



PRODUCT INFO  
& DATASHEET

# MAGNESIUM

## *The importance of Magnesium in plant nutrition*

Magnesium is an essential element in plant growth, as the central core of the chlorophyll molecule in plant tissue. If Mg is deficient, the shortage of chlorophyll results in poor and stunted plant growth.

Magnesium also helps to activate specific enzyme systems. Enzymes are complex substances that build, modify, or break down compounds as part of a plant's normal metabolism.

Magnesium Oxide and Magnesium Carbonate are suitable for the production of a range of magnesium containing fertilisers. An important application is the stabilisation of ammonium nitrate prills, where the Mg-source (MgO or MgCO<sub>3</sub>) reacts with nitric acid to produce magnesium nitrate. The latter is in turn incorporated at low amounts in the ammonium nitrate product to protect its structural integrity.

Another important application is the use of MgO powders in NPK type fertilisers to either increase the Mg nutritional value or to neutralize excess acidity in the production process.

Magnesium oxide is also commonly used for direct fertilisation of magnesium deficient soils. Sap International Corporation (SICO) offers several grades (powder and granular) for direct application, or as a component to various fertiliser formulations.

### Survey of the SICO general Magnesium fertilisers range :

- Magnesium Carbonates min. 44.8% & 42.5% MgO. Available in granular or ground forms.
- Magnesium Chloride (47% MgCl<sub>2</sub>)
- Sico Magnit Gran: Magnesium Nitrate granular 2-4 mm, min. 98% - 9.5% N + 17% MgO, Origin: China
- Sico Magnit: Magnesium Nitrate crystals (11% N+ 15 MgO) fully water soluble fertiliser. Origin: China
- Sico Magnit-Sol: Magnesium Nitrate solution (8.1% Mg + 8.4% N or 6.2% Mg + 6.5% N). Origin: EC
- Sico Magnit-Sol Super: superior Magnesium Nitrate solution with high Mg and nitrogen contents. Origin: EC
- Magnesium Nitrate 65% solution
- Sico-MAG 16 Magnesium Sulphate heptahydrate min. 16% MgO (in various grades)
- Sico-MAG 32 Magnesium Sulphate anhydrous min. 32% MgO
- Magnolite 25: Magnesium Sulphate 25% MgO (18% water soluble MgO, 40% SO<sub>3</sub>)
- SICOMAG-48 MgO - SICOMAG-33 MgO - SICOMAG-60 MgO: granulated magnesium fertilisers on kieserite basis for optimal magnesium supply.
- SICO-CalMagNit, Calcium Magnesium Nitrate (CMN) 13.6%N + 6% MgO + 16% CaO (Origin: China)
- SICO-CalMagNit + CuB, Calcium Magnesium Nitrate (CMN) 13.6%N + 5% MgO + 17% CaO + Cu + B (Origin: China)
- Sico-Kieserite fertilisers
- Micro Top Magnesium Sulphate 15/31, 15% MgO + 31% SO<sub>3</sub> + 1% B + 1% Mn

We have furthermore many SICO Specialty fertilisers/formulations with high MgO content, eg. our **SICOFERT-CAL PLUS Granular NPK 12 + 0 + 0 + 17 CaO + 11 MgO + TE** is a very popular, well selling product.

Any information in this publication is believed to be accurate and is given in good faith, but is for the customer to satisfy himself of the suitability for his own particular purpose. No representation, warranty or guarantee is made to its accuracy, reliability or completeness.

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**SICO FERTILISERS**  
EVERY TIME THE *right* SOLUTION