1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY/UNDERTAKING

1.1 PRODUCT IDENTIFIER

Portland Cement (ASTM TYPE I/II/III/ C-150)

1.2 IDENTIFIED USES OF THE PRODUCT AND USES ADVISED AGAINST

Cement is used as an hydraulic binder in concrete and mortars that are widely used in construction.

1.3 DETAILS OF THE SAFETY DATA SHEET SUPPLIER

Manufacturer' s Name : NUH ÇİMENTO SANAYİ A.Ş.
Address : Hacı Akif Mh. D-100 Karayolu Cd. No:92 Körfez/KOCAELİ
E mail : nuhcimento@nuhcimento.com.tr
Internet Address : www.nuhcimento.com.tr

1.4 EMERGENCY TELEPHONE

(Also available outside office hours)
Telephone Number for Emergency : +90 262 316 20 00
National Poison Solidarity Center : 114

2. HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE PRODUCT

Physical and Chemical Hazards : Not classified.

Human Health : Skin corrosion/irritation, cat 2: H 315
Skin sensitiser, cat 1B: H 317
Serious damage to eyes/eye irritation, cat 1: H 318
Specific target organ toxicity (STOT) – single exposure, cat 3: H 335

Environment : Not classified.

2.2. LABEL ELEMENTS

Hazard Pictograms

GHS 05 GHS 07

Signal Word: Danger

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

Precautionary Statements
General
P102: Keep out of reach of children.
Prevention
P264: Wash contact areas thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P261: Avoid breathing dust/fume/gas/mist/vapours/ spray.
P272: Do not take contaminated clothing out of the workplace
P271: Use only outdoors or in a well-ventilated area.
Response
P321: Special attention required (see label)
P312: Call a POISON CENTER / doctor - If you feel unwell
P362: Take off contaminated clothing and wash before reuse.
P302+P352: In case of contact with skin: Wash with plenty of water.
P333+P313: If skin irritation or pruritus occurs: Get medical advice/attention.
P304+P340: IF INHALED: Remove victim to fresh air and easily
Keep person in a comfortable position to allow him to breathe.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Attached
and remove contact lenses if it is easy to do. Continue rinsing.
Storage
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
Disposal
P501: Dispose of contents/container to appropriate waste collection point according to the current regulations.

2.3. OTHER HAZARDS
Portland cement is not harmful as long as it is dry. Dry cement can irritate the upper respiratory tract when inhaled. When moisture (humidity and tear on the body) and/or mixed with water during construction and becoming concrete mortar can cause burning at eye and 3rd degree burns on the skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 DESCRIPTION OF THE SUBSTANCE
Not Applicable

3.2 MIXTURES

Ingredients hazardous to health and environment

Substance	Content %	CAS NO	EINEC NO	Hazard Class
Portland Cement Clinker	95-100 %	65997-15-1	266-043-4	Skin corrosion/irritation,cat 2: H 315 Skin sensitiser, cat 1B: H 317 Serious damage to eyes/eye irritation, cat 1: H 318 (STOT) – single exposure, cat 3: H 335
Gypsum	3-5 %	13397-24-5	603-783-2	Not classified
Limestone	0-5 %	1317-65-3	215-279-6	Not classified

4. FIRST AID MEASURES

4.1 Description of first aid measures

General notes

When contacting a physician, take this SDS with you. No personal protective equipment is needed for first aid responders.

Eye Contact :Do not rub eyes as additional cornea damage is possible by mechanical stress. Remove any contact lenses and open the eyelids widely to flush eyes 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.

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.

Inhalation :Move person to fresh air. Dust in throat and nasal pasages should clear spontaneously. Contact a physician if irritation persists or later develops or if discomfort, coughing or other symptoms do not subside.

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 or contact anti poison centre.

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.
Skin : Cement may have an irritating effect on moist skin 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.
Inhalation : Repeated inhalation of dust of cements over a long period of time increases the risk of developing lung diseases.
Environment : Under normal use, cement is not hazardous to the environment.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Portland cement is not a flammable and explosive mixture. All fire fighting methods are compatable.
5.2 Special hazards arising from the substance or mixture:
Cements are non-combustible and non-explosive and will not facilitate nor support combustion of other materials.
5.3 Advise for fire-fighters:
Cement poses no fire-related hazards. No need for specialist protective equipment for fire fighters. Employ protective equipment commonly used in the event of fire.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel
Wear protective equipment as described under heading 8 and follow the advice for safe handling and use given under heading 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 Environment precautions
Do not wash cement down sewage and drainage systems or into bodies of water (e.g. streams).
Spillages or uncontrolled discharges into watercourses must be alerted to the Environmental Agency or other appropriate regulatory body.

