

CEMENT



Powerplus

Ordinary Portland Cement

For specialised building applications



bringing materials to *life*™



Your guide to **Powerplus**

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Respect for Innovation: A Perpetual Driver

A key guideline for Lafarge Cement Zambia is value creation for its customers. We aim to deliver this promise by continually developing innovative products and services.

Innovation is core to our operations; we continuously aspire to develop value-added products of the highest quality that respect social and environmental challenges. Our research interests are driven by the unique needs and requirements of the markets in which we operate and form the very foundation of our sustainable construction solutions. Which is why we repeatedly strive to offer our customers technologically advanced solutions for all their needs.

About Powerplus

Powerplus is an Ordinary Portland Cement used for specialised building applications such as high strength concrete commercial and architectural structures.

Composition:

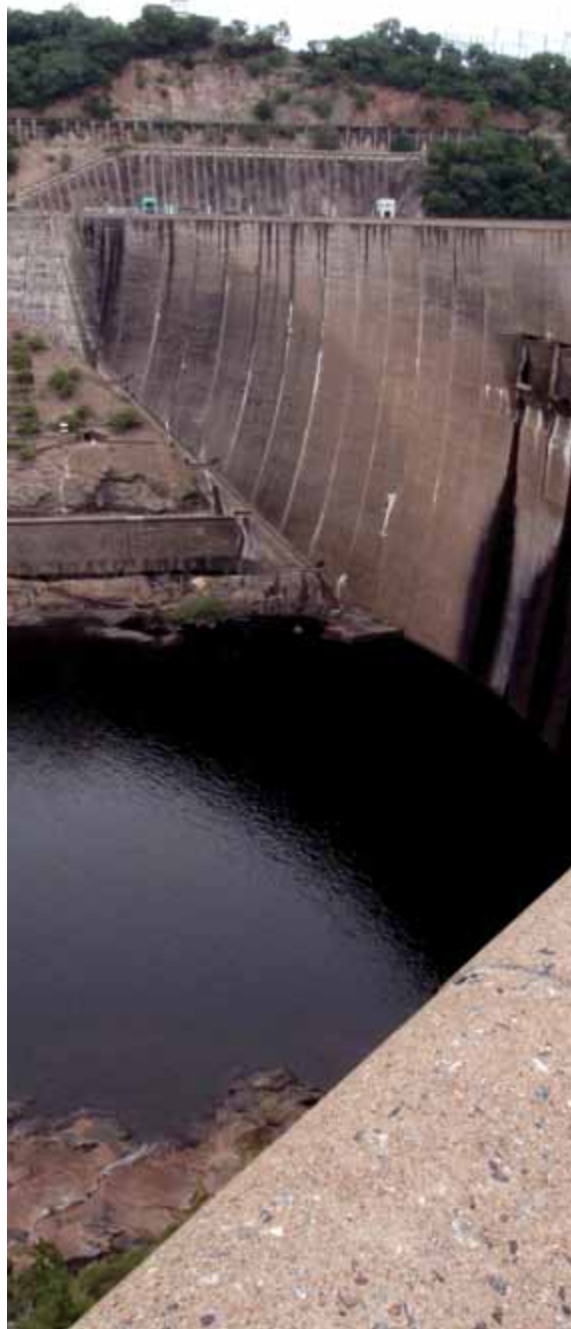
Powerplus Ordinary Portland Cement is formulated from Portland clinker in accordance with the specifications of ZS EN 197-1.

Special Characteristics:

Powerplus offers:

- Superior workability
- Good early strength

Powerplus is the effective solution to the demands of large, high-strength construction projects.





Specialised Building Applications

The special formulation of **Powerplus** allows Lafarge to offer customers a high end brand for their sophisticated needs.

It presents a solution to the requirements of a wide range of applications, such as:

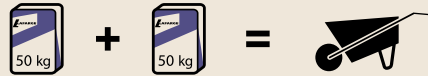
- Precast manufacturing
- Dam and bridge construction
- Brick and block making
- High strength concrete for heavy duty roads and industrial floors, columns, and water retaining structures.

