



Material Safety Data Sheet
for
Portland Cement Clinker

1 Trade Name and Synonyms	Clinker																												
2 Product Names	Potland cement Clinker for Type I / V																												
3 Manufacture	Gulf Cement Company (PSC) P.O.Box 5295, Ras Al Khaimah - U.A.E Tel: 00971 7 2668222 - Fax: 00971 7 2668038 Email: info@gulfcement.ae Website: www.gulfcement.com																												
4 Chemical Composition	<p>Clinker is produced in a kiln at high temperatures (> 1200° C) and consists of solid nodules that contain a controlled and inseparable mix of minerals. Portland cement clinker consists, chiefly, of the four minerals: tricalcium silicate, dicalcium silicate, tricalcium aluminate, and tetracalcium aluminoferrites. Clinker is finely ground with small amounts of other products to make finished cement.</p> <table border="1"><thead><tr><th>Component</th><th>CAS No.</th><th>Wt.%</th><th>Hazardous</th></tr></thead><tbody><tr><td>Tricalcium silicate 3CaO-SiO₂</td><td>12168-85-3</td><td><75</td><td>NO</td></tr><tr><td>Dicalcium silicate 2CaO-SiO₂</td><td>10034-77-2</td><td><20</td><td>NO</td></tr><tr><td>Tricalcium aluminate 3CaO·Al₂O₃</td><td>12042-78-3</td><td><15</td><td>NO</td></tr><tr><td>Tetracalcium aluminoferrite 4CaO-Al₂O₃ Fe₂O₃</td><td>12068-35-8</td><td><10</td><td>NO</td></tr></tbody></table> <p>In addition to the elements listed above, portland cement clinker may also contain small amounts of calcium oxide (CaO), magnesium oxide (MgO), potassium sulfate (K₂SO₄) and sodium sulfate (Na₂SO₄).</p>	Component	CAS No.	Wt.%	Hazardous	Tricalcium silicate 3CaO-SiO ₂	12168-85-3	<75	NO	Dicalcium silicate 2CaO-SiO ₂	10034-77-2	<20	NO	Tricalcium aluminate 3CaO·Al ₂ O ₃	12042-78-3	<15	NO	Tetracalcium aluminoferrite 4CaO-Al ₂ O ₃ Fe ₂ O ₃	12068-35-8	<10	NO								
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شركة الإسمنت الخليج
Gulf Cement Company P.S.C
شركة مساهمة عامة
Public Shareholding Company
سجل تجاري رقم 2202 Commercial Reg. No.



صناعة نظيفة
Clean Industry - Sustainable Environment

5 physical Properties Appearance and odour Boiling point Vapour pressure Vapour density Solubility in water Specific gravity	Odourless, Blackish grey, Granules Not applicable " " " " Very sparingly soluble. 1.20 to 1.45
6 Fire and Explosion Hazard Data Flash point Flammable or explosive limits special fire fighting procedure Unusual fire and explosion hazards	Clinkers are non combustible and non explosive. Not applicable Not applicable None
7 Safety Hazards & Precautions	Take normal safety precaution while handling and follow the first aid procedures in an emergency case and also seek medical advice.
8 Health Hazard Data Hazardous Ingredients	i) Portland cement clinkers are classified by international standards as nuisance dust and not listed as carcinogen or potential carcinogen ii) Dry clinker granules/dust in normal use has no harmful effect on dry skin. There may be ill effects from the inhalation or ingestion of clinker dust. So suitable precaution must be taken iii) When clinker/dust is mixed with water, alkali is released which can cause burns. Precaution should therefore be taken to prevent dry clinker dust entering eyes mouth and nose
9 Skin & Eye Irritation Acute Chronic	- Clinker dust can dry the skin and cause alkali burns and also can irritate the eyes and upper respiratory tract due to fine particles available with granules. -Clinker dust can cause inflammation of the lining tissues of the interior of the nose and inflammation of the eyes. Hypersensitive individuals may develop allergic skin rashes



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ISO 9001 : 2015 & ISO 14001 : 2015 and ISO 45001 : 2018
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Authorised and paid up capital : AED 410,548,410

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10 Emergency first aid procedure Eye contacts Skin contact Inhalation	- Wash with plenty of clean water and seek medical advice. Use tight fitting goggles in dusty environments. -Wash with soap and water immediately. If there is irritation or pain seek medical advice. Use impervious, abrasion- and alkali-resistant gloves, boots. protect the skin from prolonged contact with wet clinker. - Remove patient to fresh air. If problem persists seek medical advice
11 Reactivity Data Stability Incompatibility Hazardous decomposition product Hazardous polymerization	Stable product None None None
12 Clean up Procedure Spillage Disposal method	Use dry-clean up methods that do not disperse the dust in to the air Material can be returned to container for later use or can be disposed as an industrial waste
13 Special Protection Information Respiratory protection Ventilation	in industry environment use of a good respirator is recommended Local exhaust can be used if necessary to control airborne dust level.



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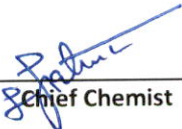



صناعة نظيفة
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14 Storage and Transport	Clinker leaving cooler is hot (Temp > 120 °C) keep in moisture-proof storage to prevent hardening Hazard class Not Applicable Identification Class Not Applicable Required lable Text Not Applicable Hazardous Substances/ Reported Quantity (RQ) Not Applicable Transportation Transportation is by road or ship in bulk form. Not classified as hazardous under US DOT, Canadian TDG, IATA and IMO
15 Ecological Information	Ecotoxicity: No recognized unusual toxicity to plants or animals
16 Disposal	Dispose of waste material according to localm state and federal regulatios. (Since portland cement is stable, uncontaminated material may be saved for future use Dispose of bags in an approved landfill or incinerator.
17 CAS NO.	65997-15-1
18 HS CODE	25231000

DISCLAIMER OF LIABILITY

- 1) This material safety data sheet (MSDS) was prepared and to be used only for this products
- 2) This material safety data sheet attempts to describe as accurately as possible the potential exposures associated with normal cement and clinker use.
- 3) Health and Safety precautions in this data sheet may not be adequate for all individuals and/or situations
- 4) Users have the the responsibility to evaluate and use this product safely and to comply with all applicable laws and regulations


Chief Chemist


Vice President

20/08/2025

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