



## MATERIAL SAFETY DATA SHEET

**PHOSPHORIC ACID PURE**

## European (EU) Version

According to Regulation 1907/2006/EC, Article 31

MSDS No:2-800-26-004-EU

Date of Issue: June 07, 2009

Revision: 7

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**1. Chemical Product and Company Identification****1.1. Product Identification:**

<b>Product Name:</b>	Phosphoric Acid pure.
<b>Chemical name:</b>	Phosphoric Acid.
<b>Synonyms:</b>	Ortho Phosphoric Acid.
<b>Chemical formula:</b>	H <sub>3</sub> PO <sub>4</sub>
<b>CAS number:</b>	7664-38-2
<b>Chemical family:</b>	Inorganic acid.
<b>Type of product end use:</b>	Food additive, chemical industry, cleaning industry, other industrial uses.

**1.2. Company Identification:**

**Manufacturer Name & Address:** Rotem Amfert Negev Ltd.  
PuriPhos Division  
Mishor Rotem Plants  
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Israel

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**2\*. Hazards identification**

Phosphoric Acid pure Grade is colorless, odorless liquid  
 Contact with reactive metals and alloys may evolve highly flammable hydrogen gas.  
 Danger of explosion if hydrogen gas evolved in confined area. Do not mix with alkalis, metals, bleach and ammonia.

- Eye Contact:** Corrosive. Causes burns, tissue destruction, permanent damage to the cornea, blindness.
- Skin Contact:** Causes irritation, burns.
- Ingestion:** Can cause nausea, vomiting, diarrhea, corrosion, burns to mouth and esophagus, abdominal pain, chest pain, shortness of breath, seizures, death.
- Inhalation:** Mist may cause irritation to nose, throat and lungs, shortness of breath,
- Chronic Effects:** The product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

**3\*. Composition / information on ingredients**

COMPONENT	CAS NO.	WEIGHT %	ANNEX I INDEX	EC NO.	CLASSIFICATION*
Phosphoric Acid	7664-38-2	75 - 93	015-011-00-6	231-633-2	C, R34

\*Full text of Classification and R-phrases are in heading 16

**4. First-aid measures**

- Eye contact:** Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 15 minutes. Get medical attention immediately. Continue intermittent irrigation until medical attention is obtained.
- Skin contact:** Immediately wipe excess material off skin with a dry cloth, and then wash skin with plenty of soap and water for at least 15 minutes. Get medical attention immediately. Remove contaminated clothing and shoes while washing. Wash contaminated clothing and shoes before re-use or discard if it is not possible to clean them thoroughly.
- Inhalation:** In case of breathing fumes released from heated material, remove person from immediate source of exposure to fresh air and assure that the victim is breathing.  
 If breathing is difficult, administer oxygen or apply artificial





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respiration, if available.  
Get medical attention immediately.

**Ingestion:** If swallowed, wash mouth thoroughly with plenty of water and give water to drink. Get medical attention immediately.  
NOTE: Never give an unconscious person anything to drink.

**5. Fire - fighting measures**

**Extinguishing media:** Not combustible. Use extinguishing media appropriate to surrounding fire conditions. Do not use chemical extinguishers or foams or attempt to smother the fire with steam or sand.

**Fire fighting procedure:** Call the fire brigade. Avoid breathing the fumes as they may be toxic. Stand upwind of the fire.  
In closed stores, provide fire-fighters with the approved self-contained breathing apparatus in positive pressure mode and full protective closing.  
Prevent the dissolved material to run into drains or watercourses.

**Special protective equipment for fire-fighters:** Self-contained breathing apparatus, full protective clothing.

**Unusual fire and explosion hazards:** Emits toxic fumes of phosphorus oxides (POx).  
Hydrogen may form upon contact with metals (danger of explosion!).

**6. Accidental release measures**

**Personal precautions:** Wear self-contained breathing apparatus, chemical safety goggles or face shield, rubber boots, liquid tight protective clothing and heavy rubber gloves.

**After spillage / leakage:** Dike and salvage, absorb with liquid acid absorbent or neutralize. soda ash and slake lime are neutralizing agents. Collect in a labeled container for safe disposal according to the regulations of the local authority.  
Remainings of the product dilute cautiously with water and handles as mentioned before.

**Environmental precaution:** Evacuate area. Take care to avoid contamination of drains and watercourses.





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**7. Handling and storage****Handling:**

Do not inhale vapors.  
Liquid phosphoric acid will attack some forms of plastics.  
Avoid contact of the product with strong bases.  
When handling the product avoid bodily contact and use appropriate personal protective equipment.

**Storage:**

Store in a dry, cool, well-ventilated area away from incompatible materials as specified in section 10, "materials to avoid" of this MSDS.

Keep containers tightly closed.

**8. Exposure controls / personal protection****Exposure limits:****TLV –TWA:**TLV/TWA – 1 mg/m<sup>3</sup> (OSHA).TLV/STEL – 3 mg/m<sup>3</sup> (OSHA, NIOSH).**Ventilation Requirements:**

Keep in ventilated area, avoiding excessive accumulation of vapors.  
Maintain ventilation sufficient to keep TLV-TWA below 1 mg/m<sup>3</sup>.

**Personal Protection****Respiratory Protection:**

For severe mist use approved acid gas respirator with full face piece.

**Hand Protection:**

Rubber, neoprene or other resistant elastomer gloves.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374.

**Eye protection:**

Use chemical safety glasses with side shields or face shields.

**Skin and Body Protection**

Where contact is likely to occur, wear, rubber apron and boots.

**Industrial hygiene:**

Avoid breathing vapors. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

Do not eat, drink or smoke until after-work showering and changing clothes.





