

SAFETY DATA SHEET

In accordance with Regulation 830/ 2015 amending (EC) Regulation no. 1907/ 2006
(REACH)

Name of the product:	Portland cement as per SR EN 197-1 Masonry cement according to SR EN 413-1
Revision	1 st edition, 4 th revision (this sheet substitutes previous versions)
Date of last revision	27.05.2022
Code	FDS-02

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND COMPANY

1.1. Product identification features

Portland cement as per SR EN 197-1
Masonry cement as per SR EN 413-1
EINECS: 266-043-4
CAS: 65997-15-1

Substance	Concentration level (%)	Registration no.	EINECS	CAS	Classification as per Regulation 1272/2008	
					Class, hazard category	Risk phrase
Portland cement clinker	5-100	-	266-043-4	65997-15-1	Irritant for the respiratory system	H335: May cause irritation of the breathing system
					Irritant for the skin	H315: Causes skin irritation
					Serious eye damage	H318: Causes serious damage of the eye
					Skin sensitization	H317: May cause an allergic skin reaction
Dust from clinker production	0-5	01-2119486767-17-0052	270-659-9	68475-76-3	Irritant for the respiratory system	H335: May cause irritation of the breathing system
					Irritant for the skin	H315: Causes skin irritation
					Serious eye damage	H318: Causes serious damage of the eye
					Skin sensitization	H317: May cause an allergic skin reaction

1.2. Identified relevant uses of substance or

Cement is used as hydraulic binder for the manufacture of concretes, mortars and plasters.
 In addition, the Portland CEM II / A-M (S-LL) cement can also be used in the process

mixture and unsuitable uses

of stabilizing non-cohesive soils and aggregate sorts. Cement and cement containing mixtures are used industrially, by professional users as well as by consumers operating in constructions. The identified uses of cement and mixtures cover both dry and wet products (pastes). Any use which is not mentioned in this safety data sheet is not permitted.

1.3. Details of the supplier of the Safety Data Sheet

HeidelbergCement România S.A, cement plant Fieni, 34 Aurel Rainu Str., Fieni, Dâmbovița County (tel.: 0245.606.425, fax: 0245.774.091)

HeidelbergCement România S.A, Cement plant Chiscadaga, 1 Principala Str., Hunedoara County (tel.: 0254.237.002, fax: 0254.237.008)

HeidelbergCement România S.A, Cement plant Tașca, Tașca village, Tașca locality, Neamț County (tel.: 0233.254.221, fax: 0233.253.131)

Contact: tel. 021.311.59.75 interior 1124 or email: tehnice@heidelbergcement.ro

1.4. Telephone number in case of emergencies

Emergency no.: 112
 Manufacturer's no.: 021 311.59.75 (Monday – Friday between 8.00-16.00)
 Office for International Sanitary Regulation and Toxicological Information – 021 318.36.06 (Monday – Friday between 8.00 - 15.00)
 The information is provided in Romanian language.

2. HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

2.1.1. As per (EC) Regulation no. 1272/2008

Risk class	Risk category
Skin irritation	2
Serious eye damage/ irritation	1
Skin sensitization	1B
Specific target organ toxicity - single exposure: respiratory tract irritation	3

Hazard statements

- H 315 Causes skin irritation
- H 317 May cause an allergic skin reaction
- H 318 Causes serious eye damage
- H 335 May cause respiratory irritation

2.2. Label elements

2.2.1. As per (EC) Regulation no. 1272/2008



Hazard statements

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

Precautionary statements

- P102 Keep out of reach of children
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- P302+P352+P333+P313: IF ON SKIN: Wash with plenty of soap and water. If

skin irritation or rash occurs: Get medical advice/attention.
 P261+P304+P340+P312: Avoid breathing dust. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
 P501 Dispose of contents/container in specially arranged places for inert waste warehousing. The requirements of waste management legislation must be complied with.

Additional Information

Skin contact with wet cement, fresh concrete or mortar may cause irritations, contact dermatitis or burns. May damage aluminum products or other non-noble metals.

2.3. Other hazards

The cement does not fulfill the criteria for PBT (persistent, bio-accumulative and toxic substances) or vPvB (very persistent and very bio-accumulative substances) according to Annex XIII of REACH (Rules (EC) No. 1907/2006).
 Cement dust may cause respiratory system irritation.
 When cement reacts with water, such as in case of concrete preparation or when cement becomes wet, alkaline solution is produced. Due to high alkalinity, wet cement may cause eyes and skin irritation.
 With certain persons, it may cause allergic reaction due to soluble Chromium (VI) content. (See chapter 15).

