Baumit SupraFix

Safety Data Sheet

As per (EU) no.1907/2006 (REACH) as well as (EU) no. 453/2010

Revised on: 24/04/2015

1.1	**Product Identifier**	
1.0	**Identification of the material or the mixture and the company**	
	Commercial name:	**Baumit SupraFix**
1.2	**Relevant identified applications of the material or mixture and applications which are not recommended**	
	Use of the material/mixture:	Suprafix is a factory- mixed, mineral, high-quality powder adhesive based on cement for wood bases to glue facade boards, facade insulation boards, EPS-F, EPS-F plus and XPS base insulation boards, and others See also: product data sheet (List is not complete)
1.3	**Details on the supplier which provides the safety data sheet**	
	Manufacturer:	Wopfinger Baustoffindustrie GmbH A-2754 Waldegg / Wopfing 156 Tel. + 43/2633/400-0 Fax + 43 2633 400 -266 email: office@wopfinger.baumit.com Office issuing information: Product management + 43/2633/400-0 Office hours: Mon. to Thurs, 7:00 to 16:00 and Fri., 7:00 to 13:00
1.4	**Emergency telephone number:**	
		Poison Information Centre at the First University Hospital, Währinger Gürtel 18-20, 1090 Vienna: + 43/1/406 43 43

2.0	**Possible hazards**	
2.1	**Classification of the material/mixture:**	
	Classified as per (EU) Directive no. 1272/2008	
	Hazard class:	**Hazard category**
	Severe eye damage/irritation:	**1**
	Skin sensitisation:	**1B**
	Hazard instructions:	
	H 318	Causes severe eye damage.
	H 317	Can cause allergic skin reactions.

	As per 1999/45/EU Directive	
	Classification:	Xi irritating.
	R36:	Irritates the eyes.
	R43:	Sensitisation possible with skin contact.
2.2	**Identification items:**	
	As per (EU) Directive no. 1272/2008	
	Hazard pictogram:	 GHS05  GHS07
	Signal word:	Hazard
	Hazard instructions:	
	H 317	Can cause allergic skin reactions.
	H 318	Causes severe eye damage.
	Safety instructions:	
	P 101	If a physician's advice is sought, bring the packaging or label.
	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	For eye contact: Rinse carefully with water for a few minutes. Remove existing contact lenses if possible. Rinse further.
	P 310	Call a poison information centre/physician immediately.
	P 302 + P 352	IF THERE IS EYE CONTACT: Wash with lots of water and soap.
	P 261	Avoid inhaling dust.
	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	**as per 1999/45/EU Directive**	
	Hazard symbol:	 X1 irritating
	R sentences	
	R 36	Irritates the eyes.
	R 43	Sensitisation possible with skin contact.
	Safety advice	
	S 2	May not be within the reach of children.
	S 22	Do not inhale dust.
	S 24/25	Avoid skin and eye contact.
	S 26	If it touches the eyes, immediately and thoroughly rinse with water and consult a physician.

S 28	Wash with water if it comes into contact with the skin.
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.
Further information	None.

Compound/Information about components

Materials

Not applicable, as this product is a mixture (see Section 3.2)

Mixtures

Mixture of white Portland cement as per Directive 2003/53/EU, calcium hydrate, aggregates and additives.

Table of hazardous contents:

Description	Contents:	CAS no.	EU No.	Registration No.	Classification as per 67/548/EEC	Classified as per (EU) Directive no. 1272/2008	
Portland cement Clinker	3% – 7%	65997-15-1	266-043-4	a)	Xi irritating R37 R38; R41 R43	H315 H318 H335 H317	Skin Irrit. 2 Eye Dam. 1 STOT SE 3 Skin Sens. 1

The complete text of the H and R sentences can be found in Section 16.

a)Portland cement clinker is exempted from registration according to Article 2.7 (b) and Appendix V10 of Regulation (EU) no. 1907/2006 (REACH).

