

SAFETY DATA SHEET

According to The Regulation of Hazardous Materials and Mixtures Safety Data Sheet [O.N.13/12/2014-29204]

Product : Common Gray Cements
Form No : GBF 2015-103

Date of Preparation : 29.05.2015
Revision Date/Number : 13.06.2018 /2

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY

1.1. Identification Of The Substance/ Mixture

This safety data sheet was prepared for the products in the table.

Product Name	Product Type
Portland Cement	CEM I 42,5R
Portland Composite Cement	CEM II/B-M (S-V) 42,5R
Portland Slag Cement	CEM II/A-S 42,5R
Blastfurnace Cement	CEM III/A 42,5N
Composite Cement	CEM V/A (S-P) 32,5R
Composite Cement	CEM V/A (S-V) 32,5R

1.2. Relevant Identified Uses Of The Substance Or Mixture And Uses Advised Against

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

Common cements and cement containing mixtures (hydraulic binders) are used industrially, by professionals as well as by consumers in building and construction work, indoor and outdoor. The identified uses of cements and cement containing mixtures cover the dry products and the products in a wet suspension (paste).

1.3. Company Identification

Company Name : ADANA ÇİMENTO SANAYİİ T.A.Ş

Address : Ceyhan Yolu Üzeri 12. Km Pk:1001321Adana/TÜRKİYE

Telephone Number : +90322 3329950

E-mail of responsible person for SDS:

Burcu ATAKAY burcu.demirkiran@adanacimento.com.tr

1.4. Emergency Telephone : 114 (Poison Information Center)

+90322 3329950

2. HAZARDS IDENTIFICATION

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2.1 Classification Of The Substance Or Mixture

√ **Physico-Chemical Risk** : Not relevant

Hazard class	Hazard category	Hazard statements
Skin irritation	2	H315: Causes skin irritation
Serious eye damage/eye irritation	1	H318: Causes serious eye damage
Skin sensitisation	1B	H317: May cause an allergic skin reaction
Specific target organ toxicity single exposure respiratory tract irritation	3	H335: May cause respiratory irritation

√ **Environment Risk** : Not relevant

2.2 Label Elements

Hazard Pictograms



Signal Word : DANGER

Hazard Statements

H318 Causes serious eye damage

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H315 Causes skin irritation
H317 May cause an allergic skin reaction
H335 May cause respiratory irritation

Precautionary Statements

P280 Wear protective gloves/protective clothing/eye protection/face protection
P264 Wash hands thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace
P272

IF IN EYES : Rinse cautiously with water for several minutes.
P305+P351+P338+P310 Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention
P302+P352+P333+P313

Avoid breathing dust/fume/gas/mist/vapours/spray.
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
P261+P304+P340+P312

P403+P233 Store in a well ventilated place. Keep container tightly closed

P501 Dispose of contents/container according to the safety data sheet

Supplemental Information:

Skin contact with wet cement, fresh concrete or mortar may cause irritation, dermatitis or burns. May cause damage to products made of aluminium or other non-noble metals.

2.3.Other Hazards

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The product contains chromate reducing agent. As a result, the content of soluble chromium (VI) is less than 2 ppm. If the storage conditions are not appropriate or the storage period is exceeded, the effectiveness of the reducing agent can diminish, and the cement can become skin sensitizing (R43 resp. H317 or EUH203)

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1.Substances

Not applicable as the product is a mixture.

3.2. Mixtures

Name	CAS NO	EC NO	Conc. (%)	Classification	
Clinker	65997-15-1	266-043-4	35-95	Serious eye damage/eye irritation 1 H318	
				Skin irritation 2 H315	
				Skin sensitisation 1B H317	
				STOT Cat.3 H335	
Blast Furnace Slag	65996-69-2	266-002-0	36-80	This substance is not classified as dangerous.	
Limestone	1317-65-3	215-279-6	0-20	This substance is not classified as dangerous.	
Naturel Pozzolana	-		18-35	This substance is not classified as dangerous.	
Coal Fly Ash		924-417-0	0-30	This substance is not classified as dangerous.	
Gypsum	13397-24-5	603-783-2	0-5	This substance is not classified as dangerous.	
Iron Sulphate	7720-78-7	231-753-5	0-0,5	Acute Toxic 4 H302	Xn : R22
				Skin Irritation 2 H315	Xi: R36/38
				Eye Irritation 2 H319	

Concentrations are lower and upper limits, which can be vary by the type of cement.

