

# Food Grade Phosphoric Acid Product specification

(REVISED – 14/12/2013)

## Formula:

H<sub>3</sub>PO<sub>4</sub> (Ortho).

## Classification:

Customs tariff: 28.092000 CAS No.: 7664-38-2.  
EINECS No.: 231-633-2 EC Classification: E338

## Method of Manufacture:

The **ROTEM AMFERT NEGEV** Food Grade Acid is manufactured by cleaning process of wet process phosphoric acid, followed by concentration to 93% H<sub>3</sub>PO<sub>4</sub> and then dilution according to the specifications and requirements of the customers.

## Appearance:

The Food Grade Acid is a water clear, odorless, slightly viscous liquid.

## Physical Data:

H <sub>3</sub> PO <sub>4</sub> Conc. %w/w	P <sub>2</sub> O <sub>5</sub> Conc. %w/w	Freezing Point* °C	Density gm/ml @ 25°C	Ton of Acid Containing 1 Ton P <sub>2</sub> O <sub>5</sub>	M <sup>3</sup> of Acid Containing 1 Ton P <sub>2</sub> O <sub>5</sub>
93	67.39	27	1.791	1.484	0.828
85	61.59	21	1.685	1.624	0.964
80	57.97	0	1.625	1.725	1.061
75	54.34	-20	1.574	1.840	1.169

\* The real freezing point is actually lower since the acid has supercooling properties which reduces crystallization temperature.

\*\* The density increases with decreasing temperature, at a rate equal to 0.00077 g/ml/°C.

## Concentration:

Acid concentration can vary between 25% - 92% H<sub>3</sub>PO<sub>4</sub>, as agreed with the customer.



**Analysis of Impurities:**

Element	Unit	Typ.	Max.
Fe	ppm	3.0	5.0
Cu	ppm	0.2	0.7
Ca	ppm	5.0	10.0
Cd	ppm	0.1	0.2
Ni	ppm	0.2	0.5
As	ppm	0.4	0.5
Cr	ppm	0.5	1.0
V	ppm	0.5	1.0
Hg	ppm		0.1
Pb	ppm	0.2	0.3
Fluoride	ppm	8	10
Sulphate	ppm	100	109
Volatile acids	ppm		<10
Nitrate	ppm		<5
Chloride	ppm	4	7
<b>Total Heavy metals</b>	<b>ppm (as Pb)</b>		<b>&lt;5</b>

**Uses:**
**1. Chemical -**

Manufacture of phosphate salts, STTP, and other alkaline phosphates, both technical and food grade. Manufacture of pigments. Production of Active Carbon.

**2. Metal Treatment -**

Manufacture of phosphatizing compounds for rust proofing, paint, electro-chemical polishing of stainless-steel, aluminium and copper alloys, pickling and metal cleaning.

**3. Food -**

Liquid cleaners, acidulation of soft drinks, particularly Cola; manufacture of cottage and processed cheese, fats and shortenings; pH control in the manufacture of imitation jellies; clarification of fruit juices after liming processes; edible oil refining.



**4. Fermentation -**

Nutrient for the production of yeast; control of bacteria growth in selected processed foods; sugar refining.

**5. Petroleum/Plastics -**

Polymerization of propylene, catalyst to enhance the setting action of synthetic resins.

**6. Water Treatment -**

Treatment of drinking and waste water, descaling of boilers and heat exchangers, water treatment of cooling towers and boilers.

**7. Ceramics and others -**

Manufacture of fire bricks, fire retarding agents, ceramic colors, dyeing, leather processing, pet food.

**8. Fertilizers -**

Production of foliar and other special liquid fertilizers.

**Shelf life:**

Two years

**Delivery:**

- A. Bulk vessels from our Terminals in Ashdod, Israel, and Amsterdam, Holland
- B. Truck, rail tanks and ISO containers serviced from our terminals in Israel, Europe, and North America.
- C. 1000 liter IBC's in 20' FCL.
- D. 25/30/60/220 liter HDPE polydrums in 20' FCL.

**Certifications:**

- **ISO-9001**
- **ISO-14001**
- **OHSAS-18001**
- **FSSC ISO-22000-1**
- **HACCP**
- **GMP**

**Product conforms to:**

- **FCC 8**
- **European Regulation 2012/231/EU**

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