4.0 First aid measures

4.1 Description of first aid measures

General instructions:	Help quickly. No special personal protective equipment is needed for first aid assistants. First aid assistance should, however, avoid contact with moist mixtures.
Inhaling:	Provide fresh air. Consult a doctor if there are symptoms.
Skin contact:	Remove the dry mixture and rinse with abundant water. Rinse moist cement immediately with plenty of water. Remove soaked clothing, shoes, watches, etc. This should be thoroughly cleaned 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.
Instructions for the doctor:	No known long-term effects.

4.2	**Most important acute or delayed symptoms and effects**	
	Eyes:	Eye contact with the mixture (dry or moist) can cause severe and possibly permanent eye damage.
	Skin:	The product can have an irritating effect on moist skin with constant contact (as a consequence of perspiring or relative humidity). Contact between the product and moist skin can cause skin irritation, dermatitis or severe skin damage. *For further information, see (1).*
	Breathing:	Repeated inhalation of larger amounts of dust or over a long period increases the risk of lung diseases.
	Environment:	The mixture is not hazardous to the environment when used normally.
4.3	**Advice for immediately doctor assistance or special treatment.**	
	Instructions for the doctor:	If a doctor is visited, please bring the safety data sheet. No known long-term effects.

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:**	The mixture is neither explosive nor flammable and also fire-promoting with other materials.
5.3	**Instructions for firefighting:**	No special measures necessary, as the product presents no fire-related hazards.

6.0	**Measures for unintended release**	
6.1	**Personal precautionary measures:**	
6.1.1	**Staff not trained for emergencies:**	Wear protective clothing as described in Section 8. Follow the instructions for safe handling as described in Section 7.
6.2	**Deployment forces:**	Emergency plans are not required Respiratory protection is required for higher amounts of dust exposure.
6.3	**Environmental protection measures:**	Keep the mixture dry. Keep the mixture dry and covered in order to prevent dust. Do not drain into the sewers, surface water or groundwater (increases pH).
6.4	**Methods and materials for containment and cleaning:**	Pick up spilled mixture and use if possible. In order to clean, use the driest procedures possible, such as low-pressure suction (portable device with highly-efficient filter systems (EPA and HEPA filter, EN 1822-1:2009) or equivalent techniques) which do not generate dust. Never use compressed air for cleaning. If dust arises during dry cleaning, one must wear personal protective equipment. Avoid inhaling dust and skin contact. Put the spilled material back into the container. One can use it afterwards.
6.5	**Reference to other sections:**	Sections 7, 8 and 13.

7.0	**Handling and storage**

7.1	**Protective measures for safe handling:**	Please follow the recommendations in Section 8. Please observe Section 6.3 to remove dry mixture. Do not eat, drink or smoke when working. Wear goggles and a respiratory mask in dusty atmospheres. Wear protective gloves in order to avoid skin contact.
7.2	**Conditions for safe storage in regards to incompatibility:**	The mixture must be stored under dry (minimise internal condensation), water-protective conditions, clean, and protected before contamination. Enter storage areas for the mixtures such as silos, boilers, silo vehicles or other packages without suitable safety measures as there is a risk that it can be spilled and one could choke. In such enclosed rooms, the mixture can form walls and bridges which could collapse. Do not use aluminium containers as there may be material incompatibility.

8.0	**Limitation and monitoring exposure / personal protective equipment**				
8.1	**Parameters to monitor:**				
	Limit values		**Exposure path**	**Exposure frequency**	**Remarks**
	Portland cement (dust):	5 (E) mg/m³	Inhalation	TMW	Portland cement (dust):
	A = respirable dust fraction **E = inhalable dust fraction**		**TMW = daily average** **Mow = instantaneous value**	**KZW = short-term exposure** **a) frequency per shift**	

8.2	**Limitation and monitoring exposure:**	
8.2.2	**Suitable technical control equipment:**	Avoid dust when handling or provide an appropriate ventilation or exhaust system or use closed handling systems. Use local vacuum or other technical dust capturing methods.
	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. **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. **Manual handling of ready-to-use mortar:** No respiratory protection required. **Machine handling of mortar:** No respiratory protection required. General information on the use of protective clothing can be found in the professional organization rules BGR/GUV R 190. Employees must be trained in the correct use of personal protective equipment in order to ensure the required effectiveness.
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.