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable.

3.2. Mixtures

Main types	Designation of the 27 products (ordinary cement types)		Composition (percentage by mass ²⁾)										Minor additional constituents	
			Main components											
			Clinker	Slag	Ultra-fine silica	Pozzolan		Fly ash		Calcined shale	Limestone			
						Natural	Naturally burnt	Siliceous	High calcium		L	LL		
K	S	D ^b	P	Q	V	W	T	L	LL					
CEM I	Portland Cement	CEM I	95-100	-	-	-	-	-	-	-	-	-	-	0-5
		Portland – slag cement	CEM II/A-S	80-94	6-20	-	-	-	-	-	-	-	-	-
		CEM II/B-S	65-79	21-35	-	-	-	-	-	-	-	-	-	0-5
	Portland cement with ultra-fine silica	CEM II/A-D	90-94	-	6-10	-	-	-	-	-	-	-	-	0-5
CEM II	Portland cement with pozzolan	CEM II/A-P	80-94	-	-	6-20	-	-	-	-	-	-	-	0-5
		CEM II/B-P	65-79	-	-	21-35	-	-	-	-	-	-	-	0-5
		CEM II/A-Q	80-94	-	-	-	6-20	-	-	-	-	-	-	0-5
		CEM II/B-Q	65-79	-	-	-	21-35	-	-	-	-	-	-	0-5
	Portland cement with fly ash	CEM II/A-V	80-94	-	-	-	-	6-20	-	-	-	-	-	0-5
		CEM II/B-V	65-79	-	-	-	-	21-35	-	-	-	-	-	0-5
		CEM II/A-W	80-94	-	-	-	-	-	6-20	-	-	-	-	0-5
		CEM II/B-W	65-79	-	-	-	-	-	21-35	-	-	-	-	0-5
	Portland cement with calcined shale	CEM II/A-T	80-94	-	-	-	-	-	-	6-20	-	-	-	0-5
		CEM II/B-T	65-79	-	-	-	-	-	-	21-35	-	-	-	0-5
	Portland cement with limestone	CEM II/A-L	80-94	-	-	-	-	-	-	-	6-20	-	-	0-5
		CEM II/B-L	65-79	-	-	-	-	-	-	-	21-35	-	-	0-5
		CEM II/A-LL	80-94	-	-	-	-	-	-	-	-	6-20	-	0-5
		CEM II/B-LL	65-79	-	-	-	-	-	-	-	-	-	21-35	0-5
Portland cement with composite	CEM II/A-M	80-88	←-----12-20-----→										0-5	
	CEM II/B-M	65-79	←-----21-35-----→											
CEM III	Blast furnace	CEM III/A	35-64	36-65	-	-	-	-	-	-	-	-	-	0-5

	cement	CEM III/B	20-34	66-80	-	-	-	-	-	-	-	-	0-5
		CEM III/C	5-19	81-95	-	-	-	-	-	-	-	-	0-5
CEM IV	Pozzolan cement	CEM IV/A	65-89	-	<-----11-35----->				-	-	-	0-5	
		CEM IV/B	45-64	-	<-----36-65----->				-	-	-	0-5	
CEM V	Composite cement	CEM V/A	40-64	18-30	-	<-----18-30----->		-	-	-	-	0-5	
		CEM V/B	20-38	31-49	-	<-----31-49----->		-	-	-	-	0-5	

a The values in the table refer to the sum of the main components and minor additional constituents.
b The ultra-fine silica percentage is limited to 10%
c In composite Portland cements CEM II/A-M and CEM II/B-M, in pozzolan cement CEM IV/A and CEM IV/B and in the composite cements CEM V/A and CEM V/B the main components other than clinker should be included in the cement nomenclature (for example see section 8)

Usual cements:

Masonry cements:

Type	Composition % by mass	
	Portland cement clinker	Additives
MC 5	> 25	≤ 1
MC 12,5; MC 12,5 X MC 22,5; MC 22,5 X	≥ 40	

4. FIRST AID MEASURES

When you visit your physician please bring this data sheet.

4.1. Description of first-aid measures

General notes

No need for individual protection equipment for persons giving first aid. Persons giving first aid must avoid contact with wet cement or wet cement containing material.