6.3 Methods and material for containment and cleaning up
Recover the spillage in a dry state if possible.

Dry cement: Use dry cleanup methods that do not cause airborne dispersion, e.g. : - Vacuum cleaner (Industrial portable units, equipped with high efficiency particulate filters (HEPA filter) or equivalent technique). - Wipe-up the dust by mopping, wet brushing or by using water sprays or hoses (fine mist to avoid that the dust becomes airborn) and remove slurry. If not possible, remove by slurrying 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 heading 13.
Wet cement: Clean up wet cement and place in a container. Allow material to dry and solidify before disposal as described in heading 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Protective measures • No particular measures required if used correctly. Ensure there is good room ventilation. Do not breathe dust. • Cement bag is heavy therefore it needs to be handled carefully. It can cause sprains or strains to the back arms, shoulders and legs during lifting and mixing. • Avoid production of dust. • Ensure adequate ventilation. • Dispose of waste material according to local, state and federal regulations.

7.1.2 Advice on general occupational hygiene • Do not eat, drink, or smoke in areas where the material is used. • Wash thoroughly after handling the material. • Remove contaminated clothing and protective equipment before entering eating areas. • Promptly remove dusty clothing or clothing which is wet with cement fluids and launder before reuse. • Wash thoroughly after exposure to dust or wet cement mixtures or fluids.

7.2 Conditions for safe storage, including any incompatibilities • Store bagged portland cement on dry areas, bulk cement on water sealed silos until used. • Normal temperatures and pressures do not affect the material. • Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3 Advice on common storage • Keep away from food, drink and animal feeding stuffs. • Store in original containers, in a cool, dry, well-ventilated area. • Keep containers securely sealed. • Store away from incompatible materials and foodstuff containers. • Protect containers against physical damage and check regularly for leaks. • Observe manufacturer's storing and handling recommendations.

7.4 Specific precautions on storage • Observe the national and local regulations concerning handling and storage.

Bulk cement should be stored in silos that are waterproof, dry (internal condensation minimised), clean and protected from contamination. To prevent burial 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 build-up 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Substance Name	EINECs No	CAS No.	Limit Value Type (Country of Origin)	Occupational exposure limit value				Source
				Long Term TWA (8 Hr.)		Short Term STEL (15 Min)		
				mg/m^3	ppm	mg/m^3	ppm	
Portland Cement	266-043-4	65997-15-1	TLV (US)	10	-	15 (total) 5 (Respirable)	-	ACGIH OSHA

8.2 Exposure Controls:

8.2.1 Appropriate engineering controls

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 Occupational exposure controls

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

Respiratory Protection: When a person is exposed to dust levels above exposure limits, use appropriate respiratory protection. It should be adapted to the dust level and conform to the relevant EN standart. Avoid creating airbone dust conditons. Local exhaust ventillation is preferred since it prevents release of contaminants in to the work area by controlling it at the source. If local or general ventillation is not adequate to control dust levels below exposure limits, use OES approved respirators.

Eye 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 internally lined with cotton, boots, closed long- sleeved protective clothing as well as 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.

8.2.3 Environmental exposure controls

Legislation for the protection of the environment must be met in full.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

(a) Appearance: Dry cement is a finely ground solid inorganic material (grey powder).
(b) Odour: Odourless
(c) Odour threshold: Odourless
(d) pH: (T = 20°C in water, water-solid ratio 1:2): 11-13.5
(e) Melting point: > 1250 °C
(f) Initial boiling point and boiling range: Not applicable

(g) Flash point: Not applicable as is not a liquid
(h) Evaporation rate: Not applicable as is not a liquid
(i) Flammability (solid, gas): Not applicable
(j) Upper/lower flammability or explosive limits: Not applicable as is not a flammable gas
(k) Vapour pressure: Not applicable as melting point > 1250 °C
(l) Vapour density: Not applicable as melting point > 1250 °C
(m) Relative density: 2.75-3.20; Apparent density: 0.9-1.5 g/cm³
(n) Solubility(ies) in water (T = 20 °C): slight (0.1-1.5 g/l)
(o) Partition coefficient: n-octanol/water: Not applicable as is inorganic mixture
(p) Auto-ignition temperature: Not applicable
(q) Decomposition temperature: Not applicable as no organic peroxide present
(r) Viscosity: Not applicable as not a liquid
(s) Explosive properties: Not applicable. Not explosive or pyrotechnic. Not capable of a self-sustaining exothermic chemical reaction.
(t) 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 Reactivity
When mixed with water, cements will harden into a stable mass that is not reactive in normal environments. Material is an inert inorganic material which mainly comprises element oxide.
10.2 Chemical stability
Dry cements are stable as long as they are stored properly and compatible with most other building materials.

10.3 Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use

10.4 Conditions to avoid
Avoid contact with humidity. Humidity during storage may cause lump formation and loss of producty quality.

10.5 Incompatible materials
Wet Portland cement is alkaline.

10.6 Hazardous decomposition products
Wet mortar and concrete react with aluminum powder, alkali and other alkaline metals causes hydrogen gas evolution.

11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes
General Information: Exposure Routes: inhalation, ingestion, skin and/or eye contact
Acute toxicity: Portland Cement LD50: No data available
IDLHs : 5000 mg/m3
Irritation and corrosivity: Portland Cement
Irritating to skin and mucous membranes.
Risk of serious damage to eyes.
Limestone

Skin (rabbit) : 500 mg/24 hours - Moderately
Eye (rabbit) : 0.75 mg/24 hours -

Skin corrosion/irritation and Eye damage/irritation:
Irritating to skin and mucous membranes.
Cause an allergic skin reaction.
Risk of serious damage to eyes.