Other added benefits are:

- **Improved workability:** for easier placing, compaction and finishing of concrete
- **Reduced water requirement:** results in less cracking and more strength, leaving fewer surface cracks and imperfections
- **Better cohesion:** the ingredients in the concrete stay uniformly mixed, instead of segregating before the concrete can set

Recommended Mix Proportions for Powerplus 42,5N

Note: Use the same size container for measuring all the materials in a batch - see volume proportions below:



RECOMMENDED MIX PROPORTIONS FOR POWERPLUS CEMENT

POWERPLUS CEMENT IS SUITABLE FOR:	NUMBERS DENOTE VOLUME PROPORTIONS		
	CEMENT	SAND	STONE
HIGH STRENGTH CONCRETE: 30-35MPa	1 	2 	3
HIGH STRENGTH CONCRETE: 25-30MPa Suspended Slabs, Reinforced Concrete, Heavy Duty Industrial Floors	1 	2 	4
MEDIUM STRENGTH CONCRETE: 20-25MPa Driveways, Light Industrial Floors - Unreinforced	1 	3 	4
LOW STRENGTH CONCRETE: 10-15MPa Foundations, Footings & Domestic Floors - Reinforced	1 	3 	5

What the Bag Tells You

Side of bag

Front of bag

Back of bag

RECOMMENDED MIX PROPORTIONS FOR POWERPLUS CEMENT IS SUITABLE FOR:	NUMBERS DENOTE VOLUME PROPORTIONS		
	CEMENT	SAND	STONE
HIGH STRENGTH CONCRETE 30-35MPa	1	2	3
HIGH STRENGTH CONCRETE 25-30MPa	1	2	4
MEDIUM STRENGTH CONCRETE 20-25MPa	1	3	4
LOW STRENGTH CONCRETE: 10-15MPa	1	3	5

1 **Powerplus Ordinary Portland Cement**
The product name. It is a Portland cement blended with limestone.

2 **42,5N**
Identifies the 28-day strength class of the cement. 'N' denotes normal early strength development.

3 **CEM I**
Denotes a Portland cement type Class I.

4 **ZABS logo**
The Zambian Bureau of Standards logo of quality.

5 **50kg**
The quantity you paid for (i.e. the net weight of cement excluding the bag).

6 **Health and Safety**
Take note of the health and safety warning! Cement dust on moist skin or in eyes can be a strong irritant.

7 **Mix Proportions**
Show some typical standard concrete mix proportions.

8 **Hints**
Some useful guidelines on storing, mixing, water addition and curing of concrete.

Lafarge Cement Zambia

Lafarge Cement Zambia is the country's major cement manufacturer.



The Company was established in 1949 by the Northern Rhodesian Government and the Colonial Development Corporation, now the Commonwealth Development Corporation (CDC). Cement production commenced in 1951, with the installation of two more kilns in 1956 and 1967. In 1969, the Ndola Plant Kiln was commissioned and in 1974 a second kiln was added. The company was privatised in October 1994 under the government privatisation programme aimed at enhancing the efficiency of state-owned companies. It was also the first company to be listed on the Lusaka Stock Exchange (LuSE), and CDC was the majority shareholder.

In 2001, CDC reorganised its cement operations in Southern Africa to form Pan African Cement

(PAC), which owned shares in Chilanga Cement in Zambia, Mbeya Cement in Tanzania and Portland Cement in Malawi. In May 2001 Lafarge acquired PAC from CDC and a further 34% of Chilanga Cement through a compulsory offer to minorities. The minority shareholders are well dispersed with over 3,200 Zambian shareholders.

In 2007, Chilanga Cement changed its name to Lafarge Cement Zambia to align with the international Lafarge Group. We have continued to establish ourselves as a leader in the local manufacturing industry. The inauguration of our new plant at Chilanga has enabled us to cater for the ever-growing demands of the Zambian regional markets.





