

Technical data sheet

MONOAMMONIUM PHOSPHATE, FOOD GRADE

PRODUCT DESCRIPTION

Monoammonium phosphate (MAP) Food Grade is a crystalline product without anti-caking agents. A technical grade product is also available. MAP is also available with silica based anti-caking agent (MAP AC SI) or as a milled product with tricalcium phosphate based anti-caking agent (MAP AC T2) or with CAB-O-SIL (MAP AC Cab-O-Sil M5). Further information about these products is available on the respective product data sheets.

| | | | |
|----------------------|---|-------------------|-----------|
| Reg.No CAS: | 7722-76-1 | Reg.No EINECS: | 231-764-5 |
| Chemical formula: | NH ₄ H ₂ PO ₄ | Molecular weight: | 115 g/mol |
| E number/INS number: | INS 342 (i) | Abbreviation: | MAP |
| Synonyms: | FCC: Ammonium phosphate, monobasic Other: Ammonium dihydrogen phosphate; Monoammonium dihydrogen orthophosphate | | |

Production plant: Lutherstadt Wittenberg, Germany

PRODUCT SPECIFICATION

Product specification

| Parameter | Unit | Method | Specification | Typical value |
|-------------------------------|------|---------------|--------------------|---------------|
| Appearance | | AA-7-01-D-205 | white, crystalline | OK |
| P ₂ O ₅ | % | AA-7-01-D-302 | min. 61,3 | 61,5 |
| Assay | % | AA-7-01-D-302 | 96,0 - 102,0 | 99,7 |
| pH of 1% solution | | C-SOP-24 | 4,3 - 4,7 | 4,5 |
| Water insoluble matters | % | AA-7-01-D-202 | max. 0,2 | <0,05 |
| Fluorides (F) | ppm | C-SOP-68 | max. 10,0 | <10,0 |
| Arsenic (As) | ppm | C-SOP-23 | max. 1,0 | <0,1 |
| Lead (Pb) | ppm | C-SOP-69 | max. 1,0 | <0,1 |
| Mercury (Hg) | ppm | C-SOP-23 | max. 1,0 | <0,1 |
| Cadmium (Cd) | ppm | C-SOP-69 | max. 1,0 | <0,1 |

Other typical values

| Parameter | Unit | Typical value |
|---|-------------------|---------------|
| Ammoniacal nitrogen (NH ₃ -N) | % | >12 |
| Sulphates (SO ₄) ₂ - | ppm | <150 |
| Heavy metals as Pb | ppm | <10 |
| Bulk density | kg/m ³ | approx. 1050 |
| Chlorides (Cl) | ppm | <20 |

Theoretical values

| Parameter | Unit | Typical value |
|-----------------------------|--------------|---------------|
| Solubility in water (20 °C) | g/100g water | approx. 33 |

The solubility value given is the tabulated value of the maximum solubility at 20 °C under optimum conditions.

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PRODUCT APPLICATION

Monoammonium phosphate has many uses in food applications as well as technical industries where a higher degree of purity is required.

Examples include:

- Buffering agent for solutions with reduced sodium and potassium contents in pharmaceutical preparations and manufacture.
- Culture nutrient in pharmaceutical and fermentation products.
- Buffer, dough conditioner, processing aid and yeast nutrient in food production.
- Yeast nutrient in wine preparation. MAP is listed in the Codex Oenologique for this purpose.
- Nitrogen and phosphorus source in fertilizers.
- Acidity regulator as well as nitrogen and phosphorous source in animal feeds e.g. for cattle.
- Nitrogen source in flame retardants.

Use and dosage of this product in food applications in the EU must be according to the requirements of the Regulation 1333/2008. Use and dosage of this product in other countries may be subject to other legislation depending on the country of use. Please refer to legislation applicable to your country and products.

TRANSPORT AND STORAGE

Delivery:

The use of warehouse racking or single stacking of pallets is recommended.

Storage:

Must be stored in dry place and should be covered. It is important to keep the product from contamination which might cause that it will not be suitable for food industry purposes.

Shelf-life:

24 months from production date when stored properly.