In case of eye contact

Do not rub your eyes to avoid possible cornea damage by mechanical friction. Remove contact lenses if you are wearing any. Bend your head towards the injured eye, open your lids widely and wash the eye (eyes) immediately by full rinse with plenty of fresh water at least 20 minutes to remove all particles. Avoid particle leakage into the uninjured eye. If possible, use isotonic water (0,9 % NaCl). Contact a labor medicine expert or an eye doctor.

In case of skin contact

For dry cement, remove and rinse with plenty of water. For wet cement, wash your skin with plenty of water. Remove contaminated clothing, footwear, watches, etc. and fully clean them before reuse. Ask for medical treatment in all cases of irritation or burns.

In case of inhalation

Take the person to fresh air. Throat and airways dust must be immediately cleaned. Contact a doctor if the irritation persists or occurs later or if discomfort sensation, cough, or other symptoms persist.

In case of ingestion

Do not cause vomit. If the person is conscious, wash his/ her mouth with water and give them plenty of water to drink. Ask immediately for medical help.

4.2. Most important symptoms and

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

effects, both acute, as well as delayed

Skin: Cement may have an irritating effect on wet skin (due to perspiration or humidity) after prolonged contact or may cause contact dermatitis after repeated exposure.

Prolonged skin contact with wet cement or wet concrete may cause serious burns because they occur without feeling pain (e.g., when entering wet cement up to one's knees, even if wearing pants), as well as irritation, dermatitis or burns.

Inhaling: Repeated inhalation of cement dust for a long time increases risk of pulmonary diseases.

4.3. Indications on any immediate medical assistance and special treatments necessary

When you visit your physician please bring this data sheet.

5. FIRE FIGHTING MEASURES

5.1. Means to put out fires

Cement is not combustible/inflammable.

5.2. Special hazards caused by the respective substance or mixture

Cement is not combustible, does not explode, does not sustain nor facilitate combustion of other materials.

5.3. Recommendations for firefighters

Cement does not pose a fire danger. No need for special firefighting protection equipment.

6. MEASURES TO TAKE IN CASE OF ACCIDENTAL DISPERSION

6.1. Personal caution, protection equipment and emergency procedures

6.1.1 For staff not involved in emergency cases

Wear protection equipment as described in Section 8 and follow handling and use advice described in Section 7.

6.1.2 For staff involved in emergency cases

No need for emergency procedures. Nevertheless, respiratory protection is necessary in cases with high dust concentration.

6.2. Environmental precautions

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

6.3. Methods and material to isolate fires and for cleaning

Collect spilled material in a dry status if possible.

Dry cement.

Use aspiration cleaning methods (i.e.: portable industrial units, equipped with high efficiency particle filters), that do not cause air dispersion. Never use compressed air.

Another option is to remove dust using a washing head, wet brush or water spray or hose (fine spraying to avoid dust rise in suspension), then remove the resulted slam.
 If not possible, remove by cleaning with water (see paragraph on wet cement).
 When aspiration cleaning is not possible, make sure workers wear individual protection equipment and dust spreading is prevented.
 Avoid inhaling cement and skin contact. Place the collected material in container/ recipient and follow up disposal indications described in Section 13.

Wet cement

Clean the wet cement and place it in a container/ recipient. Leave material to dry and solidify before removal according to Section 13.

6.4. Links to other sections

For more details, see sections 7, 8 and 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

7.1.1. Protection measures

Follow the recommendations provided at Section 8.
 To clean dry cement, see Sub-section 6.3.

Fire prevention measures

Not applicable.

Aerosol and dust generation preventive measures

Do not sweep. Use dry cleaning methods such as aspiration cleaning, that does not cause air dispersion.

Environmental protection measure

No special measures needed.

7.1.2 Information on general occupational hygiene

Do not handle or store near foods and drinks.
 In a dusty environment, wear dust protection mask and goggles. Use protection equipment to avoid skin contact.
 Wash your hands after use.
 Remove the contaminated clothing and protection equipment before eating.

7.2. Safe storage requirements, including potential incompatibilities

Bulk cement must be stored in dry and impermeable silos (minimum interior condensation) that are clean and contamination-proof.
 Asphyxiation hazard: to avoid burying or suffocation do not enter closed spaces such as a silo, warehouse, transportation means, other containers or storage facilities with cement, without taking the required safety measures.
 Cement may pile up or adhere to the walls of a closed space. Cement may fall or dislodge accidentally from the walls of a storage space.
 Packed products must be stored in closed bags as to avoid degradation or spreading. Bags must be stored so as to avoid the overset risk.
 Do not use aluminum containers to store cement due to incompatibility of materials.

