KROPZ

FEED THE WORLD

ELANDSFONTEIN PHOSPHATE ROCK FOR DIRECT APPLICATION [DAPR]

We are Kropz

Kropz is an explorer, mine developer, miner and supplier of phosphate rock to sub-Saharan Africa and worldwide markets.

Kropz has developed South Africa's largest sedimentary phosphate deposit, known as Elandsfontein - the world's newest and most innovative phosphate mine, producing up to 1,5Mtpa of 32% P_2O_5 phosphate rock from a highly automated processing plant (Earth Plant 1) with online analysis and advanced process control. Streamline mining methods and efficiencies in Earth Plant 1 allow for continuity of production.

Elandsfontein phosphate rock has a proven consistency of grade and is suitable for phosphoric acid, superphosphate production and direct application.

The product is of high quality and is low in cadmium and other impurities.

Elandsfontein is ideally positioned for export and is advantaged by simple logistics, ensuring timely supply in addition to an ethical route to market. Kropz has dedicated warehousing, ship berthing and loading facilities at the deep water Port of Saldanha Bay, which is located just 40km from the mine via a national freight road.

At the heart of Kropz lies its caring approach towards its people and communities, as well as the environments in which it operates, with the goal of Elandsfontein becoming the world's first truly green mining operation.

Elandsfontein Phosphate Rock is a sedimentary phosphate rock with 32% P_2O_5. In addition to the phosphorus content and a high concentration of calcium and micronutrients, it has a high solubility making it an ideal product for direct application.

Elandsfontein Phosphate Project

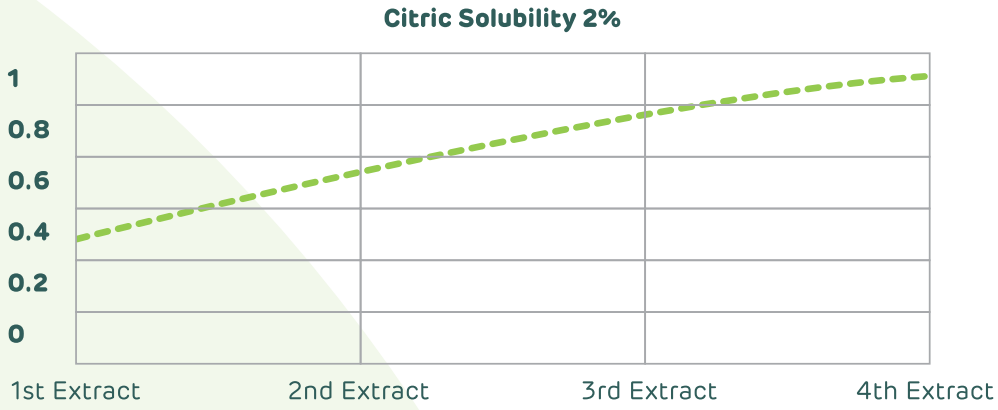
PORT OF SALDANHA BAY — ROAD
ELANDSFONTEIN — MINE

Components

Phosphorus

Phosphorus is an essential nutrient for all living organisms. Phosphorus plays a vital role in photosynthesis, respiration, energy storage and transfer, cell division and cell enlargement. Phosphorus also assists plants in surviving harsh winter conditions and increases the rate of water absorption.

Elandsfontein Phosphate Rock contains 32% P_2O_5. About 31% of the phosphorus is citric soluble in the first extract and the balance is slowly released into the soil. Plants need continual phosphorus supply throughout the growth period to ensure a maximum yield.

