

Mined in the UK, ICL is the first – and only – producer in the world to mine polyhalite, marketed as Polysulphate.

www.polysulphate.com

SO_3

48%

K_2O

14%


MgO


6%

CaO


17%

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Fertilizerplus
Premium plant nutrition from ICL Fertilizers

The above are general rates, for specific recommendations or more information consult www.polysulphate.com/contact/ for your contact in your region.

Polysulphate is a registered trademark of ICL.

ICL



Fertilizing Coffee
(*Coffea robusta*)
with Polysulphate

Polysulphate 

www.polysulphate.com



Main features of Polysulphate fertilizer

- Ideal sulphur fertilizer with 48% SO₃ and additional benefit of potassium (K), magnesium (Mg) and calcium (Ca), all in sulphate form.
- Prolonged nutrient release pattern reduces sulphate leaching risk.
- Fully soluble, with all nutrients available for plant uptake during the growth period.
- Excellent spreading characteristics; spreads evenly and accurately up to 36 m.
- Low chloride, very low salinity index, neutral pH, no acidifying effect.
- Natural mined mineral (polyhalite) approved for organic agriculture.
- UK produced fertilizer with a low carbon footprint.

Functions of S, K, Mg and Ca in coffee crops

- Sulphur is an essential constituent necessary for the synthesis of three amino acids and multiple enzymes. Necessary for high nitrogen use efficiency.
- Potassium secures yield and quality, transport of sugars, stomatal control and is a co-factor of many enzymes. It reduces susceptibility to plant diseases and the impact of drought, and is essential for efficient use of nitrogen. Improves color, quality and resistance of the coffee beans.
- Magnesium is fundamental for photosynthesis, being a central part of the chlorophyll molecule. Increases sugar formation.
- Calcium is required for strong and healthy crops; it is a major building block in cell walls and reduces susceptibility to diseases and stress conditions.

Practical guidelines for fertilizing coffee with Polysulphate

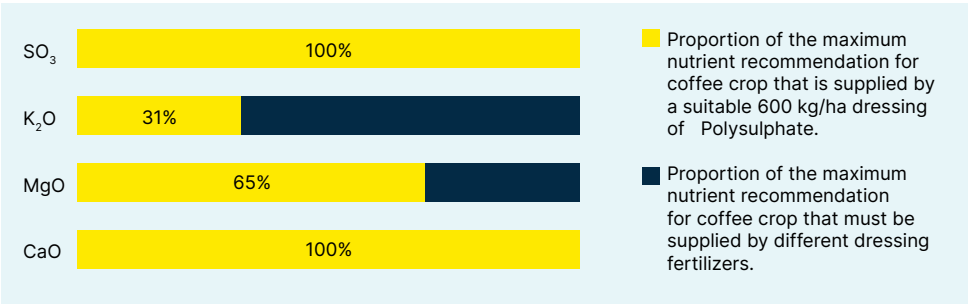
- Low-chloride Polysulphate is a sulphate-based source of water soluble potassium, magnesium and calcium, supplying all of the sulphur, magnesium and calcium needed, and a significant proportion of the potash removed at harvest without affecting the soil pH.
- Coffee beans remove very large amounts of potassium at harvest and the proportion not supplied by Polysulphate can be applied as muriate of potash; both sources must be applied during the rainy periods to allow the gradual nutrients release from fertilizers, to provide a continuing fresh source to the growing crop, and to increase the four macronutrient uptake by the coffee plantations.
- Polysulphate can be surface applied as a constituent of a fertilizer blend near the trunk twice or three times a year.
- 600 kg/ha Polysulphate is generally a suitable dressing for supplying all Ca and S required by any coffee crop and reach maximum productivity.

Estimated nutrient offtakes (removal) by the coffee harvest

Nutrient	Offtakes (kg/ton of green coffee beans - tgcb)	Offtakes (kg/ha)		
		2 tgcb/ha	3 tgcb/ha	4 tgcb/ha
N	31.0	62.0	93.0	124.0
P ₂ O ₅	5.2	10.4	15.6	20.8
SO ₃	44.3	88.6	132.9	177.2
K ₂ O	6.0	12.0	18.0	24.0
MgO	3.8	7.6	11.4	15.2
CaO	3.6	7.2	10.8	14.4

Adapted from Manual Cafetero (2013)

Nutrients supplied by Polysulphate fertilizer at the recommended dose (600 kg/ha) to productive coffee crop



Expected benefits

- Higher yields
- Improved fruit size and weight
- Better cup quality
- More balanced nutrition
- Increased nitrogen use efficiency