CMR effects (Carcinogenity) : Portland cement is not listed as a carcinogen by NTP, OSHA, or IARC.
CMR effects (Mutagenicity and Toxicity for reproduction) : Reason for no classification: conclusive but not sufficient for classification
Other Toxicological Effects:
Allergic Effects No data available
Sensitization When used within shelf-life sensitization is not expected.
Fertility None
Toxicokinetics No data available
STOT-single/repeated exposures
STOT-single exposure Eyes, skin, respiratory system
STOT-repeated expos. Eyes, skin, respiratory system
Symptoms related to the physical, chemical and toxicological characteristics:
In case of inhalation; although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are consumed. Portland cement should not be eaten.

In case of skin contact; irritating to skin. Discomfort or pain cannot be relied upon to alert a person to hazardous skin exposure. Consequently, the only effective means of avoiding skin injury or illness involves minimizing skin contact, particularly with wet cement. Dry portland cement contacting wet skin or exposure to moist or wet portland cement may cause more severe skin effects including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of (alkali) chemical burns.

In case of eye contact; risk of serious damage to eyes. Exposure to airborne dust may cause immediate or delayed irritation or inflammation. Eye contact by large amounts of dry powder or splashes of wet portland cement may cause effects ranging from moderate eye irritation to chemical burns or blindness. Such exposures require immediate first aid (see Section 4) and medical attention to prevent significant damage to the eye.

In case of ingestion; may cause discomfort if swallowed. Portland cement may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free silica can aggravate other lung conditions and cause silicosis, a disabling and potentially fatal lung disease. Exposure to portland cement may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system. It may also leave unpleasant deposits in the nose.

Additional Toxicological Information:
Toxicological classifications are based on available knowledge and information.
The special effects to health are considered by taking into account the information in section 3.
RTECS (Portland Cement): VV8770000

11.2- Information on other hazards
11.2.1- Endocrine disrupting properties No test data is available for the mixture.

11.2.2- Other information No test data is available for the mixture.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
The product is not expected to be hazardous to the environment (LC50 aquatic toxicity not determined). 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 applicable.After hardening, cement presents no toxicity risks.

12.3 Bioaccumulative potential
Not applicable.After hardening, cement presents no toxicity risks.

12.4 Mobility in soil
Not applicable. After hardening, cement presents no toxicity risks.

12.5 Results of PBT and vPvB assessment
Not applicable as cement is an inorganic material.

12.6 Other adverse effects
Not applicable.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
13.1.1 Product Packaging Disposal
Do not dispose of into sewage systems or surface waters. Disposal according to local authority regulations.

13.2 Contaminated packaging
If there is product residue in the emptied container, follow directions for handling on the container's label. Contaminated packaging must be emptied of all residues and can be recycled following appropriate cleaning. Avoid dust formation.

13.3 Disposal Methods
Dispose of chemicals waste or in accordance with local regulations. Follow all applicable local laws, rules and regulations regarding the proper disposal of this material. If this product has been altered or contaminated with other hazardous materials, appropriate waste analysis may be necessary to determine proper method for disposal.

13.4 European Waste Catalogue
Hardens after contact with water, hardened material can be disposed of as construction and demolition waste – concrete (EWC-Code 170101). The listed waste number according to the European Waste Code (EWC) is a recommendation. Uncleaned packaging must be disposed of in accordance with official local regulations (EWC Code 150105 composite packaging (Paper/PE-foil)). The final classification has to be done together with the local waste disposal company/authority.

14. TRANSPORT INFORMATION

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

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

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
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). However, some substances in the mixture cement might require registration and an exposure scenarios. The necessary exposure scenarios will be added in the annex to this SDS as soon as these substances have been registered and the exposure scenarios have been received from the registrant.

15.2 Chemical Safety Assessment
No chemical safety assessment has been carried out for this mixture by the supplier.

16. OTHER INFORMATION

This document has been prepared and documented in accordance with the provisions of Regulation on Information Forms on Hazardous Substances and Mixtures (Official Gazette on Registration, Evaluation, Authorization and Restriction of Chemicals 30105 dated 23 June 2017) and (EU) 2020/878

Expert Accrediation No: Chemist Sanem KÜÇÜKKABAŞ
TÜV/11.234.05

Reason for re-issue: Expert of this SDS has changed. Referred regulation has changed. Format has changed.

Legal Disclaimer
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 giudance 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.This Safety Data Sheet does not constitute a guarantee and the product specifications do not establish a legally valid contractual relationship.

Abbreviations

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.
CAS :Chemical Abstracts Service
EWC : European Waste Catalogue
REACH : Registration, Evaluation and Authorisation of Chemicals
LC50 : Lethal Concentration where 50% of the test animals dies.
VPvB : Very persistent, very bio-accumulative
PBT : Persistent, bio-accumulative and toxic
EINEC : European Inventory of Existing Commercial Chemical Substances