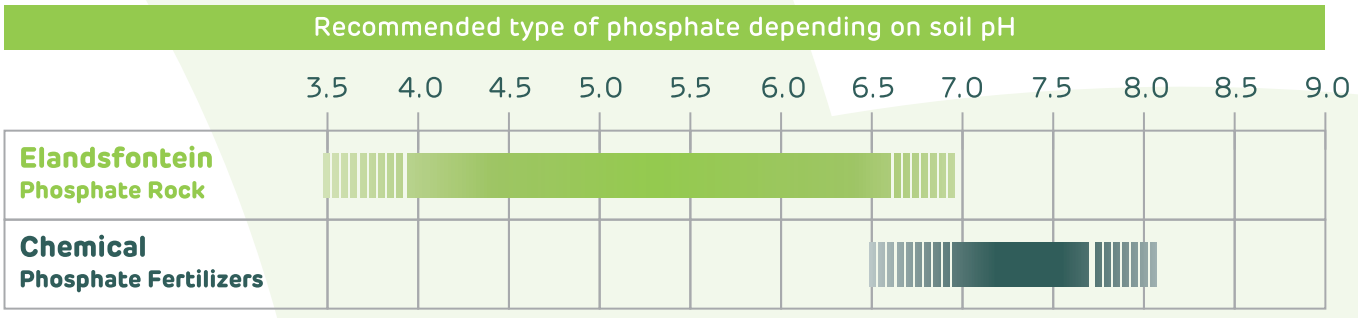


Calcium

Elandsfontein Phosphate Rock contains 34% calcium. Calcium is essential for microorganisms as they turn crop residues into organic matter, release nutrients and improve soil aggregation and water holding capacity. Calcium also plays an important role in neutralising soil toxicity.

Suitable for all soil types and crops, Elandsfontein Phosphate Rock is an excellent source of phosphorus especially for sub-tropical acidic soils, yielding excellent results compared to other sources of phosphorus.

Elandsfontein Phosphate Rock is particularly important in areas with low soil pH.



Micronutrients

Micronutrients are known to play many complex roles in plant development and health. Micronutrients promote the strong, steady growth of crops that produce higher yields and increase crop quality.
In particular, their presence can have a great impact on root development, fruit setting and grain filling, seed viability, plant vigour and health.

Product Specifications

Phosphate	P_2O_5	%	32.0
BPL	BPL		70
Aluminium Oxide	Al_2O_3	%	1.14
Arsenic	As	ppm	19
Cadmium	Cd	ppm	5.7
Calcium Oxide	CaO	%	46.0
Carbon	C	%	<0.05
Cerium	Ce	ppm	74
Chlorine	Cl	ppm	<50
Cobalt	Co	ppm	4.7
Copper	Cu	ppm	10
Chrome	Cr	ppm	160
Chromite	Cr_2O_3	%	0.02
Fluorine	F	%	3.5
Iron Oxide	Fe_2O_3	%	1.67
Lead	Pb	ppm	35
LOI		%	8.47
Magnesium Oxide	MgO	%	0.58
Manganese	Mn	ppm	10
Potssium Oxide	K_2O	%	0.25
Silica	SiO_2	%	8.0
Sodium Oxide	Na_2O	%	0.6
Thorium	Th	ppm	6.4
Titanium	Ti	ppm	90
Titanium Oxide	TiO_2	%	0.11
Uranium	U	ppm	30
Vanadium	V	ppm	30
Zinc	Zn	ppm	40

Benefits of using phosphate rock for direct application

- Phosphate rock ensures that phosphorus is available to the plant immediately and all year round ensuring more phosphorus is available during the growing period.
- Phosphate rock has the ability to restore microelemental and microbial soil balance which in turn leads to less reliance on artificial fertilizers.
- Use of phosphate rock instead of chemically processed phosphate avoids the environmental degradation caused by increased concentrations of fertilizers in the ground water, the rivers and the coastal waters.
- Use of phosphate rock reduces the risk of harmful accumulation of nutrients in the soil and reduces soil salinity problems.
- Phosphate rock is a source of several nutrients other than phosphorus. Rock phosphates are usually applied to replenish soil phosphorus status, but phosphate rock also provides other nutrients such as calcium and micronutrients not present in soluble phosphate fertilizers.
- Elandsfontein Phosphate Rock has very low levels of cadmium, impurities, other heavy metals and harmful substances.
- Based on the unit cost of phosphorus, natural phosphate rock is usually the least costly.
- Very low fixation rate.
- Increases cation exchange capacity and helps microorganisms to reproduce and reduce soil degradation.

WHY CHOOSE OUR PHOSPHATE ROCK?

- **To correct soil phosphorus content**
- **Slow release properties ensuring all year round phosphorus availability**
- **Rich in calcium and micronutrients**
- **Low in heavy metals and harmful substances**
- **Very effective in acidic soils**
- **Promotes microorganism growth**

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