



AIF Trading®- Egyptian Phosphate Rock: Grades, Reserves, Applications & Target Markets



AIF Trading® – Alexandria International for Trading & Contracting (AIF Trading)

This report provides a comprehensive overview of Egyptian phosphate rock, a key resource in the global fertilizer industry. It details Egypt's substantial reserves and production capacity, the typical specifications of its phosphate rock, and the diverse applications based on P₂O₅ grade. Furthermore, it highlights the key commercial selling points, required documentation for buyers, target markets, and a recommended commercial strategy for Egyptian phosphate rock.

1. Egypt's Phosphate Reserves & Production Capacity

- Total estimated reserves: approximately 2.8 billion tons of phosphate rock.
- Annual production: around 4.8–5 million tons/year (2023–2024).
- Major producing regions:
 - Abu Tartur Complex: one of the largest in the region, with layers reaching 30–31% P₂O₅.
 - El-Sebaiya (Sibaiya): consistent commercial grades around 28–30% P₂O₅.
 - Red Sea / Duwi Formation: wide range of grades (20–33% depending on the layer).

Egypt's mining infrastructure and proximity to Europe, Africa, and Middle East markets strengthen its export competitiveness.

2. Typical Specifications of Egyptian Phosphate Rock

Actual specifications vary by mine and batch, but common commercial parameters include:

- P₂O₅: 24%, 25%, 26%, 27%, 28%, 29%, 30–31%
- Moisture: 1–4%
- Size: 0–50 mm (lump) or crushed/fines
- Impurities: CaO, MgO, SiO₂, Fe₂O₃, Al₂O₃, F – important for acid production efficiency
- LOI (Loss on Ignition) – used for purity evaluation

Certificates of Analysis (CoA) are usually required by international buyers.

Egyptian Phosphate Rock: Reserves, Production & Specifications



Egypt possesses significant phosphate reserves and production capacity, making it a competitive exporter.

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3. Applications Based on P₂O₅ Grade (24% → 30%)

Grade 24% P₂O₅

- Used for Direct Application to Soil (DAP/rock phosphate) in markets that accept low-grade material.
- Suitable for low-cost fertilizer blending after screening or calcination.
- Attractive for developing markets due to price advantage.

Grade 25% P₂O₅

- Similar to 24%, but more favorable for basic phosphoric acid production with low-cost wet processes.
- Can be used in simple phosphate fertilizers (SSP).

Grade 26% P₂O₅

- Good for phosphoric acid production in plants tolerating moderate impurity levels.
- Used in blended fertilizers and SSP manufacturing.

Grade 27% P₂O₅

- Popular for wet-process phosphoric acid, intermediate between low and high grades.
- Accepted by many industrial fertilizer producers.

Grade 28% P₂O₅

- Strong commercial grade for high-efficiency phosphoric acid.
- Suitable for producing DAP and MAP fertilizers.
- Common Egyptian export quality, especially from Sebaiya mines.

Grade 29% P₂O₅

- High-grade phosphate rock used for premium phosphoric acid and high-analysis fertilizers.
- Competes with Moroccan and Algerian material in several markets.

Grade 30–31% P₂O₅

- Top-grade Egyptian phosphate (notably from Abu Tartur).
- Ideal for advanced phosphoric acid plants, DAP/MAP production, and high-yield processing lines.
- Lower acid consumption and better operational efficiency → reduced production costs per ton.

Top Phosphate Rock Grades by P₂O₅ Content



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4. Key Commercial Selling Points of Egyptian Phosphate

1. Large and stable reserves ensuring long-term supply.
2. High-quality grades (up to 31% P₂O₅) available in significant volumes.
3. Multiple export ports (Damietta, Alexandria, Red Sea ports) reducing logistics cost.
4. Competitive pricing compared to North African and Middle Eastern suppliers.
5. Availability of screened and low-dust materials suitable for strict international markets.

5. Required Documentation for Buyers

International clients typically request:

- Certificate of Analysis (CoA)
- Certificate of Origin
- Inspection report (SGS / EuroCert)
- Loading supervision photos
- MSDS (Material Safety Data Sheet)
- Technical Data Sheet (TDS), if needed

6. Target Markets & Recommended Countries

High-Demand Markets (Top Priority)

- India – One of the world's largest phosphate consumers (fertilizer & phosphoric acid plants).
- Indonesia & Malaysia – Strong demand for fertilizer and blending plants.
- European Union (Spain, Netherlands, Belgium, Romania) – High-quality requirements; prefer screened and low-dust rock.
- Brazil & Paraguay – Major global agricultural markets with high fertilizer imports.

Medium-Demand / Growing Markets

- East Africa (Kenya, Tanzania, Ethiopia) – Growing agricultural expansion.
- West Africa (Nigeria, Ghana, Côte d'Ivoire) – Importing raw phosphate for blending.
- Turkey – Active phosphoric acid and fertilizer manufacturing sector.

Specialized / Industrial Markets

- Countries producing DAP/MAP or purified phosphoric acid:
 - India, Turkey, EU require high-grade 28–31%
 - Some Asian markets demand low-contaminant materials

Target Markets for Phosphate

| | High-Demand | Medium-Demand | Specialized/Industrial |
|----------------------|--|---------------------|---------------------------------------|
| Demand Level | Largest consumers | Growing expansion | High-grade required |
| Key Countries | India, Indonesia, Malaysia, EU, Brazil, Paraguay | East Africa, Turkey | India, Turkey, EU, Some Asian markets |
| Main Use | Fertilizer & phosphoric acid | Fertilizer blending | DAP/MAP, purified phosphoric acid |
| Quality Needs | Screened, low-dust | Raw phosphate | High-grade, low-contaminant |

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7. Recommended Commercial Strategy

- Offer grades in a clear range (24–30% P₂O₅) with full analysis.
- Provide flexible shipment sizes: 5,000 MT / 10,000 MT / 25,000 MT / 50,000 MT.
- Provide monthly supply programs for stable factories.
- Highlight long-term contract availability and competitive FOB/CIF pricing

Salah Farrag

CEO – Alexandria International for Trading & Contracting Co.

✉ ceo@aiftrading.com | ✉ info@aiftrading.com | ☎ +20 103 223 2254