



**PRODUCT INFO
& DATASHEET**

SICO[®]-DYNAMIC WORLD-CLASS CHELATED MICRONUTRIENTS & PLANT NUTRIENTS ETC

08/2023

SICO[®]FERTILISERS: EVERY TIME THE RIGHT SOLUTION

Innovative & dynamic superior German quality with unique know-how

As Belgium's probably most specialised supplier of micronutrients & plant nutrients we introduce now a new range of superior quality chelated micronutrients and phosphorus based products under our **SICO-DYNAMIC** brand, produced in cooperation with our German partners.

Our mission = customer support

Our mission is to help realising ideas for new projects or improved products. It is always our aim to work out the best practical solutions/options for you. Using our global suppliers network, the choice of dedicated starting materials, an extended analytical set-up or regulatory support: we stand close to your individual needs !

Our entire range of liquid products and formulations as well as a few granular specialties are manufactured in our German facilities, following our own proprietary processes of synthesis and refined analytics. Particular care is taken for the regular control of the raw materials and products low heavy metal limits.

We are successful in the formulation of chelated micronutrients as supplements for fertilisers, a focus we have for more than 25 years under different brands. Central element of our offered **SICO-DYNAMIC** is a full set of metal chelates and mixtures thereof in solid / microgranular form or concentrated solutions. This also includes unusual elements like Cobalt and Nickel. Our customers benefit from excellent properties, high analytical traceability and long-term stability as a quality promise.

PLANT NUTRIENTS

SICO-DYNAPHOS

Phosphorous-based products:

CAS 13598-36-2	Phosphorous acid Phosphonic acid – H ₃ PO ₃	White, odorless crystals ≥ 98.5 % or ≥ 99.0 %
CAS 13598-36-2	Phosphorous acid solution Phosphonic acid solution – H ₃ PO ₃	Adequous solution with 70 % content
	(N)PK solutions	Concentrated and odorless aqueous potassium phosphite solutions in variable composition and concentrations

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

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SICO-DYNACHEL - Chelated Micronutrient Solutions
(concentrated aqueous liquids, sprayable, miscible, stable) :

CAS 15137-09-4 CAS 24704-41-4 CAS 94233-08-6	Cobalt Nutrient Solution EDTA-Cobalt-Salt	Dark red, clear solution, 5 % or 7 % Cobalt
CAS 67989-88-2	Copper Nutrient Solution EDTA-Cu(NH ₄) ₂	Deep-blue, clear solution, 7 % or 9 % chelated Copper
CAS 85959-68-8	DTPA-Iron Diammonium Solution DTPA-Fe (NH ₄) ₂	Red-brown, clear solution, 6 % chelated Iron
CAS 68413-60-5	Iron Nutrient Solution EDTA-FeNH ₄ x NH ₄ OH	Red-brown ,clear solution, 7.3 % chelated Iron
CAS 68015-77-0	Manganese Nutrient Solution EDTA-MnK ₂	Pink, clear solution, 6 % chelated Manganese
CAS 14402-88-1	Magnesium Nutrient Solution EDTA-MgNa ₂	4.7 % / 7.0 MgO
CAS 15708-55-1 CAS 25481-21-4 CAS 947-740-9	Nickel Nutrient Solution EDTA-Nickel-Salt	Deep blue, clear liquid 5 % or 7 % Nickel
CAS 67859-51-2	Zinc Nutrient Solution EDTA-Zn(NH ₄) ₂	Colorless, clear solution, 6 % or 9 % chelated Zinc
	Boron Ethanolamine Solution (aqueous reaction product of Boric acid + Ethanolamine)	Clear solution with color fingerprint, 11 % Boron

SICO-DYNACHEL – EDTA-based single element chelates (solids) :

CAS 15137-09-4 CAS 24704-41-4 CAS 94233-08-6	EDTA-Cobalt-Salt EDTA-CoNa ₂	Pink, free flowing granulate: completely water soluble; 13.0 – 14.0 % Cobalt
CAS 61916-40-3	EDTA-Copper Disodium Salt EDTA-CuNa ₂ x 2H ₂ O	Blue, crystalline powder, 15 % Copper
CAS 15708-41-5	EDTA-Ferric Sodium Salt EDTA-FeNa x 3H ₂ O	Brownish-yellow, micro- Crystalline, 13 % Iron
CAS 14402-88-1	EDTA-Magnesium Disodium Salt EDTA-MgNa ₂ x 2H ₂ O	White, crystalline powder, 5.5 % Magnesium (9 % MgO)
CAS 73637-20-4	EDTA-Manganese Disodium Salt EDTA-MnNa ₂ x 2H ₂ O	Light pink, micro-granular powder, 13 % Manganese
CAS 15708-55-1 CAS 25481-21-4 CAS 947-740-9	EDTA-Nickel-Salt EDTA-NiH ₂	Blue, free flowing granulate 13.0 % - 14.0 % Nickel
CAS 73513-47-0	EDTA-Zinc Disodium Salt EDTA-ZnNa ₂ x 2H ₂ O	White, micro-granular powder, 15 % Zinc