4. FIRST AID MEASURES

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When contacting a physician, take this SDS with you.

4.1. Description of First Aid Measures

General notes

No personal protective equipment is needed for first aid responders. First aid workers should avoid contact with wet cement or wet cement containing mixtures.

Following contact with eyes

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

Following skin contact

For dry cement, remove and rinse abundantly with water.

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

Following inhalation

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

Following ingestion

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

4.2. Most Important Symptoms And Effects, Both Acute And Delayed

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

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

Prolonged skin contact with wet cement or wet concrete may cause serious burns because they develop without pain being felt (for example when kneeling in wet concrete even when wearing trousers).

For more details see Reference (1).

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

Environment: Under normal use, Common cement is not hazardous to the environment.

4.3. Indication Of Any Immediate Medical Attention And Special Treatment Needed

When contacting a physician, take this SDS with you.

5. FIRE FIGHTING MEASURES

5.1.Extinguishing Media

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

5.2.Special Hazards Arising From The Substance Or Mixture

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

Cements can emit corrosive fumes.

5.3.Advice For Fire-Fighters

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

6. ACCIDENTAL RELEASE MEASURES

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6.1. Personal Precautions, Protective Equipment And Emergency Procedures

6.1.1. For Non-Emergency Personal

Wear protective equipment as described under Section 8 and follow the advice for safe handling and use given under Section 7.

6.1.2. For Emergency Responders

Emergency procedures are not required. However, respiratory protection is needed in situations with high dust levels.

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 For Containment And Cleaning Up

Collect the spillage in a dry state if possible.

Dry cement

Use cleanup methods such as vacuum clean-up or vacuum extraction (industrial portable units, equipped with high efficiency air filters (EPA and HEPA filters, EN 1822-1:2009) or equivalent technique) which do not cause airborne dispersion. Never use compressed air.

Alternatively, wipe up the dust by mopping, wet brushing or by using water sprays or hoses (fine mist to avoid that the dust becomes airborne) and remove slurry.

If not possible, remove by slurring with water (see wet cement).

When wet cleaning or vacuum cleaning is not possible and only dry cleaning with brushes can be done, ensure that the workers wear the appropriate personal protective equipment and prevent dust from spreading.

Avoid inhalation of cement and contact with skin. Place spilled materials into a container. Solidify before disposal as described under Section 13.

Wet cement

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

6.4. Reference To Other Sections

See sections 8 and 13 for more details.

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7. HANDLING AND STORAGE

7.1. Precautions For Safe Handling

7.1.1. Protective Measures

Follow the recommendations as given under Section 8.

To clean up dry cement, see Subsection 6.3.

- **Measures to prevent fire**

Not applicable.

- **Measures to prevent aerosol and dust generation**

Do not sweep. Use dry cleanup methods such as vacuum clean-up or vacuum extraction, which do not cause airborne dispersion.

- **Measures to protect the environment**

No particular measures.

7.1.2. Information On General Occupational Hygiene

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

In dusty environment, wear dust mask and protective goggles.

Use protective gloves to avoid skin contact.

7.2. Conditions For Safe Storage, Including Any Incompatibilities

Bulk cement should be stored in silos that are waterproof, dry (i.e. with internal condensation minimised), clean and protected from contamination.

Engulfment hazard: To prevent engulfment or suffocation, do not enter a confined space, such as a silo, bin, bulk truck, or other storage container or vessel that stores or contains cement without taking the proper security measures. Cement can buildup or adhere to the walls of a confined space. The cement can release, collapse or fall unexpectedly.

Packed products should be stored in unopened bags clear of the ground in cool, dry conditions and protected from excessive draught in order to avoid degradation of quality.

Bags should be stacked in a stable manner.

Do not use aluminium containers for the storage or transport of wet cement containing mixtures due to incompatibility of the materials.

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7.3. Specific End Use(s)

No additional information for the specific end uses (see section 1.2).