9.0	**Physical and chemical properties**	
9.1	**Information on the basic physical and chemical properties:**	
a)	**Appearance:** **Aggregate status:** **Colour:**	Power Solid 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:**	1100-1300 kg/m³ (20 °C)
o)	**Solubility in water:**	low (at 20 °C: <2g/l related to calcium dihydroxide)
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**

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.
All information assumes use as intended.		

11.0	**Toxicological information**			
	Hazard Class	**Cat.**	**Effect**	**Reference**
	Acute toxicity – dermal:	-	Limit test, rabbits, 24-hour exposure, 2000 mg/kg body weight - no lethality. The classification criteria are not fulfilled in light of the data presented.	(4)
	Acute toxicity – inhaled:	-	Limit test, rats, at 5 g/m³, no acute toxicity Studies were performed with Portland cement clinker, the main cement component. The classification criteria are not fulfilled in light of the data presented.	(10)
	Acute toxicity – 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.	Literature search
	Irritation to the skin:	2	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 such as reddening and forming cracks. Constant contact in Constant contact in connection with mechanical friction can lead to severe skin damage.	(4) skin reactions, in humans
	Severe eye damage/irritation:	1	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 through mechanical penetration, and on the other hand, through immediate or later irritation or inflammation. Direct contact with larger volumes of dry cement or sprays of moist cement can have effects which range from moderate eye irritation (such as conjunctivitis or lid edge infection) to severe eye damage and becoming blind.	(11), (12) and experiences in humans
	Skin sensitisation:	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).	(5), (13)
	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.	(1)
	Nuclear mutagenicity:	-	No evidence of nuclear mutagenicity. The classification criteria are not fulfilled in light of the data presented.	(14), (15)

	Carcinogenicity:	-	No causal connection has been found between cement and cancer. Epidemiological studies lead to no conclusions about the association between exposure to cement and cancer. Portland cement is not classified as a human carcinogen as per ACGIH A4. " Materials which are related to human carcinogenicity due to inadequate data, cannot be conclusively assessed. In-vitro tests or animal experiments provide insufficient evidence of carcinogenicity in order to classify this material in another classification." Portland cement contains over 90% Portland cement clinker. The classification criteria are not fulfilled in light of the data presented.	(1) (16)
	Reproduction toxicity:	-	Classification criteria are not met based on available data, no evidence based on experience in humans.	
	Specific target organ toxicity with single exposure:	3	Cement dust exposure can lead to irritation of the breathing organs (throat, neck, lungs). Coughing, sneezing and shortness of breath can be the consequences if exposure is over the workplace limits. Work-related exposure to cement dust can lead to impacts on breathing functions. In any case, there is currently insufficient knowledge to determine a dose-effect relationship.	(1)
	Specific target organ toxicity with repeated 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. The classification criteria are not fulfilled in light of the data presented.	(17)
	Aspiration hazard:	-	Not applicable, as cement is not present in aerosol form.	
	Effects on health due to exposure			
		The mixture can worsen existing diseases of the skin, eyes or respiratory tract, such as with emphysema or asthma.		

12.0	**Environmental information**	
12.1	**Toxicity:**	The mixture is not hazardous to the environment. 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, as the mixture is an inorganic mineral material. There is no toxicological risk in hydrating remnants of the mixture which remain.
12.3	**Bioaccumulation potential:**	Not applicable, as the mixture is an inorganic mineral material. There is no toxicological risk in hydrating remnants of the mixture which remain.
12.4	**Soil mobility:**	Not applicable, as the mixture is an inorganic mineral material. There is no toxicological risk in hydrating remnants of the mixture which remain.