7.3. Specific final use

See section 1.2.

7.4. Soluble chromium control (VI)

For cements treated with Cr reduction agent (VI) according to the provisions of Section 15, reduction agent efficacy diminishes in time. Consequently, the cement bags and/ or delivery documents contain information on date of packaging,

storage conditions and storage period.

8. EXPOSURE/PERSONAL PROTECTION CONTROLS

8.1. Control parameters

Name – limit value	Limit value type	Value (at 8 h TWA – weighted average in time)	Unit	Legal base
Romania				
Cement powders	LEP - professional exposure limit values –inhalable fraction	10	mg/ m ³	HG 1218/ 2006 – annex 4, as subsequently amended and supplemented

8.2. Exposure controls

8.2.1. Appropriate technical controls

Measures to reduce dust generation and avoid the spreading of the dust in the air, such as dust removal, exhaust ventilation and dry-cleaning methods that do not cause air dispersion.

8.2.2. Individual protection measures such as personal protection equipment

General recommendations: during work, avoid entering up to your knees in mortar or fresh concrete whenever possible. If it is absolutely necessary to enter, then use waterproof individual protection equipment. Do not eat, drink or smoke when working with cement to avoid skin and mouth contact. Before starting work with cement, apply a protection cream and reapply at regular intervals. Immediately after working with cement or cement- containing materials, workers must wash up, take a shower and use skin moisturizing creams. Remove contaminated clothing, footwear, watches, etc. and completely clean them before re-use.

Protection of the eyes/face



Wear protection goggles according to EN 166 when handling dry or wet cement to avoid eye contact.

Protection of the skin



Use impermeable, abrasion and alkali proof gloves, lined with cotton, protection footwear, full body protection clothing as well as skin care products. In certain circumstances such as concrete commissioning, you must wear impermeable pants.

Respiratory protection



When a person may be exposed to dust concentrations over the exposure limits, use a proper respiratory protection, as per EN 149.

8.2.3 Environmental exposure control

With regard to air-borne cement particles emissions, exposure control of this environmental factor must be achieved according to the best available techniques in this field and the applicable regulations on dust particles, in general. Take measures to make sure cement or cement dust does not reach into water

(sewage systems, surface water or ground-water layer).
If the water pH level is over 9, negative eco-toxicological impact may occur.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information regarding basic physical and chemical properties

- (a) Aspect: Dry cement is solid, fine, inorganic material (grey dust). General particle size: 5 - 30 µm
- (b) Smell: Smell-free
- (c) Smell acceptance level: no smell limit, smell-free
- (d) pH: (T = 20°C in water, water-solid ratio 1:2): 11-13.5
- (e) Melting point: > 1 250 °C
- (f) Initial boiling point and boiling interval: Not applicable since in normal weather conditions the melting point is >1 250°C
- (g) Combustion point: Not applicable since it is not a liquid
- (h) Evaporation speed: Not applicable since it is not a liquid
- (i) Inflammability (solid, gas): Not applicable since it is a not inflammable solid and does not cause or contribute to burning by friction.
- (j) High/ low inflammability or explosion limit: Not applicable since it is a not inflammable gas
- (k) Vapor pressure: Not applicable since melting point > 1250 °C
- (l) Vapor density: Not applicable since melting point > 1250 °C
- (m) Relative density: 2.75-3.20; Apparent density: 0.9-1.5 g/cm³
- (n) Water solubility (solubility) (T = 20 °C): low (0.1-1.5 g/l)
- (o) N-octanol/water partition coefficient: Not applicable since it is inorganic substance
- (p) Self-combustion temperature: Not applicable (pyrophoricity free - it is not organic-metallic, organic-metalloid or organic-phosphate binders or their derivatives nor any other pyrophoric composition element)
- (q) Decomposition temperature: Not applicable since no organic peroxide is present
- (r) Viscosity: Not applicable since it is not a liquid
- (s) Explosive properties: Not applicable since it is not explosive or pyro-technical. Alone it is not capable to produce gas by chemical reaction to temperature and pressure and at speed causing destruction of the surroundings. It is not capable of self-sustained chemical exothermal reaction.
- (t) Oxidation properties: Not applicable since it does not cause or contribute to burning of other materials.

9.2. Other information

Not applicable.

10. STABILITY AND REACTIVITY

10.1. Reactivity

When mixed with water, cement hardens into a stable mass which is not reactive in normal environments.

