon the origin and composition of the waste. Assigning a waste key must be done in concert with the responsible authorities in accordance with national and regional provisions. |

14.0 Transport instructions

No hazardous goods as per the regulations for the transport of dangerous goods ADR/RID, ADN, IMDG Code, ICAO-TI, IATA-DGR.

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| 14.1 | UN number: | Not applicable. |
| 14.2 | Proper UN shipping name: | Not applicable. |
| 14.3 | Transport hazard class: | Not applicable. |
| 14.4 | Packaging group: | Not applicable. |
| 14.5 | Environmental hazards: | Not applicable. |
| 14.6 | Special precautionary measures for the user: | Not applicable. |
| 14.7 | Bulk goods transport as per Appendix II of MARPOL Treaty 73/78 and as per the IBC code: | Not applicable. |

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| 15.0 | Information on legislation | |
| 15.1 | Regulations for safety, health and environmental protection/specific legislation for the mixture | |
| | Relevant regulations, rules and laws: | Regulation for protection from hazardous materials (GrfStoffV) Prohibited chemicals regulation (ChemVerbotsV) Regulation for the European Waste Index (AVV) Federal Soil Protection Law (BBodSchG) Federal Soil Protection and Contamination Regulation (BBodSchV), Technical Directions for Keeping the Air Clean (TA Luft) |
| | Water hazard class (WGK): | WGK 1 (slight water hazard), calcium dihydroxide, ID no. 320 as per VwVwS |
| | Other regulations, limitations and prohibitions: | Observe the REACH Directive (EU) no. 1907/2006, Appendix XVII, no. 47 (chrome VI compounds). |
| | Relevant TRGS: | TRGS 200 (classification and identification of materials, preparations and products) TRGS 500 (protective measures) TRGS 559 (mineral dust) TRGS 510 (Storing hazardous material in containers which can be moved) TRGS 900 (workplace limit values) |
| | Relevant professional association rules (BGR) for Statutory Accident Insurance (GUV): | BGR/GUV R 190 (use of respiratory protection devices) BGR 192 (use of eye and face protection) BGR 189 (use of protective clothing) BGR 195 (use of protective gloves) |
| | GISCODE: | ZP1 Products containing cement, low-chrome. |
| | VCI storage class: | Storage class 13 (non-flammable solids) as per TRGS 510 |
| 15.2 | Material safety assessment: No material safety assessment was performed. | |

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| 16.0 | Other information | |
| 16.1 | Changes as compared to the previous version of the safety data sheet | |
| | Correction of P sentences (new P304+P340), Section 8.1, parameters to monitor | |
| 16.2 | Abbreviations and acronyms | |
| | ACGIH | American Conference of Industrial Hygienists |
| | ADN | Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure |
| | ADR/RID | European Agreements on the transport of Dangerous goods by Road/Railway |
| | AGW | Workplace limit value |
| | AVV | Regulation for the European Waste Index (AVV) |
| | CAS | Chemical Abstracts Service |
| | DFG | German Research Association |
| | DIN | Deutsches Institut für Normung e.V. |
| | DNEL | Derived No-Effect Level Determine amount of exposure without impacting Effective concentration at 10% mortality rate |
| | EC10 | Half maximal effective concentration |

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| EC50 | Half maximal effective concentration |
| EN | European standard |
| GHS | Globally Harmonized System of Classification, Labelling and Packaging of Chemicals |
| IBC Code | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk |
| IATA-DGR | International Air Transport Association-Dangerous Goods Regulations |
| ICAO-TI | International Civil Aviation Organisation - Technical instructions for the safe transport of dangerous goods by air. |
| IFA | Institute for Worker Protection of German Statutory Accident Insurance |
| IMDG Code | International agreement on the Maritime transport of Dangerous Goods |
| LC10 | Lethal concentration at 10% mortality rate |
| LC50 | Median lethal concentration |
| LD10 | Lethal dose at 10% mortality rate |
| LD50 | Mean lethal dose |
| MARPOL | Marine pollution (International Convention for the Prevention of Pollution from Ships) |
| MEASE | Metals estimation and assessment of substance exposure |
| NaCl | Sodium chloride |
| NOEC | No observed effect concentration Highest tested concentration without observed damaging effects, |
| OECD | Organisation for Economic Cooperation and Development |
| OSHA | Occupational Safety & Health Administration |
| PBT | Persistent, bio-accumulative and toxic |
| REACH | Registration, Evaluation and Authorisation of Chemicals (Directive (EU) 1907/2006) |
| RID | Règlement international concernant le transport des marchandises dangereuses par chemin de fer International regulation for transporting hazardous goods by rail |
| STOT | Specific target organ toxicity |
| TRGS | Technische Regeln für Gefahrstoffe [Technical Rules for Hazardous Materials] |
| U.S.EPA | Chemical Industry Association e.V. |
| VCI | Verband der chemischen Industrie e.V. [German Chemical Association] |
| vPvB | Very persistent, very bioaccumulative |
| VwVwS | Verwaltungsvorschrift wassergefährdende Stoffe [Administrative Guidelines for Material Hazards to Water] |