7.4. Control of soluble Cr (VI)

For cements treated with a Cr (VI) reducing agent according to the regulations given in Section 15, the effectiveness of the reducing agent diminishes with time. Therefore, cement bags and/or delivery documents will contain information on the packaging date, the storage conditions and the storage period appropriate to maintaining the activity of the reducing agent and to keeping the content of soluble chromium VI below 0.0002% of the total dry weight of the cement ready for use, according to EN 196-10. They will also indicate the appropriate storage conditions for maintaining the effectiveness of the reducing agent.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control Parameters

Substance	Cas No	EC No	Occupational Exposure Limits	
			Long time TWA (8Hours) (mg/m3)	Long Time STEL (15Minute) (mg/m3)
Clinker	65997-15-1	266-043-4	10	Total : 15 Respirable : 5
Limestone	1317-65-3	215-279-6	10	Total : 15 Respirable : 5
Gypsum	13397-24-5	603-783-2	10	Total : 15 Respirable : 5

Ref : ACGIH, OSHA

Limit Type (Country) : TLV (ABD) PEL

8.2. Exposure Controls

8.2.1. Appropriate Engineering Controls

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Measures to reduce generation of dust and to avoid dust propagating in the environment such as dedusting, exhaust ventilation and dry clean-up methods which do not cause airborne dispersion.

8.2.2. Individual Protection Measures Such As Personal Protection Equipment

General:

During work avoid kneeling in fresh mortar or concrete wherever possible. If kneeling is absolutely necessary then appropriate waterproof personal protective equipment must be worn.

Do not eat, drink or smoke when working with cement to avoid contact with skin or mouth

Immediately after working with cement or cement-containing materials, workers should wash or shower or use skin moisturizers.

Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before re-using them.

Eye/face protection:



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

Skin protection:



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

Respiratory protection:



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

Thermal Hazards:

Not applicable.

8.2.3 Environmental Exposure Controls

Environmental exposure control for the emission of cement particles into air has to be in accordance with the available technology and regulations for the emission of general dust particles.

Air: Environmental exposure control for the emission of cement particles into air has to be in accordance with the available technology and regulations for the emission of general dust particles.

Water: Do not wash cement into sewage systems or into bodies of water, to avoid high pH. Above pH 9 negative ecotoxicological impacts are possible.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information On Basic Physical And Chemical Properties

Property	Information
Appearance	Solid, inorganic material. Main particle size: 5-30 µm
Odour	Odourless
Odour threshold	No odour threshold, odourless
pH (T = 20°C in water, water-solid ratio 1:2)	11-13.5
Melting point	> 1 250 °C

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Initial boiling point and boiling range	Not applicable as under normal atmospheric conditions, melting point >1 250°C
Flash point	Not applicable as is not a liquid
Evaporation rate	Not applicable as is not a liquid
Flammability (solid, gas)	Not applicable as is a solid which is non combustible and does not cause or contribute to fire through friction
Upper/lower flammability or explosive limits	Not applicable as is not a flammable gas
Vapour pressure	Not applicable as melting point > 1250 °C
Vapour density	Not applicable as melting point > 1250 °C
Relative density	2.75-3.20 g/cm ³
Solubility(ies) in water (T = 20 °C)	Slight (0.1-1.5 g/l)
Partition coefficient: n-octanol/water	Not applicable as is inorganic mixture
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable, as no organic peroxide present
Viscosity	Not applicable, as not a liquid
Explosive properties	Not applicable. Not explosive or pyrotechnic.
Oxidising properties	Not applicable as does not cause or contribute to the combustion of other materials

9.2. Other Information

Not applicable.

10. STABILITY AND REACTIVITY

10.1. Stability

When mixed with water, cements will harden into a stable mass that is not reactive to normal environments.

10.2. Chemical Stability

Dry cements are stable as long as they are properly stored (see Section 7) and compatible with most other building materials. They should be kept dry.

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Contact with incompatible materials should be avoided.

Wet cement is alkaline and incompatible with acids, with ammonium salts, with aluminium or other non-noble metals. Cement dissolves in hydrofluoric acid to produce corrosive silicon tetrafluoride gas. Cement reacts with water to form silicates and calcium hydroxide. Silicates in cement react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

10.3. Possibility Of Hazardous Reactions

Cements do not cause hazardous reactions.

10.4. Conditions To Avoid

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

10.5. Incompatible Materials

Acids, ammonium salts, aluminium or other non-noble metals. Uncontrolled use of aluminium powder in wet cement should be avoided as hydrogen is produced.

