



Chemical and Agricultural Industry, Research S.A.

## SAFETY DATA SHEET

### Liquid fertilizer (8-24-0)

According to the Regulations 453/2010EC, 2015/830, 1907/2006 (REACH) & 1272/2008 (CLP)

Revision date: 4-12-2020  
Edition: 1.3

#### 1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

##### 1.1 Product identifier

Designation	High phosphorus NP liquid fertilizer. EC fertilizer
Trade name	<b>Liquid fertilizer (8-24-0)</b>
Product identifier	Phosphoric acid CAS no:7664-38-2 : H314

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Product Use	Foliar or soil applied fertilizer, for the early stages of vegetables and ornamentals, open-field crops and trees.
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##### 1.3. Details of the supplier of the safety data sheet

VIORYL s.a 28 <sup>th</sup> km Athens-Lamia National Road,19014 AFIDNES	Tel.	+30 22950-45100
	Fax :	+30 22950 45250
	Email	<a href="mailto:agrochemical@vioryl.gr">agrochemical@vioryl.gr</a>

- 1.4 Emergency telephone number:** In case of poisoning call:  
(Cyprus) Poisoning center: 1401  
(Greece) Poisoning center: +30 210 7793777  
(Greece) National emergency center: 166

#### 2. HAZARDS IDENTIFICATION

##### 2.1. Classification of the mixture

The product is classified as hazardous according to the Regulation (EC) 1272/2008(CLP) and subsequent amendments and supplements).

##### 2.1.1. Regulation (EC) 1272/2008(CLP) and following amendments and adjustments.

Skin irrit, category 2, H315

Eye irrit. Category 2: H319

##### 2.2. Label elements

Hazard labelling according to the Regulation (EC) 1272/2008 (CLP).

##### Hazard pictograms



Signal word: Warning

##### Hazard statements:

**H314:** Causes severe skin burns and eye damage.

##### Precautionary statements - prevention:

**P405+P102** Keep it locked and out the reach of children.

**P260** Do not breathe dust/fume/gas/mist/vapours/spray.

**P264** Wash hands thoroughly after handling.

**P280:** Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statements- response:**

**P301+P330+ P331** IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

**P303+P361+P353** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

**P304+P340** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

**P310:** Immediately call a POISON CENTER or doctor/physician.

**P305+ P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3. **COMPOSITION/INFORMATION ON INGREDIENTS**

3.1 **Substances:** not applicable

3.2 **Mixtures:**

Solution of simple fertilizers.

Hazardous ingredients:	% (w/w)	EC Classification
		Regulation 1272/2008 EC
Phosphoric acid (H <sub>3</sub> PO <sub>4</sub> ) 85% CAS no 7664-38-2  REACH registration number 01-2119485924-24-0036	> 25	GHS05, Danger Met. Corr. 1 H290 Skin corr. Category 1B H314

4. **FIRST AID MEASURES**

4.1 **Description of first aid measures**

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2 cupfuls of milk or water.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air.

4.2. **Most important symptoms and effects, both acute and delayed**

**Following eye contact:**

Eye contact may cause irritation, discomfort, tearing, swelling and redness.

Possible slight transitory redness and swelling. Delayed effects are not expected.

**Following skin contact:**

The product is not expected to cause prolonged or significant skin irritation. Delayed effects are not expected.

**Following ingestion:**

Ingestion may produce irritation of the mucous membranes as demonstrated by signs and symptoms of mouth membrane irritation, nausea and diarrhoea. Delayed effects are not expected.

4.3. **Indication of immediate medical attention and special treatment needed**

**Notes for the physician.** There is no specific antidote. Treat symptomatically. Call a Poison Centre.

5. **FIRE FIGHTING MEASURES**

5.1. **Suitable extinguishing Media:** Water, Carbon dioxide, foam, dry chemical.

5.2. **Special hazards arising from the substance or mixture**

**If product is involved in the fire**

When strongly heated it can decompose giving off phosphorus and nitrogen oxides.

**Unusual Fire and Explosion Hazards:** none

### 5.3. Advice for firefighters

**Special Firefighting Procedures:** Do not enter any confined fire space without proper protective equipment.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency and appropriate protective clothing. Clothing conforming to EN469 is sufficient with fires involving the product.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel:

Wear appropriate personal protective equipment.

#### 6.1.2. For emergency responders:

Wear suitable personal protective equipment.

### 6.2. Environmental precautions

Keep product away from ground and surface waters.

### 6.3. Methods and material for containment and cleaning up

**Small spill:** Soak up spilled material with paper towels and discard in trash.

**Large spill:** Liquid spills on floor or other impervious surfaces should be contained and absorbed with attapulgite, bentonite or other absorbent clays. Never mix the product with sawdust and various combustible or organic substances.

Collect contaminated absorbent, place in plastic or plastic-lined metal drum and dispose of in accordance with instructions provided under Section 13.

Leaking containers should be separated from non-leakers and either the container or its contents transferred to a drum or other non-leaking container and disposed of in accordance with instructions provided.

