

# TECHNICAL DATA SHEET

## COBO 15-15-15 + S

Granular NPK Fertilizer with Sulfur

### Product Description

**COBO 15-15-15 + S** is a fully granular, balanced NPK fertilizer enriched with sulfur (S), formulated to deliver complete and uniform nutrition for crops requiring balanced feeding and enhanced sulfur supply. With 15% Nitrogen (N), 15% Phosphorus (P<sub>2</sub>O<sub>5</sub>), 15% Potassium (K<sub>2</sub>O), and 2–3% Sulfur (S), this formulation supports strong vegetative growth, root development, protein synthesis, and improved stress tolerance.

It is suitable for **broadcast, banding, and mechanical spreading** applications.

### Guaranteed Analysis

Nutrient	Content	Form
Total Nitrogen (N)	15%	7% Nitrate (NO <sub>3</sub> <sup>-</sup> ), 8% Ammoniacal (NH <sub>4</sub> <sup>+</sup> )
Available Phosphorus (P <sub>2</sub> O <sub>5</sub> )	15%	Citrate-soluble
Soluble Potassium (K <sub>2</sub> O)	15%	Potassium salts
Sulfur (S)	2–3%	Sulfate form

### Physical & Technical Properties

Parameter	Specification
Physical Form	Granules
Granule Size	2–4 mm (ideal for spreading)
Bulk Density	1.0 – 1.2 g/cm <sup>3</sup>
Caking Tendency	Low (anti-caking treated)
Solubility	Low (granular formulation)

Dust Content	Low (dust-free handling)
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### Mode of Action (Plant Nutrition)

- **Nitrogen (N):** Drives vegetative growth, chlorophyll production, and protein formation.
- **Phosphorus (P):** Enhances root development, early establishment, and energy transfer.
- **Potassium (K):** Improves water regulation, stress tolerance, and crop quality.
- **Sulfur (S):** Supports amino acid synthesis and improves nitrogen efficiency and crop resilience.

The balanced NPK-S composition ensures **uniform nutrient availability throughout all growth stages.**

### Key Features & Benefits

- **Balanced NPK + Sulfur Formula:** Provides complete nutrition for sustained crop growth
- **Enhanced Sulfur Content:** Improves protein synthesis and stress resistance
- **Dual Nitrogen Forms:** Fast and sustained nitrogen availability
- **Free-Flowing Granules:** Ensures smooth mechanical spreading
- **Low Chloride:** Safe for chloride-sensitive crops (e.g., potatoes, tobacco)
- **Dust-Free:** Reduces airborne particles during handling and application

### Recommended Crops

- **Field Crops:** Wheat, corn (maize), soybeans
- **Vegetables:** Tomatoes, potatoes, leafy greens
- **Fruits:** Citrus, grapes, strawberries
- **Turf & Forage:** Pastures, golf courses

### Recommended Application Rates

#### Application Guidelines

Method	Dosage	Equipment	Notes
Broadcast	300–500 kg/ha	Rotary spreader	Pre-plant incorporation

Banding	150–250 kg/ha	Grain drill	Place 5 cm beside seed row
Top-Dressing	200–300 kg/ha	Drop spreader	Early growth stages

*Adjust rates based on soil analysis. Sulfur-deficient soils may require higher application rates.*

### Granule Performance Characteristics

- **Hardness:** ≥225 N (resists breakdown during handling)
- **Color:** Light brown (easy visibility during application)
- **Coating:** Polymer-coated for controlled nutrient release
- **Dissolution:** Gradual nutrient release over **7–14 days**

### Compatibility

Compatible with MAP, SOP, and most granular micronutrients  
Avoid mixing with urea granules (risk of hygroscopic caking)

### Safety & Handling

#### Precautions

- Wear gloves and mask during handling
- Avoid prolonged skin contact
- Store away from moisture (use pallets)

### First Aid

- **Inhalation:** Move to fresh air
- **Skin Contact:** Wash with soap and water
- **Eye Contact:** Rinse with clean water for several minutes

### Storage & Shelf Life

- Store in a cool, dry, well-ventilated area
- Maximum stack height: **12 bags**
- Keep bags sealed and off the floor
- **Shelf life:** 24 months under dry storage conditions

## **Packaging Options**

- 10 kg bags
- 25 kg bags