10.6. Hazardous Decomposition Products

Cements will not decompose into any hazardous products.

11. TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Hazard class	Cat	Effect	Reference
Acute toxicity - dermal	-	Limit test, rabbit, 24 hours contact, 2,000 mg/kg body weight – no lethality. Based on available data, the classification criteria are not met.	(2)
Acute toxicity- inhalation	-	No acute toxicity by inhalation observed. Based on available data, the classification criteria are not met.	(9)
Acute toxicity - oral	-	No indication of oral toxicity from studies with cement kiln dust. Based on available data, the classification criteria are not met.	Literature survey

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Hazard class	Cat	Effect	Reference
Skin corrosion/irritation	2	Cement in contact with wet skin may cause thickening, cracking or fissuring of the skin. Prolonged contact in combination with abrasion may cause severe burns.	(2) Human experience
Serious eye damage/irritation	1	Portland cement clinker caused a mixed picture of corneal effects and the calculated irritation index was 128. Common cements contain varying quantities of Portland cement clinker, fly ash, blast furnace slag, gypsum, natural pozzolans, burnt shale, silica fume and limestone. Direct contact with cement may cause corneal damage by mechanical stress, immediate or delayed irritation or inflammation. Direct contact by larger amounts of dry cement or splashes of wet cement may cause effects ranging from moderate eye irritation (e.g. conjunctivitis or blepharitis) to chemical burns and blindness.	(10), (11)
Skin sensitisation	1B	Some individuals may develop eczema upon exposure to wet cement dust, caused either by the high pH which induces irritant contact dermatitis after prolonged contact. The response may appear in a variety of forms ranging from a mild rash to severe dermatitis and is a combination of the two above mentioned mechanisms. If the cement contains a soluble Cr (VI) reducing agent and as long as the mentioned period of effectiveness of the chromate reduction is not exceeded, a sensitising effect is not expected [Reference (3)].	(3), (4), (17)
Respiratory sensitisation	-	There is no indication of sensitisation of the respiratory system. Based on available data, the classification criteria are not met.	(1)
Germ cell mutagenicity	-	No indication. Based on available data, the classification criteria are not met.	(12), (13)

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12. ECOLOGICAL INFORMATION

12.1. Toxicity

The product is not hazardous to the environment. Ecotoxicological tests with Portland cement on Daphnia magna [Reference (5)] and Selenastrum coli [Reference (6)] have shown little toxicological impact. Therefore LC50 and EC50 values could not be determined [Reference (7)]. There is no indication of sediment phase toxicity [Reference (8)]. The addition of large amounts of cement to water may, however, cause a rise in pH and may, therefore, be toxic to aquatic life under certain circumstances.

12.2. Persistence And Degradability

Not relevant. After hardening, cement presents no toxicity risks.

12.3. Bioaccumulative Potential

Not relevant. After hardening, cement presents no toxicity risks.

12.4. Mobility In Soil

Not relevant. After hardening, cement presents no toxicity risks.

12.5. Results Of PBT And vPvB Assessment

Not relevant. After hardening, cement presents no toxicity risks.

12.6. Other Adverse Effects

Not relevant.

13. DISPOSAL CONSIDERATION

13.1. Waste Treatment Methods

Do not dispose of into sewage systems or surface waters.

Product - cement that has exceeded its shelf life

EWC entry: 10 13 99 (wastes not otherwise specified)

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(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.

Product - unused residue or dry spillage

EWC entry: 10 13 06 (Other particulates and dust)

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"

Product – slurries

Allow to harden, avoid entry in sewage and drainage systems or into bodies of water (e.g. streams) and dispose of as explained below under "Product - after addition of water, hardened".

Product - after addition of water, hardened

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

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

Packaging

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

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

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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 relevant

14.2. UN Proper Shipping Name

Not relevant

14.3. Transport Hazard Class(es)

Not relevant

14.4. Packing Group

Not relevant

14.5. Environmental Hazards

Not relevant

14.6. Special Precautions For User

Not relevant

14.7. Transport In Bulk According To Annex II Of MARPOL73/78 And The IBC Code

Not relevant

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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 exempt from registration (Art 2.7 (b) and Annex V.10 of REACH).
- The marketing and use of cement is subject to a restriction on the content of soluble Cr (VI) (REACH Annex XVII point 47 Chromium VI compounds).
- The implementation of Turkish CLP [O.G. 11/12/2013-28848]
- The implementation of hazardous materials and mixtures safety data sheet [O.G. 13/12/2014-29204]
- The agreement on the transport of dangerous goods by road [O.G. 24/10/2013-28801]

16. OTHER INFORMATIONS

16.1. Indications Of Changes

Not applicable.