10.2. Chemical stability

Dry cement is stable when stored properly (see section 7) and is compatible with most of the other construction materials.

It must be kept dry and contact with incompatible material must be avoided. Wet cement is alkali and incompatible with acids, ammonia salts, aluminum or other non-noble metals. The cement dissolves into hydrofluoric acid and produces silicon tetrafluoride corrosive gas. The cement reacts with water to form calcium silicate and calcium hydroxide. The cement silicates react with strong oxidants such as fluoride, boron trifluoride, chloride trifluoride, manganese trifluoride and oxygen difluoride.

10.3. Likelihood of hazardous reactions	The cement does not produce dangerous reactions.
10.4. Conditions to avoid	Humidity during storage may cause agglomeration and leads to product quality loss.
10.5. Incompatible materials	Acids, ammonia salts, aluminum or other usual metals. Uncontrolled use of aluminum dusts in wet cement should be avoided because it produces hydrogen.
10.6. Hazardous products of decomposition	The cement does not decompose into other dangerous products nor does it polymerize.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects	Hazard class	Category	Effect	Reference
	Acute toxicity – skin path	-	Limit test, rabbit, 24 hours contact, 2,000 mg/kg body weight – no lethality. Based on the available data, the classification criteria are not met.	(2)
	Acute toxicity - inhalation path	-	No acute toxicity by inhalation observed. Based on the available data, the classification criteria are not met	(9)
	Acute toxicity - oral path	-	No indication of oral toxicity from studies with cement kiln dust. Based on the available data, the classification criteria are not met.	Literature study
	Skin corrosion / irritation	2	Cement in contact with wet skin may cause thickening, cracking or injuring of the skin. Prolonged contact in combination with abrasion may cause severe burns.	(2) Human experience
	Serious eye damage/eye irritation	1	Portland cement clinker caused a mixed picture of corneal effects and the calculated irritation index was 128. Cements contain a varied quantity of Portland cement clinker, fly carbon ash, slag, gypsum, natural volcanic tuff, quartz or chalk. Direct contact with cement may cause cornea destruction by mechanical stress, irritation or immediate or delayed inflammation. Direct contact with large cement quantities or wet cement droplets may cause effects ranging from moderate eye irritation (i.e. conjunctivitis or blepharitis) up to chemical burns and blindness.	(10), (11)
	Skin sensitization	1B	Certain persons may develop eczema upon exposure to wet cement dust, caused either by high pH inducing contact dermatitis by irritation after prolonged contact, or an immunological reaction to soluble Cr (VI) which in turn causes allergy contact dermatitis. Response may appear in a variety of forms from moderate rash up to severe dermatitis and is a combination of the above mentioned mechanisms. If the cement contains Cr VI reducing agent and as long as the efficacy period of chromium reduction is not overpassed, no sensitization effect is to be expected [(Reference (3))]	(3), (4), (17)
	Respiratory sensitization	-	There is no indication of sensitization of the respiratory system. Based on the available data, the classification criteria are not met.	(1)
	Germ cell mutagenicity	-	No indication. Based on the available data, the classification criteria are not met.	(12), (13)
	Carcinogenicity	-	No causal association has been established between Portland cement exposure and cancer. The epidemiological literature does not support the designation of Portland cement as a suspected human carcinogen.	(1)

12. ECOLOGICAL INFORMATION

12.1. Toxicity	Product is not dangerous for the environment. Eco-toxicological tests with Portland cement on Daphnia magna [Reference (5)] and Selenastrum coli [Reference (6)] have shown a small toxicological impact. Therefore, LC50 and
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	EC50 values could not be determined. [Reference (7)]. No indication of sediment phase toxicity [Reference (8)]. The addition of large quantities of cement in water, may, still, cause an increase in pH and therefore, cement may be toxic for aquatic life in certain circumstances.
12.2. Persistence and degradation level	Not applicable. After hardening, cement becomes an inorganic material. After hydration, cement presents no toxicity risks.
12.3. Bioaccumulation potential	Not applicable. After hardening, cement becomes an inorganic material. After hydration, cement presents no toxicity risks.
12.4. Mobility in soil	Not applicable. After hardening, cement becomes an inorganic material. After hydration, cement presents no toxicity risks.
12.5. PBT and vPvB evaluation results	Not applicable. After hardening, cement becomes an inorganic material. After hydration, cement presents no toxicity risks.
12.6. Other adverse effects	Not applicable.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods	<p>Do not dispose of into sewage systems or surface waters.</p> <p>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.</p> <p>Product - unused residue or dry spillage Pick up dry unused residue or dry spillage as is. 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 “Product – after addition of water, hardened”</p> <p>Product – slurries Allow to harden, avoid entry in sewage and drainage systems or into bodies of water and dispose of as explained below under “Product - after addition of water, hardened”.</p> <p>Product - after addition of water, hardened Dispose of according to the local legislation. Avoid entry into the sewage and drainage systems or into bodies of water. Dispose of the hardened product as concrete waste. Due to the inert, concrete waste is not a dangerous waste. EWC (European Waste Catalogue) entries: 10 13 14 (waste from manufacturing of cement – waste concrete or concrete sludge) or 17 01 01 (construction and demolition wastes - concrete).</p> <p>Packaging Completely empty the packaging and process it according to local legislation. EWC entry: 15 01 01 (wastepaper and cardboard packaging).</p>
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14. TRANSPORT INFORMATION

