



Portland cement

MATERIAL SAFETY DATA SHEET (91/155/EEC)

1. IDENTIFICATION OF PREPARATION AND COMPANY

Preparation name	Portland cement (synonym: Cement)
Normal use	Hydrating binder for concrete, mortar and plaster
Company registered name	AfriSam South Africa (Pty) Ltd
Address	Constantia Park, cnr 14 th Ave and Hendrik Potgieter Rd, Roodepoort, GAUTENG
Telephone No	011 670 5500

The product includes five main types of cement:

- CEM I Portland cement
- CEM II Portland-composite cement
- CEM III Portland blastfurnace cement
- CEM IV Pozzolanic cement
- CEM V Composite cement

2. INFORMATION ON INGREDIENTS

Chemical formula: Tri and di-calcium silicate

3. HAZARD IDENTIFICATION

UN No: None
Hazchem code: Awaited
NIOSH No: W8770000 (RTECS)

4. FIRST AID MEASURES

Inhalation: Remove person to fresh air
Contact with eyes: Wash with large volumes of water. Seek medical attention.
Contact with skin: Wash with water and non-sensitizing soap
Ingestion: If ingested drink plenty of water and consult a doctor immediately. DO NOT INDUCE VOMITING.

5. FIRE-FIGHTING MEASURES

Non-flammable.

6. MEASURES TO BE TAKEN IN THE EVENT OF ACCIDENTAL SPILLAGE

Safety precautions: Consult the safety measures listed under sections 7 and 8.
Environmental safety precautions: Prevent any material entering drains or waterways.

7. HANDLING AND STORAGE

Standard regulations relating to storage premises and to sites where the product is handled and used.

8. EXPOSURE CONTROL - PERSONAL SAFETY

Personnel shall wear standard PPE including gloves.

- **Inhalation:** Demarcate dust area with zebra lines. Wear dust masks where TLV is exceeded in line with SANS 1455 and Govt Gazette 1200 of 22/10/89
- **Eyes:** Wear fully-sealing eye protection. Optional eye and dust shields.
- **Skin:** Wear gloves and long sleeves preventing skin contact with product, and preventing undue perspiration
- **Ingestion:** Do not eat in area exposed to cement. Ingestion in harmful quantities unlikely to occur.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Fine grey powder
Maximum particle size	0,1 mm
Density	2,3 to 3,8 kg/litre

Specific gravity and angle of repose	Dependent on amount of air in the material
Mobility	Readily air-entrained
Solubility in water	Negligible, but sticky when wet
Melting point	1 500°C
Molecular weight	Variable
Alkalinity	pH 10 to 12

10. STABILITY AND REACTIVITY

The preparation is unstable. Avoid contamination with other materials which may render the product useless as a binding agent. The surface of cement exposed to air may harden to form a crust. Cement will dissolve slowly in acidic conditions. Store bags off the ground on pallets in weatherproof shed. Shelf-life bags: 3 months. Discard cement with lumps that cannot be broken easily by hand.

Incompatibility with other materials: Avoid moisture – hardens when wet

Hazardous decomposition: Nil

Hazardous polymerization: Nil

11. TOXICOLOGICAL INFORMATION

OEL total inhalable: 10 mg/m³

OEL respiratable dust: 5 mg/m³

Summary of toxicology: Portland cement dust irritates the eyes and causes dermatitis. Prolonged exposure to undefined mixtures of cement and other dusts have led to reports of increased incidence of bronchitis and chest X-ray changes. Exposure to cement can cause chronic conjunctivitis, blepharitis, and skin ulcers of the nose. Repeated and prolonged contact can result in primary irritant dermatitis of hands, forearms and feet, with potential complications.

Recommended medical surveillance for persons exposed to portland cement at potentially hazardous levels:

- **Initial examination:** Complete history and physical examination to detect pre-existing conditions for increased risk, and to establish base-line for future health monitoring, with stress on examination of respiratory tract (14 x 17" chest X-rays) and eyes. FVC and FEV (1 sec): Portland cement mixtures may cause signs of respiratory impairment. Persons with impaired pulmonary function may be at increased risk from exposure: periodic surveillance is indicated. Skin: examine for evidence of chronic disorders.
- **Periodic/annual surveillance** of lungs for persons with impaired pulmonary function. X-rays are necessary when indicated by results of pulmonary testing, or by signs and symptoms of respiratory disease.

Contact the Poison Information Centre at the Johannesburg General Hospital at 011 495 5112 all hours.

12. ECOLOGICAL INFORMATION

Aquatic toxicity to Fish daphnia, Algae: Non-toxic in small quantities. Large quantities especially in static water will increase pH to >12, and pH changes may result in death of aquatic life.

13. DISPOSAL CONSIDERATIONS

Do not pour into drains or waterways.

14. TRANSPORT INFORMATION

Packaging: 20kg, 25kg and 50kg paper sacks; mini-bulk silos; road and rail tankers

No UN No.: Non-hazardous cargo in terms of the IMDC Code

BC Code: Appendix C cargo

15. STATUTORY INFORMATION

Inhalation: Exposure over long periods of time to very high concentrations may cause cough with phlegm

Skin contact: Prolonged exposure could sensitise skin causing mild irritation or dermatitis in extreme cases

Back strain: As bags are heavy, prevent back and neck injuries by proper bending and lifting

16. OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this material safety data sheet is based on our current level of knowledge and on national and community regulations.

The product must not be used for any purposes other than those specified under section 1 without first obtaining written instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information given on this safety data sheet must be regarded as a description of the safety requirements relating to our product and not a guarantee of its properties.

This MSDS supercedes all previous issues prior to: January 2017