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**9. Physical and chemical properties**

<b>Appearance:</b>	Light Greenish Liquid
<b>Odour:</b>	Odorless
<b>pH water solution (23 g/liter) ;</b>	<1
<b>Boiling point/range:</b>	138 <sup>0</sup> C to 171 <sup>0</sup> C <sup>(1)</sup>
<b>Decomposition temperature:</b>	Changes to pyrophosphoric acid at 200 <sup>0</sup> C
<b>Melting range, °C:</b>	-18 <sup>0</sup> C to 27 <sup>0</sup> C <sup>(1)</sup>
<b>Flash point:</b>	Not Available
<b>Flammable/Explosion limits:</b>	Not Available
<b>Auto-ignition temperature:</b>	Not Available
<b>Explosive Properties:</b>	Not Available
<b>Oxidizing Properties:</b>	Not Available
<b>Vapor pressure:</b>	<1 mm to 6.8 mm Hg <sup>(1)</sup>
<b>Relative (Bulk) density, g/cm<sup>3</sup>:</b>	1.574 to 1.791
<b>Solubility in water (25 C):</b>	Fully Soluble

(1) Depending on H<sub>3</sub>PO<sub>4</sub> concentration**10. Stability and reactivity**

<b>Stability:</b>	Stable under normal handling and storage conditions (see section 7).
<b>Materials to avoid:</b>	Alkalines, metal oxides, metals, metal alloys, and organic matters, fluorine, strong reducing agents, bases, sulfur trioxide, phosphorus pentoxide,.
<b>Conditions to avoid:</b>	Strong heating.
<b>Hazardous reactions / decomposition products:</b>	Phosphorus oxides (POx).
<b>Hazardous polymerization:</b>	Not likely to occur when stored under proper conditions.





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**11. Toxicological information**

<b>Oral toxicity to Rat - LD50</b>	1530 mg/kg	(For pure phosphoric acid)
<b>Dermal toxicity to Rat - LD50</b>	2740 mg/kg	(For pure phosphoric acid)
<b>Inhalation toxicity to Rat – LC 50</b>	850 mg/kg/1H	(For pure phosphoric acid)
<b>Skin Irritation, Rabbit</b>	No data Available	
<b>Eye Irritation, Rabbit</b>	No data Available	
<b>Skin Sensitization, guinea pigs</b>	No data Available	
<b>Carcinogenicity:</b>		
<b>IARC</b>	Not listed	
<b>NTP 11th Report on Carcinogens</b>	Not listed	
<b>OSHA</b>	Not listed	

**12. Ecological information**

<b>Mobility:</b>	Water soluble phosphates, are translocated in the soil over a very short period of time, and being immobilized.
<b>Persistence / Degradability:</b>	No specific biodegradation test data located. While acidity of this material is readily reduced in natural waters, the resulting phosphate may persist indefinitely or incorporate into biological systems and contribute to eutrophication.
<b>Bioaccumulation:</b>	No data available
<b>Ecotoxicity:</b>	No data available

**13. Disposal considerations**

<b>Waste disposal:</b>	Dispose to an authorized waste facility following the instruction in section 6 of this MSDS. Prevent discharging of waste into watercourses and drains. Waste material must be treated and disposed accordance to local regulations.
<b>Contaminated packaging:</b>	Disposal of empty or contaminated packaging material should be performed in accordance to local regulations.





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**14. Transportation information**

<b>UN Number</b>		<b>1805</b>
<b>ICAO/IATA</b>	UN No:	1805
	Hazard Class:	8 - Corrosive
	Label:	Corrosive (8)
	Packaging group:	III
	Proper shipping name:	Phosphoric acid, solution
<b>RID/ADR</b>	UN No.	1805
	Hazard Class	8 C1 Corrosive substances
	Packaging group:	III
	Label	8
	Proper shipping name:	Phosphoric acid, solution
<b>IMDG</b>	UN No:	1805
	Hazard Class.:	8 - Corrosive
	Danger label	8
	Packaging group:	III
	Danger Label Mode No:	
	Proper shipping name	Phosphoric acid, solution

**15. Regulatory information**

<b>EEC Directives</b>	This chemical substance is classified according to the Annex I of Directive 67/548/EEC.
<b>EC No.</b>	231-633-2
<b>ANNEX I INDEX</b>	015-011-00-6
<b>Labeling:</b>	

C	Corrosive
R 34	Causes Burns
S 1/2	Keep locked and out of the reach of children.
S 26	In case of contact with eyes rinse immediately with plenty of water and seek medical advice.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection
S 45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 60	This material and its container must be disposed of as hazardous waste.



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**Inventory Status**

<b>Inventory</b>	<b>Status</b>
United States (TSCA)	Listed
Canada (DSL)	Listed
Europe (EINECS/ELINCS)	Listed
Australia (AICS)	Listed
Japan (ENCS)	Listed
New Zealand (NZIoC)	Listed

**16. Other information****Text of R Phrases mentioned in Section 3**

R34 – Causes burns

**Reason for revision:**

Reversed paragraphs 2 and 3 to comply with REACH regulation and added reference to the regulation in the title.

**Key Legend Information:**

ACGIH	-	American Conference of Governmental Industrial Hygienists
OSHA	-	Occupational Safety and Health Administration
TLV	-	Threshold Limit Value
PEL	-	Permissible Exposure Limit
TWA	-	Time Weighted Average
STEL	-	Short Term Exposure Limit
NTP	-	National Toxicology Program
IARC	-	International Agency for Research on Cancer
NDSL	-	Non-Domestic Substances List
NA	-	Not available





ROTEM AMFERT NEGEV LTD.

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**MSDS prepared by HSE Specialist according to Commission Directives 90/155/EC and 2001/58/EC.**

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**End of safety data sheet**