



## TECHNICAL DATA SHEET

**Product Name:** 3,4-Dimethylpyrazole Phosphate (DMPP)

**CAS No.:** 202842-98-6

**Molecular Formula:** C<sub>5</sub>H<sub>11</sub>N<sub>2</sub>O<sub>4</sub>P

**Molecular Weight:** 198.13 g/mol

**EINECS No.:** 424-640-9

**EC Number:** 202842-98-6

### 1. Product Description

DMPP is a highly effective nitrification inhibitor used in modern agriculture to enhance nitrogen fertilizer efficiency. It delays the microbial conversion of ammonium (NH<sub>4</sub><sup>+</sup>) into nitrate (NO<sub>3</sub><sup>-</sup>), thereby reducing nitrogen loss through leaching and denitrification. This contributes to higher crop yields, better nitrogen utilization, and reduced environmental impact.

### 2. Typical Specifications

Parameter	Specification
Appearance	White to off-white powder
DMPP Content	≥ 99.0%
Moisture Content	≤ 0.5%
pH (1% solution in water)	6.0–8.0
Water Solubility	Fully soluble
Heavy Metals (Pb)	≤ 20 mg/kg
Arsenic (As)	≤ 2 mg/kg
Melting Point	Approx. 168–173°C

### 3. Mode of Action

DMPP specifically inhibits the activity of *Nitrosomonas* bacteria in soil, thereby slowing the oxidation of ammonium to nitrate. This stabilizes nitrogen in the ammonium form for a longer period, reducing nitrogen losses and enhancing fertilizer efficiency.

### 4. Applications

Urea, ammonium sulfate, and compound fertilizers (NPK)

Liquid fertilizers and urea solutions

Controlled release or slow-release fertilizer formulations

Suitable for use in crops such as corn, wheat, rice, vegetables, and fruits

## 5. Benefits

Increases nitrogen use efficiency (NUE)  
Reduces nitrate leaching and N<sub>2</sub>O emissions  
Enhances crop yield and quality  
Extends nitrogen availability in soil  
Environmentally friendly and safe

## 6. Packaging & Storage

Packaging	Standard
Packaging Type	25 kg fiber drums or bags
Shelf Life	24 months in original packaging
Storage Condition	Store in a cool, dry, ventilated area, away from sunlight and moisture

## 9. Supplier's Note:

**Jiangsu Khonor Chemicals Co., Limited** provides **high-quality, customizable DMPP** tailored for global markets.

With **ultrafine powder grades** optimized for **liquid calcium-magnesium supplements**, our product is particularly suited for **teen nutrition and advanced formulations**.

Whether you need a specific **Ca:Mg ratio, ultrafine mesh, or regulatory certification**, we are ready to support your product development and market expansion.