SICO-DYNACHEL BIODEGRADABLE MICRONUTRIENTS

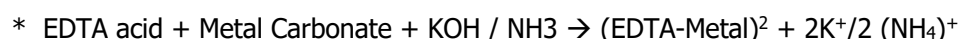
Your eco-friendly alternative for foliar and soil nutrition:

- SICO-DYNACHEL-Complex (liquids and solids)
- Bio-degradable Heptogluconate complexes
- Alkaline resistant (pH 6 – 12)
- High solubility, low phytotoxicity

Readily Biodegradable Glucoheptonate Complexes liquid		Microgranular Micronutrient Supplements	
SICO-DYNACHEL COMPLEX Fe L HGA-Fe solution	4.5% Fe	SICO-DYNACHEL COMPLEX Fe MG HGA-Fe	12.0% Fe
SICO-DYNACHEL COMPLEX Ca L HGA-Ca solution	8.4% CaO	SICO-DYNACHEL COMPLEX Cu MG HGA-Cu	13.0% Cu
SICO-DYNACHEL COMPLEX Mg L HGA-Mg solution	4.2% MgO	SICO-DYNACHEL COMPLEX Mg MG HGA-Mg	11% MgO
SICO-DYNACHEL COMPLEX Mn L HGA-Mn solution	5.0% Mn	SICO-DYNACHEL COMPLEX Mn MG HGA-Mn	13.0% Mn
SICO-DYNACHEL COMPLEX Zn L HGA-Zn solution	5.0% Zn	SICO-DYNACHEL COMPLEX Zn MG HGA-Zn	15.% Zn
SICO-DYNACHEL COMPLEX 101 L HGA- (Fe + Mn + Zn + Cu + B + Mo)		SICO-DYNACHEL COMPLEX 300 MG HGA- (Fe + Mn + Zn + Cu + B + Mo)	

Superior German Quality

* If not particularly requested, our range of liquid chelates are free from Sodium, Chloride, Nitrate or other unwanted by-products. Following the below reaction scheme only those alkaline cations are used that lead to the highest concentration, best stability and optimal bioavailability.



Easy Going

Just tell us your desired composition and we will do the rest for you !

Our team finds the optimal recipe and clarifies all regulator aspects to enable you to enter the market with your desired sales product as quickly as possible.

Tailor as for your needs

Protect yourself, your employees and our environment by using our eco-friendly EDTA-based microelement mixtures !

In addition to your product idea, the corresponding development and the production, we also offer the following services to complete the full set of documentation:

- MSDS and accurate classification according to CLP
- Design and print of customised product label
- Impact of the regulatory framework on the product and vice versa
- REACH registrations



BIOGAS ADDITIVES

With a broadly diversified portfolio of miscible micronutrients chelates and mixtures thereof, we offer you a maximum of flexibility with regard to your wishes and needs. Thereby, we incorporate our extensive market and product experience in order to be your competent and reliable partner.

INDIVIDUALITY IS OUR PRIORITY !

The dosing and handling of single element products with critical classification characteristics can be minimized by using ready-to-use microelement mixtures, which are available in concentrated solution or in solid form.

The minimum production quantity per order for individual mixtures starts at 1,000 ltr. Furthermore we offer various packaging alternatives like:

- cans (5 ltr, 10 ltr, 20 ltr), barrels (200 ltr), IBC (1,000 ltr), bulk
- and various solid packaging eg. 25 kg pe bags or 500-1,000 kg big bags

SICO-DYNACHEL MULTI ELEMENT MIXTURES FOR BIOGAS & AGRICULTURE

* Prominent examples of our tailored mixtures are unlimited combinations of our biogas nutrients solutions for improving biogas fermentation / methanisation performance (usually implements metals like: Co, Ni, Mo, Se + Fe + Mn + Cu + Zn in chelated form).

* But also "**Triple-Mix**" formulations, which usually contain metals as Cu, Mn, Zn, are applied as seed treatment products in a multitude of formulations.

SICO-DYNAMIC Co/Ni/Mo+Se Solution (1.3% Co + 4.1% Ni + 1.3% Mo + 0.66% Se)

Parameter	Value	Unit
Visual appearance	Blue to purple, clear liquid	
Cobalt (Co)	1.31 ± 0.2 16 ± 2	% w/w g/ltr
Nickel (Ni)	4.1 ± 0.5 50 ± 5	% w/w g/ltr
Molybdenum (Mo)	1.31 ± 0.2 16 ± 2	% w/w g/ltr
Selenium (Se)	0.66 ± 0.1 8 ± 2	% w/w g/ltr
Density (20° C)	1.275 ± 0.10	g/cm ³
pH (1% solution)	7.5 ± 1	