LAWS AND REGULATIONS

- REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- The product is not an organism and therefore it cannot be subject to REGULATION (EC) No 1829/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 September 2003 on genetically modified food and feed
- This product is not classified as hazardous, no safety data sheet (SDS) is issued. Please refer to the SDS statement

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NUTRITIONAL DATA

| Nutritional data (USA) | Value per 100g | Unit | Nutritional data (EU) | Value per 100 g | Unit |
|------------------------|----------------|------|--|-----------------|------|
| Calories | 0 | kcal | Energy | 0 | kJ |
| Total fat | 0 | g | | 0 | kcal |
| of which saturated fat | 0 | g | Fats | 0 | g |
| of which trans fat | 0 | g | of which saturated fats | 0 | g |
| Cholesterol | 0 | mg | Carbohydrates | 0 | g |
| Total carbohydrate | 0 | g | of which sugars | 0 | g |
| of which dietary fiber | 0 | g | Fibers | 0 | g |
| of which sugar | 0 | g | Proteins | 0 | g |
| Protein | 0 | g | Salt* | 0,025 | g |
| Vitamine D | 0 | mg | *Salt equivalent content calculated using the formula: Salt = Sodium x 2,5 according to Regulation (EU) 1169/2011 | | |
| Ascorbic acid | 0 | mg | | | |
| Thiamin | 0 | mg | | | |
| Riboflavin | 0 | mg | | | |
| Niacin | 0 | mg | | | |
| Vitamine B6 and B12 | 0 | mg | | | |
| Sodium | max. 10 | mg | | | |
| Phosphorus | max. 27 000 | mg | | | |
| Potassium | max. 10 | mg | | | |
| Calcium | max. 10 | mg | | | |
| Iron | max. 10 | mg | | | |

ALLERGENS

| Allergen | Present | Possible cross contamination |
|--|---------|------------------------------|
| Cereals containing gluten, namely: wheat (such as spelt and khorasan wheat), rye, barley, oats and their hybridised strains and products thereof | NO | NO |
| Crustaceans and products thereof | NO | NO |
| Eggs and products thereof | NO | NO |
| Fish and products thereof | NO | NO |
| Peanuts and products thereof | NO | NO |
| Soybeans and products thereof | NO | NO |
| Milk and products thereof (including lactose) | NO | NO |
| Nuts (i.e. Almonds, Hazelnuts, Walnuts, Cashews, Pecan nuts, Brazil nuts, pistachio nuts, macadamia or Queensland nuts) and products thereof | NO | NO |
| Celery and products thereof | NO | NO |
| Mustard and products thereof | NO | NO |
| Sesame seeds and products thereof | NO | NO |
| Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/l expressed as SO ₂ | NO | NO |
| Lupine and product thereof | NO | NO |
| Molluscs and products thereof | NO | NO |

Technical data sheet

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STATEMENTS

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|---|
| Food Fraud and Food Defence |
| Producer is certified according to FSSC 22000. Food Fraud and Food Defence is implemented in our Food Safety System. |
| Contaminants |
| The product is neither subject to Regulation (EC) No 396/2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin, nor to Commission Regulation (EU) 2023/915 on maximum levels for certain contaminants in food. It is neither biocidal product, active substance nor treated article. It does not contain substances listed in Annex III to Regulation (EC) No 1107/2009 (Commission Regulation (EU) 2021/383 of 3 March 2021) and does not contain/is not produced using: mycotoxins, alcohol, bisphenol (A, S), dioxine, EDTA, enzymes, ethylene oxide, gluten, latex, palm oil, phthalates, nitrosamines, glycolethers. |
| Microbiological Data |
| The product is not conducive to microbial development or growth. The microbial innocuousness is supported by the properties of the raw materials, the manufacturing processes and the physicochemical properties of the finished product. |
| Nanomaterials |
| The product does not contain any nanomaterials or nanotechnologies. |
| Irradiation |
| The product does not undergo any treatment by irradiation and does not contain any irradiated ingredients. Based on the production process as well as on the type of raw materials used, the product is free of radioactive contamination. |
| Animal Testing |
| No kind of animal testing is conducted during any stage of production, development or testing of our products. |
| Transmissible Spongiform Encephalopathy |
| The product is produced from inorganic materials and does not contain any material of animal or biological origin. There is no risk the product contains material with any kind of TSE or prion disease. |
| Vegan, vegetarian |
| The product is suitable for vegan and vegetarian nutrition. |

CERTIFIED SYSTEMS

FSSC 22000 - ISO 14001 - ISO 50001 - ISO 9001 - KOSHER - HALAL - SEDEX