



DURACEM 42.5 N

MSDS DATE: 02/02/2022

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** DURACEM 42.5 N

**SYNONYMS:** Cement, Portland cement, Portland-composite cement, Blast furnace cement, Pozzolanic cement and Composite cement.

**PRODUCT CODES:** CEM II/B-L 42.5 N

**MANUFACTURER:**

**ENTITY:** Cimentos da Beira

**ADDRESS:** Rua Krus Gomess, Munhava, Beira - Sofala

**EMERGENCY PHONE:** +258 87 100 0551 / +258 87 100 1453      Ozias Gomes

**MAIN LINE:** +258 84 560 9903 Reception

**CHEMICAL NAME:** Portland Limestone Cement

**CHEMICAL FAMILY:** Calcium compounds

Silicates

Iron compounds (ferrites)

Aluminium compounds (aluminates).

**QUALITY**

Cement Type	Naming	Clinker (%)	Limestone (%)	Gypsum [Calcium Sulphate Hydrated] (%)
CEM II/B-L 42.5N	Portland Limestone Cement	65-79	21-35	0-5

**CHEMICAL ABSTRACT NUMBER (CAS #):** 65997-15-1

### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

**INGREDIENTS:**

Clinker	65-79%	
Limestone	21-35%	CaCO <sub>3</sub>
Gypsum	0-5%	CaSO <sub>4</sub> .2H <sub>2</sub> O

Clinker Components	CAS #	Abbreviature	Specification				
			Unit	Min	Max	Preferred	Chemical formula
Calcium oxide	CAS # 1305-78-8	CaO	%	62	66	65	CaO
Tricalcium silicate	CAS # 12168-85-3	C <sub>3</sub> S	%	55	65	59	3CaO.SiO <sub>2</sub>
Dicalcium silicate	CAS # 1003-77-2	C <sub>2</sub> S	%	16	24	17	2CaO.SiO <sub>2</sub>
Tricalcium aluminate	CAS # 12042-78-3	C <sub>3</sub> A	%	6	9	5,2	3CaO.Al <sub>2</sub> O <sub>3</sub>
Aluminoferrite of tetra calcium	CAS # 12068-35-84	C4AF	%	7	11	11	CaO.Al <sub>2</sub> O <sub>3</sub> .Fe <sub>2</sub> O <sub>3</sub>

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### SECTION 3: HAZARDS IDENTIFICATION

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**EMERGENCY OVERVIEW:** Dust act as a skin and respiratory irritant. Dust and wet cement cause serious eye irritation. Long term exposure may lead to contact dermatitis.

**ROUTES OF ENTRY:** Skin, eye, mouth and nose.

#### POTENTIAL HEALTH EFFECTS

**EYES:** Exposure to airborne dust may cause immediate or delayed irritation of the eyes. Depending on the level of exposure, effects may range from redness to chemical burns and blindness.

**SKIN:** The hazards of wet cement are due to its caustic, abrasive, and drying properties. Wet cement contacting the skin for a short period and then thoroughly washed off causes little irritation. But continuous contact between skin and wet cement allows alkaline compounds to penetrate and burn the skin.

**INGESTION:** Ingestion in a harmful quantity is very unlikely to occur.

**INHALATION:** Inhaling high levels of dust may occur in different situation. In the short term, such exposure irritates the nose and throat and causes choking and difficult breathing.

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### SECTION 4: FIRST AID MEASURES

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**EYES:** Wash eyes with large volumes of water. Seek medical attention.

**SKIN:** Wash with running water and neutral soap.

**INGESTION:** Ingestion in a harmful quantity is very unlikely to occur. If ingested drink plenty of water and consult a doctor immediately. DO NOT INDUCE VOMITING.

**INHALATION:** Remove exposed person to fresh air. Prolonged exposure at high dust concentration may cause a cough and phlegm.

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**SECTION 5: FIRE-FIGHTING MEASURES**

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This product isn't combustible, use agent most appropriate to extinguish surrounding fire.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**ACCIDENTAL RELEASE MEASURES:****Personal precautions**

Dust mask where Threshold Limit Value (TLV) is exceeded. Wear eye shielding. Any type of glove which prevents contact with the product.

**Environmental precautions**

Non-toxic in small quantities. Large quantities in water will lead to high pH values, up to 12,5. Aquatic life will be endangered.

The cement will harden, possibly forming a crust. It may dissolve slowly in acid conditions.

**(i) Small spills**

(a) Containment – Sweep up. Prevent dust becoming airborne.

(b) Clean-up – Sweep up. Prevent dust becoming airborne.

**(ii) Large spills**

(a) Containment – Sweep up. Prevent dust becoming airborne.

(b) Clean – up – Sweep up. Prevent dust becoming airborne.

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**SECTION 7: HANDLING AND STORAGE**

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During handling aerated cement has liquid properties which disperse after settlement.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Occupational exposure limits** TWA OEL RL 5 mg/m<sup>3</sup> respirable dust, 10 mg/m<sup>3</sup> total inhalable dust.

**Personal protection** Dust mask, safety glasses or goggles, gloves.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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**Physical Properties**

Fine grey. Particle size < 0.1 mm.

Relative density 2.2 to 3.8 g/ml.

Melting point > 1500°C.

Alkalinity can exceed pH of 12 in water.

**Chemical Properties**

Cement chemistry is directly related to the proportions of silicates and aluminates. However, it does not pose any danger when not mixed with water.

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**SECTION 10: STABILITY AND REACTIVITY**

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Stable, but product will solidify over a period of hours if moistened or wet. Absorbs moisture from the air (hygroscopic) and solidifies over prolonged periods if not kept in a protected dry atmosphere.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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Dust acts on the skin as an irritant. Dust and wet cement cause serious eye irritation. Long-term exposure can lead to contact dermatitis. The silica particles present in cement dust cause silicosis, which is capable of long-term death. This disease causes lung disorders and can affect mainly civil construction workers.

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**SECTION 12: ECOLOGICAL INFORMATION**

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Nontoxic in small quantities. Large quantities in water will lead to high pH values, up to 12.5. Aquatic life will be endangered. The cement will harden, possibly forming a crust. It may dissolve slowly in acid conditions.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing use or contamination of this product may change the waste management options. Dispose of container and unused contents in accordance with local regulations.

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**SECTION 14: TRANSPORT INFORMATION**

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In terms of the Código de Estrada (Decreto – Lei 1/2011) de 23 de Março and Regulamento de Produção Transporte Comercialização e Garantia de Qualidade de Cimento Correntes (Decreto 28/2016) de 18 de Julho. The transport of cement in suitable bags to the storage site must be carried out in such a way as to preserve the quality of the cement provided for in NM NP EN 197-1 to avoid the rupture of the bags or the incidence of water in the cargo, in accordance with cargo transportation legislation.

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**SECTION 15: REGULATORY INFORMATION**

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The MSDS for cement product is regulated by Decreto 28/2016 de 18 de Julho – Regulamento de Produção Transporte Comercialização e Garantia de Qualidade de Cimento Correntes.

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**SECTION 16: OTHER INFORMATION**

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**Notice to ready**

While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of Portland cement as it is commonly used, the sheet cannot anticipate and provide all the information that might be needed in every situation. Inexperienced product users should obtain proper

training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with Portland cement to produce Portland cement products. Users should review other relevant safety data sheets before working with Portland cement or working on Portland cement products, for example, Portland cement concrete.