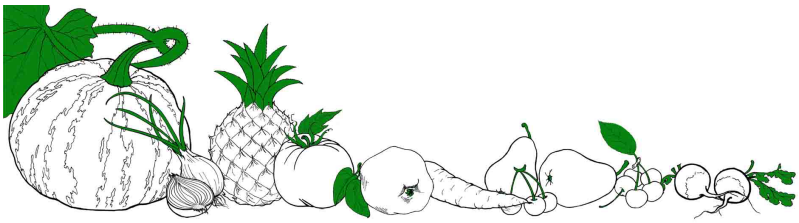

PRODUCT INFO & DATASHEET

SICO-APP NPK 18-58-0
AMMONIUM POLYPHOSPHATE (APP) soluble powder
- Contract manufactured in China -

Updated 09/2024

1. PRODUCT DESCRIPTION

Molecular formula : $(NH_4)_{n+2}P_nO_{3n+1}$
Cas No. : 68333-79-9
EINECS No. : 269-789-9
HS Code : 2835.3900

Polyphosphates (eg APP) differ slightly from the more commonly known orthophosphate fertilisers as MAP, DAP. However nearly all liquid fertilisers containing P are of the polyphosphate type.
Water soluble SICO-APP 18-58-0 can be used in production of NPK fertilisers where its performance will be better than MAP or DAP. SICO-APP 18-58-0 dissolves very well in water and the solution is clear.

PROPERTIES
Known as the most popular phosphorus source, MAP and DAP contain the 'orthophosphate' form that is single phosphate molecule which is uptaken by the plants. But is easily becomes locked up and unavailable to plants when applied to acidic or alkaline soil, causing huge phosphorus loss.
APP ammonium polyphosphate is not subject to this lock up due to its long chain structure. This structure will slowly react with the root secreted acid and soil microorganisms as well as other factors and then change to 'orthophosphate' as MAP, giving the effect of a slow release phosphorus source and much less phosphorus loss.
With high water solubility APP is an ideal fertiliser for water soluble and liquid fertilisers.

2. CERTIFICATE OF ANALYSIS (on batch dd 20/09/2024)

SICO-APP 18-58-0 (water soluble)		
Parameters	**Standard value**	**Test result**
Appearance	White/colorless powder	Powder
Total nutrient (N+P2O5)	76% min.	76.40 min.
Total Nitrogen (N)	17.5% min.	18.20%
Available P2O5	58.0% min.	58.20%
Polymerization Rate	65.0% min.	69.0%
Degree of Polymerization	2 – 5	
Solubility (in 100 ml water)	170 g min.	
Water insolubles	0.2% max.	not detected
Moisture (H2O)	0.5% max.	0.47%
pH Value	6 - 8	7.2
Particle size (beneath 35 mesh)	90.0% min.	95.00%
As	50 ppm max.	28 ppm
Pb	20 ppm max.	8 ppm
Cd	10 ppm max.	0.2 ppm

3. MAIN ADVANTAGES OF SICO-APP

- Polyphosphate is long chain structure, less fixation by soil than orthophosphate like MAP and DAP.
- Slow release source of phosphate provides controlled delivery of nutrient in soil to maintain even growth.
- Unique polymer characteristics and neutral pH value ensure phosphorus remains readily available in all types of soils.
- Ability to sequester and free insoluble trace elements in the soil making them available to the plant.
- Water solubility is not less than 170 g/100 ml water, ideal raw material to produce liquid fertiliser and water soluble fertiliser.

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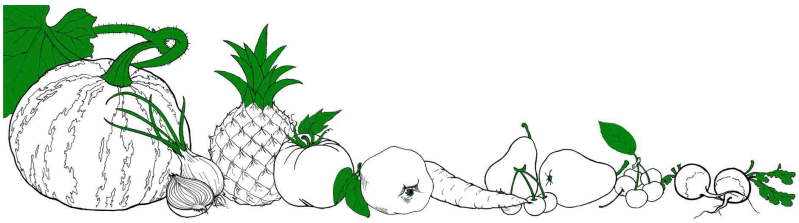
Tel. +32-3-309.06.51 Email : info@sico.be Website : www.sico.be



PRODUCT INFO
& DATASHEET

- Completely soluble and plant available delivering the required amount of nutrient with low application rates.
- Widely suitable for most of types of soil, plants and application ways.

4. ADVANTAGES OF USING SICO-APP 18-58-0 soluble powder

- Much higher degree of polymerization, is more than 60%, so much more stable than liquid APP so can be transported over long distances.
- SICO-APP 18-58-0 can be dissolved to 10-34-0 or 11-37-0. If you use our SICO-APP 18-58-0 to dissolve it into liquid 11-37-0 you need to add 1.7 ton of water, so finally you can get 2.7 ton of liquid APP 11-37-0.
- Very low level of heavy metals.
- Solid APP polymerization rate is much more stable than liquid ones because it is hydrolysed much slower.
- pH value is neutral, safe and stable during production and use.
- High N-P content in appropriate proportion, excellent synergistic effect and reasonable price.

5. STORAGE

in cool, dry, well ventilated place, protected from direct sunlight.

6. SHELF LIFE

up to 2 years, much longer than Russian or USA's (only half a year).

7. PACKING

- in 25 kg net wpp + pe bags, 21 MT/20' fcl (if loose bags) or 18 MT/20' fcl on heat treated (as per ISPM15) pallets)
- in big bags (with 4 loops) of 900 kg, without pallets, 18 MT/20' fcl
- in big bags (with 4 loops) of 800 kg, on HT (as per ISPM15) pallets, 16 MT/20' fcl

PS: We also supply SICO-APP 11-37-0 liquid in 1000 ltr IBC (+/- 1.4 MT), +/- 25.2 MT/20' fcl

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