- (1) Portland Cement Dust - Hazard assessment document EH75/7, UK Health and Safety Executive, 2006: <http://www.hse.gov.uk/pubns/web/portlandcement.pdf>.
- (2) TRGS 900, Technical rules for hazardous materials, "Workplace Limit Values," 2014
- (3) MEASE 1.02.01 Exposure assessment tool for metals and inorganic substances, EBRC Consulting GmbH für Eurometaux, 2010: <http://www.ebrc.de/ebrc/ebrc-mease.php>.
- (4) Observations on the effects of skin irritation caused by cement, Kietzman et al, *Derma tosen*, 47, 5, 184-189 (1999).
- (5) 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.
- (6) U.S. EPA, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 3rd ed. EPA/600/7-91/002, Environmental Monitoring and Support Laboratory, U.S. EPA, Cincinnati, OH (1994a).
- (7) U.S. EPA, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 4th ed. EPA/600/4-90/027F, Environmental Monitoring and Support Laboratory, U.S. EPA, Cincinnati, OH (1993).
- (8) Environmental Impact of Construction and Repair Materials on Surface and Ground Waters. Summary of Methodology, Laboratory Results, and Model Development. NCHRP report 448, National Academy Press, Washington, D.C., 2001.
- (9) Final report Sediment Phase Toxicity Test Results with *Corophium volutator* for Portland clinker prepared for Norcem A.S. by AnalyCen Ecotox AS, 2007.
- (10) TNO report V8801/02, An acute (4-hour) inhalation toxicity study with Portland Cement Clinker CLP/GHS 03-2010-fine in rats, August 2010.
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- (13) Investigation of the cytotoxic and proinflammatory effects of cement dusts in rat alveolar macrophages, Van Berlo et al, *Chem. Res. Toxicol.*, 2009 Sept; 22(9):1548-58
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- (18) Anonymous, 2008: Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL) for calcium oxide (CaO) and calcium hydroxide (Ca(OH)₂), European Commission, DG Employment, Social Affairs and Equal Opportunities, SCOEL/SUM/137 February 2008

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| 18.0 | Methods as per Article 9 of the Directive (EU) 1272/2008 to assess information for purposes of classification |
| | The assessment follows Article 6, para. 5 and Appendix I of the Directive (EU) no. 1272/2008 |

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| 19.0 | Texts of the R sentences, hazard instructions, safety advice and safety instructions, description of special hazards (R sentences) |
| | |
| R 37/38 | Irritates the respiratory organs and eyes. |
| R 41 | Hazard of severe eye damage. |
| R 43 | Sensitisation possible with skin contact. |

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| 20.0 | Safety advice (S sentences) |
| | |
| S 2 | May not be within the reach of children. |
| S 22 | Do not inhale dust. |
| S 24/25 | Avoid contact with the eyes and skin. |
| S 26 | If it touches the eyes, immediately and thoroughly rinse with water and consult a physician. |
| S 36/37/39 | Wear suitable protective clothing, gloves and goggles/face protection when working. |
| S 46 | If swallowed, seek medical advice immediately, and show packaging or label. |

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| 21.0 | Safety instructions (P instructions) |
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| P 102 | May not be within the reach of children. |
| P 261 | Avoid inhaling dust. |
| P 271 | Only use outdoors or in well-ventilated rooms. |
| P 280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P 305 + P 351 + P 338 + P 310 | IF THERE IS EYE CONTACT: Rinse carefully with water for a few minutes. Remove existing contact lenses if possible. Continue rinsing. Call a poison information centre/physician. |
| P 302 + P 352 + P 332 + P 313 | IF THERE IS EYE CONTACT: Wash with lots of water and soap. If there is skin irritation: Consult with a physician. |
| P 362 | Pull off contaminated clothing and wash before wearing again. |
| P 501 | Dispose of contents/container as per national rules for waste recycling. |

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| 22.0 | Hazard instructions (H instructions) |
| | |
| H 315 | Causes skin irritation. Causes severe |

| | |
|--------------|-------------------------------------|
| H 317 | Can cause allergic skin reactions. |
| H 318 | Causes severe eye damage. |
| H 335 | Can irritate the respiratory tract. |

Training instructions

Additional training beyond the prescribed instruction in working with hazardous materials is not required.

Exclusion clause

The information in this safety data sheet describes the safety requirements for our product, and relies on the current status of our knowledge. It provides no assurance of product characteristics. See also the technical leaflet or the product data sheet for more information.

The users of our products are responsible on their own to observe existing laws, regulations and rules, even those not named in this data sheet.

Department publishing the data sheet:

Department: Quality Assurance

Our recommendations for applications which we give to support the purchasers/handlers from our experience, corresponds to current science and practice. The advice is non-binding, and forms no contractual, legal relationship and no additional obligations in the purchase contract. The advice does not release the purchaser from examining our products for their suitability for their foreseen uses. The general rules of construction equipment must be adhered to. We reserve the right to make changes which serve to provide technical progress and improve the product or its use. When such technical information appears, earlier information is no longer valid.

You can find the most current information on our Internet pages. Only our current sales and supply conditions as well as provisions for the placement and use of our silos and mixing facilities apply for all business cases.

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