16.2. Abbreviations And Acronyms

- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transport Association
- ADR/RID: Agreement on the transport of dangerous goods by road/Regulations on the international transport of dangerous goods by rail
- LC50 Lethal Concentration where 50% of the test animals dies.
- OEL : occupational exposure limit
- TWA: Time Weighted Averages
- CAS : Chemical Abstracts Service
- CLP : Classification, labelling and packaging (Regulation (EC) No 1272/2008)
- ECHA : European Chemicals Agency
- EINECS : European Inventory of Existing Commercial Chemical Substances
- EPA : Type of high efficiency filter
- REACH : Registration, Evaluation and Authorisation of Chemicals

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- STOT : Specific Target Organ Toxicity
- EWC : European Waste Catalogue
- vPvB : Very persistent, very bio-accumulative
- w/w : Weight by weight
- TWA : A Time-Weighted Average
- STEL : A Short Term Exposure Limit

16.3. References

- (1) *Portland Cement Dust - Hazard assessment document EH75/7*, UK Health and Safety Executive, 2006. Available from: <http://www.hse.gov.uk/pubns/web/portlandcement.pdf>.
- (2) *Observations on the effects of skin irritation caused by cement*, Kietzman et al, *Dermatosen*, 47, 5, 184-189 (1999).
- (3) *European Commission's Scientific Committee on Toxicology, Ecotoxicology and the Environment (SCTEE) opinion of the risks to health from Cr (VI) in cement* (European Commission, 2002).
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) TNO report V8801/02, *An acute (4-hour) inhalation toxicity study with Portland Cement Clinker CLP/GHS 03-2010-fine in rats*, August 2010.
- (6) TNO report V8815/09, *Evaluation of eye irritation potential of cement clinker G in vitro using the isolated chicken eye test*, April 2010.
- (7) TNO report V8815/10, *Evaluation of eye irritation potential of cement clinker W in vitro using the isolated chicken eye test*, April 2010.
- (8) *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.
- (9) *Cytotoxicity and genotoxicity of cement dusts in A549 human epithelial lung cells in vitro*; Gminski et al, Abstract DGPT conference Mainz, 2008.
- (10) *Comments on a recommendation from the American Conference of governmental industrial Hygienists to change the threshold limit value for Portland cement*, Patrick A. Hessel and John F. Gamble, EpiLung Consulting, June 2008.

SAFETY DATA SHEET

According to The Regulation of Hazardous Materials and Mixtures Safety Data Sheet [O.N.13/12/2014-29204]

Product : Common Gray Cements
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- (11) *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*, Hilde Notø, Helge Kjuus, Marit Skogstad and Karl-Christian Nordby, National Institute of Occupational Health, Oslo, Norway, March 2010.
- (12) *Occurrence of allergic contact dermatitis caused by chromium in cement. A review of epidemiological investigations*, Kåre Lenvik, Helge Kjuus, NIOH, Oslo, December 2011.

16.4. Classification And Procedure Used To Derive The Classification For Mixtures

Classification	Classification procedure
Skin Irrit. 2, H315	on basis of test data
Eye dam. 1, H318	on basis of test data
Skin sens. 1B, H317	Human experience
STOT SE. 3, H335	Human experience

16.5. Relevant H-Phrases and P-Statements

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

- P280** Wear protective gloves/protective clothing/eye protection/face protection
P264 Wash hands thoroughly after handling
P272 Contaminated work clothing should not be allowed out of the workplace

- IF IN EYES** : Rinse cautiously with water for several minutes.
P305+P351+P338+P310 Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician

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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/fume/gas/mist/vapours/spray.
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

P403+P233 Store in a well ventilated place. Keep container tightly closed

P501 Dispose of contents/container according to the safety data sheet

16.6. Training Advice

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

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

16.7. SDS Preparatory Information

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