



PRODUCT INFO  
& DATASHEET

## **SICO-APP NPK 17-59.5-0 Solid**

**Water soluble Ammonium Polyphosphate**  
**White crystalline powder or lumps**

**A new and innovative high P fertiliser with N**  
**Made in China – with Reach**

03/2024

### **1/ INTRODUCTION**

#### **\* What are polyphosphates and its advantages over MAP & DAP ?**

Known as the most popular phosphorus sources, MAP and DAP contain the 'orthophosphate' form, which is single phosphate molecule which is taken up by the plants, but it easily becomes locked and unavailable to plants when applied to acidic or alkaline soils, causing huge phosphorus loss.

APP in ammonium polyphosphate is not subject to this lock up due to its long chain structure. This structure will slowly react with the roots, secreting acid and soil microorganisms and then change into 'orthophosphate' as MAP, giving the **effect of a slow release phosphorus source and much less phosphorus loss.**

\* Molecular formula:  $(\text{NH}_4)_{n+2}\text{P}_n\text{O}_{3n+1n} < 20$   
CAS No: 68333-79-9  
EINECS No: 269-789-9  
HS Code: 2835.3990

Other name: Polyphosphoric acids, ammonium salts

Properties: Ammonium polyphosphate with short chain and low polymerisation degree, PH value is neutral. The fire-retardant mechanism is mainly based on the condensed phase, which has both flame-retardant and smoke suppression effects.

### **2/ PRODUCT SPECIFICATIONS**

Appearance: White crystalline, easy to absorb water and good solubility. The water solution is clear and neutral.

<b>SPECIFICATION</b>	<b>APP 17-59.5-0</b>	<b>TEST RESULTS</b>
P2O5 content (w/w)	≥ 59.5 %	59.93 %
N content (w/w)	≥ 17.0 %	17.52 %
pH value (10% water solution)	5.0 – 7.0	6.37
Solubility (at 25° C in 100 m water)	≥ 150 g	
Water insoluble (25° C)	≤ 0.02 %	
Arsenic	---	Not detected

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### **3/ CHARACTERISTICS**

1. Solid, stable property, convenient for transportation, storage and use.
2. pH value is neutral, safe and stable during production and use, good compatibility, not to react with other flame retardants and auxiliaries.
3. High P-N content, binary compound slow release fertiliser, appropriate proportion, excellent synergistic effect and reasonable price.
4. 100% water solubility. The solution is clear and neutral and eco-friendly.

### **4/ USAGE & APPLICATIONS**

1. Aqueous solution is used for the retardant treatment. To prepare 15-25% P-N flame retardant, used solely or together with other materials in the flameproof treatment for textiles, papers, fibers and woods, etc. To apply by autoclave, immersion or by spray both ok. If special treatment, it can be used to prepare high-concentration flameproof liquid to 50% to meet the flameproof requirement of special production.
2. It also can be used as flame retardant in water based fire extinguisher and wood varnish.
3. It is also used as a high concentration of binary compound fertiliser, slow release fertiliser with :

#### **\* Fertiliser applications:**

1. Suitable for all kind of applications: broadcast, fertigation, aerial, foliar
2. Suitable for crops as soybean, corn, wheat, rice, also for vegetables and fruits suitable for acidic fields or alkaline soils.

### **5/ STORAGE**

In dry and cool place, store dry, away from direct sunshine  
Shelf life is one year.

### **6/ PACKING**

25 kg bags, 24 MT/20' without pallets, 18 MT/20' on pallets.

### **REACH is available**

Methods of sampling and of analysis and analysis tolerances & deviations allowed as per E.C. regulations.  
[https://eur-lex.europa.eu/resource.html?uri=cellar:afaa9799-bcff-486f-8c45-d51052c754bf.0004.01/DOC\\_84&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:afaa9799-bcff-486f-8c45-d51052c754bf.0004.01/DOC_84&format=PDF)

The E.C. methods of sampling & analysis, allowed tolerances & regulations etc. can be found on internet  
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R1009>

Also tolerances on analysis are as per regulation (EC) nr. 2003/2003 of the European Parliament and of the Council of 13 October 2003 relating to fertilisers