12.5	**Results of the PBT and vPvP assessment:**	Not applicable, as the mixture is an inorganic mineral material. There is no toxicological risk in hydrating remnants of the mixture which remain.
12.6	**Other hazardous effects:**	Not applicable.

13.0	**Instructions on disposal**	
	Procedure for waste treatment disposal:	Pick up dry. Disposal as per local and official regulations. Do not mix spent residual amounts while avoiding any skin contact with water and treat like concrete waste after it hardens. Do not dispose with household rubbish. Do not drain the remains into the sewers. Do not empty into the sink or toilet.
	ÖNORM S2100:	31607 Mud from ready-mixed mortar production (solidified)
	EWC:	Definitive classification of this material to appropriate European waste groups and therefore for the correct European waste key depends upon the final use of this material. Confer with an authorised waste disposal firm. Recommendation: 10 13 14: Concrete waste and concrete slurry.

14.0	**Transport instructions**	
The mixture is subject to none of the international hazardous goods regulations (ADR, RID, ADN, IMDG- Code, ICAO-TI, IATA-DGR). Thus no hazardous material classification is required.		
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.

15.0	**Information on legislation**	
15.1	**Regulations for safety, health and environmental protection/specific legislation for the mixture**	
	Relevant regulations, rules and laws:	REACH Directive (EU) no. 1907/2006, Appendix XVII, no. 47 (chrome VI compounds).
15.2	**Material safety assessment:**	
	No material safety assessment was performed.	

16.0	**Other information**
16.1	**Changes as compared to the previous version of the safety data sheet**
	New version as per (EU) Directive no. 1272/2008 (CLP)

16.2	**Abbreviations and acronyms:**	
	ACGIH	American Conference of Industrial Hygienists
	ADN	Accord européen relativ au transport international des marchandises dangereuses par voie de navigation intérieure
	ADR/RID	European Agreements on the transport of Dangerous goods by Road/Railway
	APF	Assigned protection factor
	AVV	Regulation for the European Waste Index (AVV)
	CAS	Chemical Abstracts Service
	CLP	Classification, labelling and packaging (Directive (EU) no. 1272/2008)
	EC10	Half maximal effective concentration
	EC50	Half maximal effective concentration
	ECHA	European Chemicals Agency
	EINECS	European Inventory of Existing Commercial Chemical Substances
	EPA	Type of high efficiency air filter
	HEPA	Type of high efficiency air filter
	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
	IUPAC	International Union of Pure and Applied Chemistry
	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]

17.0 Literature information and data sources

(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.**

(11) **TNO report V8815/09, Evaluation of eye irritation potential of cement clinker G in vitro using the isolated chicken eye test, April 2010.**

(12) **TNO report V8815/10, Evaluation of eye irritation potential of cement clinker W in vitro using the isolated chicken eye test, April 2010.**

(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**

(14) **Cytotoxicity and genotoxicity of cement dusts in A549 human epithelial lung cells in vitro: Gminski et al, Abstract DGPT conference Mainz, 2008.**

(15) **Comments on a recommendation from the American Conference of governmental industrial Hygienists to change the threshold limit value for Portland cement, Patrick A.**

(16) **Hessel and John F. Gamble, EpiLung Consulting, June 2008.**

Prospective monitoring of exposure and lung function among cement workers, Interim report of the study after the data collection of Phase I-II 2006-2010, H. Notø, H. Kjuus, M. Skogstad and K.-C. Nordby, National Institute of Occupational Health, Oslo, Nor way, March 2010.

(17) **Anonymous, 2006: Tolerable upper intake levels for vitamins and minerals Scientific Committee on Food, European Food Safety Authority, ISBN: 92-9199-014-0 [SCF document]**

(18) **Anonymous, 2008: Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL) for calcium oxide (CaO) and calcium dihydroxide (Ca(OH)2), European Commission, DG Employment, Social Affairs and Equal Opportunities, SCOEL/SUM/137 February 2008**

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