Cement is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID), therefore no classification is required.

No special precautions are needed apart from those mentioned under Section 8.

14.1. UN number	Not applicable.
14.2. Correct UN shipping name	Not applicable.
14.3. Transport hazard class(es)	Not applicable.
14.4. Packing group	Not applicable.
14.5. Environmental hazards	Not applicable.
14.6. Special precautions for user	Not applicable.
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC code	Not applicable.

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Cement is a mixture according to REACH and is not subject to registration. Cement clinker is exempted from registration (Art 2.7 (b) and Annex V.10 of REACH).

Marketing and use of cement are subject to restrictions concerning the soluble Cr (VI) content (REACH, Annex XVII, item 47 – constituents of chrome VI):

1. Market introduction or use of the cement and mixtures containing cement, are forbidden, if contain, when hydrated, a soluble chromium VI quantity higher than 2 mg/kg (0.0002 %) of the total dry cement weight.
2. Notwithstanding the applicability of other community dispositions regarding classification, packaging and labeling of substances and mixtures, when reducing agents are used, suppliers make sure, prior to market introduction, that the cement or cement containing mixture packaging is visibly, legibly and indelibly marked with information regarding the date of packaging, storage conditions as well as the limit time for storage in which the reducing agent maintains active and the soluble chromium VI content stays under the limit stipulated at paragraph (1).
3. By way of derogation, requirements from paragraphs (1) and (2) do not apply in case of market introduction and use in controlled, closed and fully automatized processes when the cement and the mixtures containing cement are exclusively handled by machinery and there is no possibility of skin

contact.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

16. OTHER INFORMATION

16.1. Indications on changes

The safety data sheet has been developed according to the provisions of (EU) Regulation no. 830/2015, amending (EC) Regulation no. 1907/2006 (REACH) of the European Parliament and Council regarding the registration, evaluation, authorization and restriction of chemicals (REACH). This version was last updated on 27.05.2022.

16.2. Abbreviations and acronyms

ADR/RID European Agreements on the transport of Dangerous goods by Road/Railway
 CAS Chemical Abstracts Service
 CLP Classification, labelling and packaging (Regulation (EC) No 1272/2008)
 EINECS European Inventory of Existing Commercial chemical Substances
 IATA International Air Transport Association
 IMDG International agreement on the Maritime transport of Dangerous Goods
 PBT Persistent, bio-accumulative and toxic
 REACH Registration, Evaluation and Authorization of Chemicals
 STOT Specific Target Organ Toxicity
 vPvB Very persistent, very bio-accumulative
 TWA Time-weighted average

16.3. Key references to specialized literature and sources of data

- (1) *Portland Cement Dust - Hazard assessment document EH75/7*, UK Health and Safety Executive, 2006. Available at: <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)*.
http://ec.europa.eu/health/archive/ph_risk/committees/sct/documents/out158_en.pdf
- (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.
- (5) 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).
- (6) 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)
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16.4. Training recommendations

In addition to health, safety and environmental training programs for their workers, companies must make sure that workers read, understand and apply the requirements of this SDS.

16.5. Other information

Not applicable.

16.6. Disclaimer

The information in this data sheet reflects the currently available knowledge and is reliable provided that the product is used in the stipulated conditions and in accordance with the applications specified on the packaging and/ or the specialty technical literature. Any other use of the product, including in combination with any other products or processes falls under the responsibility of the user. The user is implicitly responsible for setting out the proper occupational health and safety measures and for enforcing the laws regulating its own activities.