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Read the safety precautions. Ensure adequate ventilation in the areas where the product is stored and used. Avoid unnecessary inhalation of the product.

Avoid contact with bare skin. Wear personal protective equipment. When using, do not eat, drink or smoke. Remove contaminated clothing and protective equipment after work. Wash your hands thoroughly after using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in original container and out of the reach of children.

In the store, make sure that the product is not close to hay, straw, wheat, oils and other materials that could support fire. Keep away from sources of heat or fire.

### 7.3. Specific end use(s)

The product is an EC fertilizer. Advise the label information.

## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

### 8.1. Control parameters

#### Occupational exposure limits

#### Ingredients with limit values that require monitoring at the workplace:

Ortho Phosphoric Acid Cas no. 7664-38-2

IOELV (EE) *Short-term value:* 2 mg/m<sup>3</sup>

*Long-term value:* 1 mg/m<sup>3</sup>

PEL (USA) 1 mg/m<sup>3</sup>

REL (USA) *Short-term value:* 3 mg/m<sup>3</sup>

*Long-term value:* 1 mg/m<sup>3</sup>

TLV (USA) *Short-term value:* 3 mg/m<sup>3</sup>

Long-term value: 1 mg/m<sup>3</sup>  
 AGW (Germany) Long-term value 2 mg/m<sup>3</sup>  
 2 (I), DFG, EE, AGS, Y

DNEL

For workers:

Long-term-local effects (inhalation) DNEL: 1 mg/m<sup>3</sup>

Acute local effects (inhalation) DNEL: 2 mg/m<sup>3</sup>

Long-term-systemic effects (inhalation): 10.7 mg/m<sup>3</sup>

For general population:

Long-term-local effects (inhalation) DNEL: 0.36 mg/m<sup>3</sup>

Long-term-systemic effects (oral) DNEL: 4.57 mg/kg bw/day

PNECs

Not applicable



Phosphoric acid toxicity is related to its acidic nature. A generic PNEC (water) cannot be derived as the effects are highly depending on the pH of the receiving water and its buffer capacity highly variable.

## 8.2. Exposure controls

### 8.2.1 Appropriate engineering controls

Provide the required ventilation where necessary. Engineering controls should be used to eliminate worker and environmental exposure in the areas where the product is handled, transported, loaded, stored and used.

### 8.2.2. Personal protection equipment

<p><i>Eyes protection:</i> Wear Safety glasses, splash proof goggles (<i>EN 166</i>). Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area.</p>	
<p><i>Hand protection:</i> Wear impervious gloves (Good resistance gives: Nitrile rubber (NBR) (<i>0.4 mm</i>)). Take advice to your gloves' supplier. Replace damaged gloves.</p>	
<p><i>Skin and body protection:</i> Suitable protecting clothes.</p>	
<p>Respiratory protection only in cases that product is in fire.</p>	

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Physical State: liquid  
 Color: colorless  
 Odor: odorless  
 pH: 2.5  
 Specific Gravity/Density: 1.4 kg/m<sup>3</sup>.  
 Explosive properties Not explosive  
 Oxidizing properties Not classified as oxidizing material

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

No hazardous reactions are expected.

### 10.2. Chemical stability

The product is stable when stored in original container under normal conditions of storage.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

### 10.4. Conditions to avoid

Heating above 80°C.

### 10.5. Incompatible materials

Stable under normal temperatures and pressures.

Do not store in metallic containers. Avoid alkaline materials.

### 10.6. Hazardous decomposition products

Combustion may yield carbon monoxide and dioxide, phosphorus and nitrogen oxides. Do not breathe smoke or fumes, Wear appropriate protective equipment.

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

The product has not been tested. The data have been derived from the properties of the main components.

The dangerous nature of the product relates to the caustic effect of phosphoric acid on mucous membranes, eyes and skin. However it is diluted in water within the product.

**Data for Orthophosphoric acid Cas no 7664-38-2 (REACH registration dossier)**

**LD/LC50 values relevant for classification:**

**Acute toxicity Dermal**

Effect level > 2000 mg/kg bw

New Zealand albino rabbits, when exposed dermally at a dose level of 2.0 g/kg bw, produced severe eschar formation, but no mortality.

**Primary irritant effect:**

Skin corrosion/irritation: Causes severe skin burns.

Serious eye damage/irritation: Causes severe eye damage.

**Respiratory or skin sensitization**

No sensitizing effects known.

Phosphoric acid is classified as skin corrosive, thus a further assessment for sensitization was not necessary.

**Additional toxicological information:**

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**Carcinogenicity:**

no data available

(no carcinogenicity study needs to be performed as this substance is not genotoxic)

**· Toxicity for reproduction:**

no classification is necessary

reproductive toxicity: NOAEL≥500 mg/kg bw/day ; rat; oral (OECD 422)

developmental toxicity: NOAEL≥410 mg/kg bw/day ; rat; oral

maternal toxicity: NOAEL≥410 mg/kg bw/day ; rat; oral (equivalent to OECD 414)

**· STOT-single exposure** Based on available data, the classification criteria are not met.

### **Toxicokinetics, metabolism and distribution**

Phosphoric acid is not considered to have bioaccumulative potential as it is highly soluble in water and phosphate levels in the body are regulated via homeostasis.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

The product has not been tested. The data have been derived from the properties of the main components.

