

Safety data sheet

according to 1907/2006/EC, Article 31

Printing Date: 06.07.22

Revision: 06.07.22

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**



- **Trade name:** pH-DOWN
- **Registration number** 01-2119485924-24
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU1 Agriculture, forestry, fishery
- **Product category** PC12 Fertilisers
- **Application of the substance / the mixture** pH adjustment.
- **Uses advised against** Processes involving the use of incompatible substances - refer to section 10.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Indica Nutrients Ltd
e-mail: info@indicanutrients.com

- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:** Tel:

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

- Skin Corr. 1B H314 Causes severe skin burns and eye damage.
- Eye Dam. 1 H318 Causes serious eye damage.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms** GHS05

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Phosphoric acid

· **Hazard statements**

H314 Causes severe skin burns and eye damage.

· **Precautionary statements**

- P102 Keep out of reach of children.
- P260 Do not breathe mist/vapours/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** An aqueous solution of orthophosphoric acid with multifunctional additives.

- **Dangerous components:**

CAS: 7664-38-2	Phosphoric acid	☞ Skin Corr. 1B, H314	25-85%
EINECS: 231-633-2			

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
DO NOT DELAY!
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
DO NOT DELAY!
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
DO NOT DELAY!
Wash mouth out with water
Drink plenty of water and provide fresh air. Call for a doctor immediately.
Do not induce vomiting; call for medical help immediately.
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Information for doctor:** Treat symptomatically and supportively.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
Not combustible.
Gives off irritating or toxic fumes (or gases) in a fire.
Mixable with water.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
Do not inhale explosion gases or combustion gases.

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- **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

- **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course in the undiluted form.

- **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
Ensure adequate ventilation.

Neutralise with slaked lime (calcium hydroxide), soda ash (sodium carbonate), calcium carbonate or sodium bicarbonate.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

NEVER pour water into this substance; when dissolving or diluting always add it slowly to the water.

- **Information about fire - and explosion protection:** No special measures required.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Prevent any seepage into the ground.

Compatible materials:

- Stainless steel 316-L.
- High-density polyethylene.
- Glass.

Unsuitable materials:: Phosphoric acid corrodes most metals. The warm, concentrated solution attacks porcelain and granite.

- **Information about storage in one common storage facility:**

Store away from metals.

Store away from foodstuffs.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Store in a bunded area.

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

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· 8.1 Control parameters

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

7664-38-2 Phosphoric acid

WEL	Short-term value: 2 mg/m ³
	Long-term value: 1 mg/m ³

· DNELs

Workers

Long-term exposure - local effects

Inhalation DN(M)EL

- DNEL (Derived No Effect Level): 2.92 mg/m³

General population

Long-term exposure - local effects

Inhalation DN(M)EL

- DNEL (Derived No Effect Level): 0.73 mg/m³

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Personal protective equipment:

Select PPE appropriate for the operations taking place taking into account the product properties.

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

Do not inhale gases / fumes / aerosols.

Take note of assigned Workplace Exposure Limits.

· Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

· Body protection:

Acid resistant protective clothing

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Body protection must be chosen depending on product properties, activity and possible exposure.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Odourless

· pH-value at 20 °C: <2

· Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

· Flash point: Cannot support combustion
Not applicable.

· Auto-ignition temperature: Product is not self-igniting.

· Explosive properties: Product does not present an explosion hazard.

· Vapour pressure at 20 °C: 23.0 hPa

· Density at 20 °C: 1.7 g/cm³

· Solubility in / Miscibility with water: Fully miscible.

· Solvent content:

Organic solvents:	0.00 %
VOC (EC)	0.00 %

· 9.2 Other information NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

· 10.3 Possibility of hazardous reactions

The substance violently polymerizes under the influence of azo compounds and epoxides.

Upon extreme heating forms toxic fumes (phosphorous oxides).

The substance decomposes on contact with alcohols, aldehydes, cyanides, ketones, phenols, esters, sulfides, halogenated organics producing toxic fumes.

Attacks many metals forming flammable/explosive gas (hydrogen).

The substance is a medium strong acid.

Reacts violently with bases.

Exothermic reaction with water.

Risk of explosion in contact with: nitromethane.

The substance can react dangerously with: bases; sodium hydridoborate.

· 10.4 Conditions to avoid No further relevant information available.

· 10.5 Incompatible materials:

Strong bases.

Finely powdered metals.

Substances specifically listed in section 10.3 as incompatible.

· 10.6 Hazardous decomposition products: Phosphorus oxides (e.g. P₂O₅)

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- **Additional information:**
- Mixable with water.
- Hygroscopic.
- Aqueous solution reacts strongly acidic.
- Heavier than water.
- Slightly volatile.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

7664-38-2 Phosphoric acid

Oral	LD50	1530 mg/kg (rat)
Dermal	LD50	2740 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**

ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

INHALATION RISK: A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· European waste catalogue

Waste key numbers in accordance with the European Waste Catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

· Uncleaned packaging:

· Recommendation:

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop hazardous gases and vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

Disposal must be made according to official regulations.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number

· ADR, IMDG, IATA 1805

· 14.2 UN proper shipping name

· ADR 1805 PHOSPHORIC ACID SOLUTION
· IMDG, IATA PHOSPHORIC ACID SOLUTION

· 14.3 Transport hazard class(es)

· ADR, IMDG, IATA



· Class 8 Corrosive substances.
· Label 8

· 14.4 Packing group

· ADR, IMDG, IATA III

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user

Warning; Corrosive substances.
· Danger code (Kemler): 80
· EMS Number: F-A,S-B

· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

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· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

5ltr

· **Tunnel restriction code**

E

· **UN "Model Regulation":**

UN1805, PHOSPHORIC ACID, SOLUTION, 8, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H314 Causes severe skin burns and eye damage.

· **Department issuing SDS:** Product safety department.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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