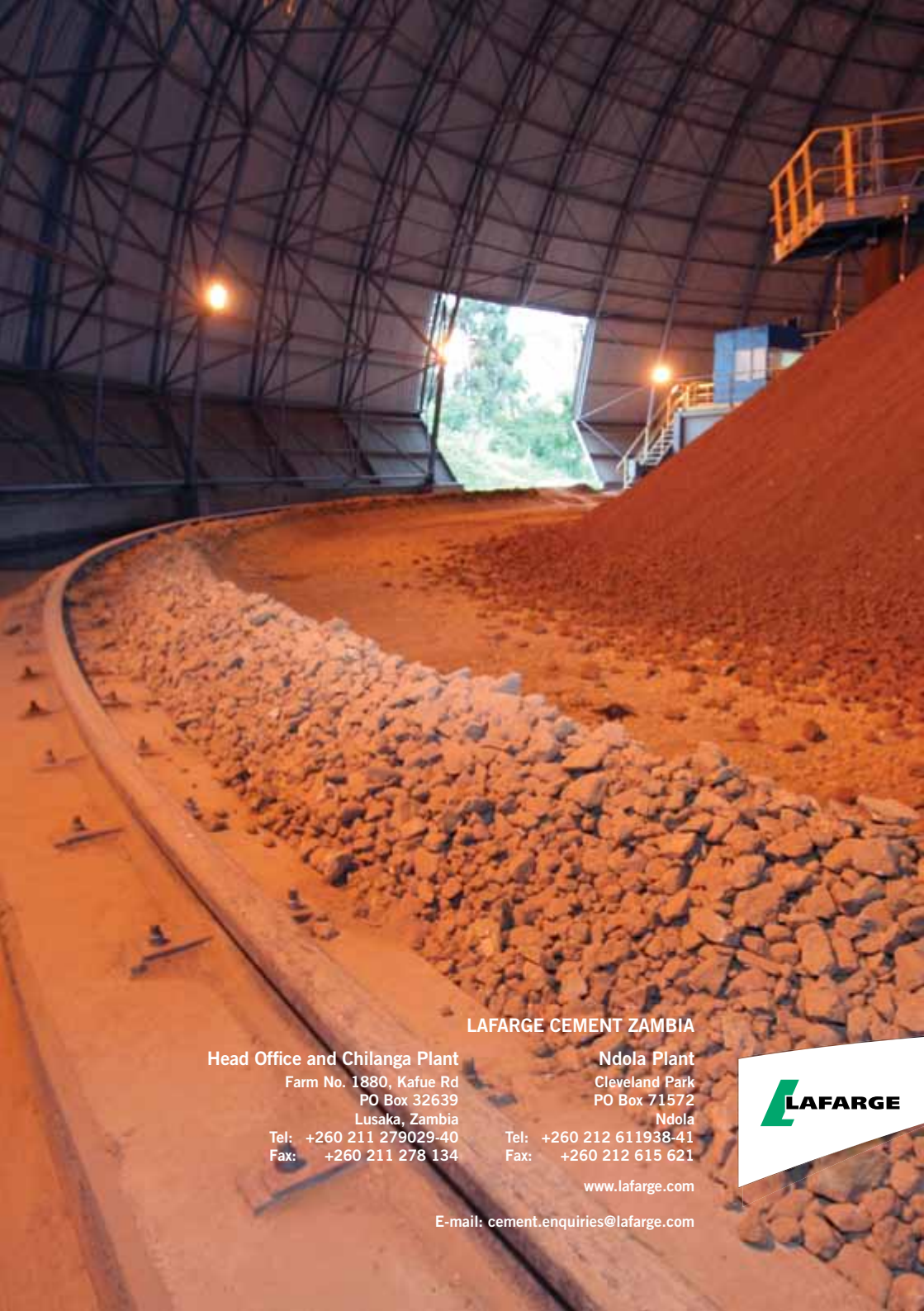
The Global Lafarge Group



Lafarge is a world leader in building materials and holds top-ranking positions in each of its businesses across the globe: Cement, Aggregates & Concrete and Gypsum. With 78,000 employees in 78 countries, Lafarge posted sales of €15.9 billion in 2009.

Lafarge responds to the needs of its customers, shareholders, local communities and the environment. This is achieved by research and development activities at the Lafarge Centre de Recherche (LCR) in order to develop new value-added products that provide greater solutions for our customers, increase our product ranges to better incorporate current sustainable construction concerns, and research sustained efforts to reduce greenhouse emissions in our industrial processes and materials.

In 2009, the Group increased the resources allocated to research and development, reinforcing the Group's expertise in the various fields across the three divisions.



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