**Data for Orthophosphoric acid CAS no 7664-38-2**

**Aquatic toxicity:**

Phosphoric acid toxicity is related to its acidic nature and, therefore, is more related to concentration than to dose.

EC50/48 h (static) >100 mg/L (Daphnia magna) (OECD 202, freshwater)

EC50/72 h (static) >100 mg/L (algae) (OECD 201, freshwater, 72 h NOEC=100 mg/L)

median lethal pH 96h 3-3,25 (Bluegill fish)

Fish mortality is caused by low pH values

### 12.2 Persistence and degradability

This fertilizer degrades in aquatic reservoirs and soil. Phosphoric acid dissociates in water into H3O+, H2PO4-, HPO4- ions, which cannot be further degraded.

Nitrogen follows the natural nitrification/ denitrification cycle to give nitrogen or nitrogen oxides. Phosphoric acid dissociates in water into  $H_3O^+$ ,  $H_2PO_4^-$ ,  $HOPO_4^{2-}$  ions, which cannot be further degraded.

### 12.3 Bioaccumulative potential

Components of this product are highly water soluble and dissociating. Phosphoric acid dissociates in water into  $H_3O^+$ ,  $H_2PO_4^-$ ,  $HOPO_4^{2-}$  ions, which are ubiquitous in the environment. Bioaccumulation is not relevant for such highly soluble and dissociating substances.

### 12.4 Mobility in soil

Components of this product are highly water soluble and dissociating. Nitrogen is mobile. When spilled onto soil, phosphoric acid will infiltrate downward and will be partially neutralized. Phosphorus then immobilizes.

### 12.5 Results of PBT and vPvB assessment

**PBT:** No assessment is required for inorganic substances.

**vPvB:** No assessment is required for inorganic substances.

### 12.6 Other adverse effects:

No other effects to be mentioned.

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Dispose of in a manner consistent with local regulations. Small amounts may be diluted with plenty of water and washed away. Dispose of large amounts in accordance with Local Authority requirements, or as a fertilizer with spreading no more than 200kg/hectare on open fields.

#### **Packaging materials:**

Empty contaminated packaging and clean. They may be recycled after proper cleaning.

**Recommended cleansing agents:** Water.

## 14. TRANSPORT INFORMATION

Classified according to the criteria of the following international transport agreements, codes, regulations and instructions:



### 14.1 Land transport ADR/RID

ADR/RID Class: 8

UN number: 1805

Packaging group: III

Phosphoric acid solution

### 14.2 Maritime transport IMDG

IMDG Class: 8

UN number: 1805

Packaging group: III

Phosphoric acid solution

### 14.3 Air transport ICAO-TI and IATA-DGR

ICAO/IATA Class: 8

UN number: 1805

Packaging group: III

Phosphoric acid solution

## **15. REGULATORY INFORMATION**

### **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Regulation (EC) No 1005/2009**, about substances that deplete the ozone layer: Not applicable

**Regulation (EU) No 649/2012**, in relation to the import and export of hazardous chemical products: Not applicable

**Seveso III**: Not applicable

**Regulation (EC) No 1107/2009** of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC.

This product has been evaluated for safety and risks concerning health and environment with the principles of the above mentioned Regulation.

**Regulation (EC) 1272/2008** 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.

This product is classified according to the above mentioned Regulation.

**Regulation (EC) No 1907/2006 (REACH)** Candidate substances for authorization: not applicable  
Substances included in Annex XIV of REACH ("Authorization List") and sunset date: Not applicable

**Regulation (EC) 1907/2006** of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency.

This product contains only ingredients that are either pre-registered, registered, excluded from registration or considered to be registered in accordance with Regulation (EC) 1907/2006 (REACH).

## **16. OTHER INFORMATION**

### **16.1. Indication of changes:**

The contents of the following section(s) alter and supersede those in the previous version:

1,2,3,4,5,6,7,8,9,10,11,12,13,14,15 & 16. All parts updated in accordance to the Regulation (EU) 2015/830 amending Regulation (EC) No 1907/2006.

### **16.2. Full text of H - Statements**

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

### **16.3. Further information:**

According to Regulation (EU) 2015/830 amending Regulation (EC) No 1907/2006, the information in this safety data sheet is based on the properties of the materials known to VIORYL S.A. at the time the data sheet was issued. The safety data sheet is intended to provide information for a healthy and safety assessment of the material and the circumstances, under which it is packaged, stored or applied in the workplace. It is the user's responsibility to determine conditions of safe use of the product, according to the information provided in this safety data sheet.

This document is not intended for quality assurance purposes.

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