

**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-UP**
- Registration number Potassium hydroxide: 01-2119487136-33
- 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 control
- 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

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. 1A H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- 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, GHS07
- Signal word Danger
- Hazard-determining components of labelling:  
Potassium hydroxide
- Hazard statements  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.
- Precautionary statements  
P102 Keep out of reach of children.  
P260 Do not breathe mist/vapours/spray.  
P270 Do not eat, drink or smoke when using this product.

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- P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 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.

- **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 potassium hydroxide with multifunctional additives.

- **Dangerous components:**

CAS: 1310-58-3	Potassium hydroxide	☞ Skin Corr. 1A, H314; ☞ Acute Tox. 4, H302	25-50%
EINECS: 215-181-3			

- **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.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
DO NOT DELAY!  
Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
DO NOT DELAY!  
Immediately wash with water and soap and rinse thoroughly.  
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.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Information for doctor:**  
Corrosive. The substance is very corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation of an aerosol of a solution of this substance may cause lung oedema.
- **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.

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- **5.2 Special hazards arising from the substance or mixture**  
SPECIFIC HAZARDS
  - Corrosive
  - Not combustible.
  - Gives off hydrogen by reaction with metals.
- **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.
- **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 to penetrate the ground/soil.  
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.
- **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**  
Store in cool, dry place in tightly closed receptacles.  
Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.  
The product is corrosive.
- **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.  
Packaging material
  - Suitable: stainless steel, synthetic material / polyethylene, glass
  - To avoid: lead, aluminium, copper, tin, zinc, bronze
- **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Store away from metals.  
Store away from flammable substances.  
Store away from water.
- **Further information about storage conditions:**  
Store in a bunded area.  
Protect from frost.  
Keep container tightly sealed.  
Store in a well-ventilated area.  
Store at ambient temperature.  
Keep container tightly closed.  
Keep away from : heat sources, highly flammable materials, incompatible products.

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· 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.· **8.1 Control parameters**· **Ingredients with limit values that require monitoring at the workplace:**

1310-58-3 Potassium hydroxide

WEL Short-term value: 2 mg/m<sup>3</sup>· **DNELs****WORKERS**

Long-term exposure - local effects

Inhalation DN(M)EL

- DNEL (Derived No Effect Level): 1 mg/m<sup>3</sup>**GENERAL POPULATION**

Long-term exposure - local effects

Inhalation DN(M)EL

- DNEL (Derived No Effect Level): 1 mg/m<sup>3</sup>· **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:**

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

Storing food in the working area is prohibited.

Take note of assigned Workplace Exposure Limits.

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.

Ensure that eyewash stations and safety showers are close to the workstation location.

Eye wash bottles or eye wash stations in compliance with applicable standards must be present within easy reach of the work station.

· **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  
Hand protection:

- Impervious gloves

- Suitable material: PVC, Neoprene, Natural rubber, Butyl rubber

- Unsuitable material: Leather

· **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.

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- **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

Face shield if risk on splashes.

- **Body protection:**

Impervious protective clothing

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:**

· <b>Form:</b>	Fluid
· <b>Colour:</b>	Clear
· <b>Odour:</b>	Odourless
· <b>Odour threshold:</b>	Not determined.

- **pH-value:** 13.5

- **Change in condition**

· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Initial boiling point and boiling range:</b>	Undetermined.

- **Flash point:** Cannot support combustion

- **Flammability (solid, gas):** Not applicable.

- **Decomposition temperature:** Not determined.

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

- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

- **Vapour pressure at 20 °C:** 23 hPa

· <b>Density at 20 °C:</b>	1.2 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

- **Solubility in / Miscibility with water:** Fully miscible.

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.

- **Solvent content:**

· <b>Organic solvents:</b>	0.00 %
· <b>VOC (EC)</b>	0.00 %

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### · 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 is a strong base, it reacts violently with acid and is corrosive in moist air to metals such as zinc, aluminium, tin and lead forming a combustible/explosive gas (hydrogen).

Reacts with ammonium salts to produce ammonia and causing fire hazard. Attacks some forms of plastics, rubber or coatings.

Rapidly absorbs carbon dioxide and water from air.

Contact with moisture or water will generate heat.

Risk of explosion in contact with: fluorine; aluminium hexachloroplatinate-(2)/heat; bromoform + crown ether; but-2-ene-1,4-diol (heat); calcium powder; calcium carbide/chlorine; chlorine dioxide; cyanogen azide (rarely); 1,2-dichloroethene; magnesium; sodium azide + benzoyl chloride; nitrobenzene; nitroethane; nitromethane; nitroparaffines; N-nitrosomethylurea; phosphorus (rarely); nitrogen trichloride; tetrachloroethane/ potassium hydroxide solid/heat; tetrahydrofurane (peroxide containing,rarely); 2,4,6-trinitrotoluene; zinc ; tin

The substance can react dangerously with:acids; water; hydrogen peroxide; acetonitrile; acrolein; aldehydes; lower alcohols; aluminium -> hydrogen; aluminium carbide (rarely); ammonium salts/ammonia; chloroform/ methanol; cyclopentadiene; acetic acid; germanium; halogenated hydrocarbons; iodine pentafluoride; potassium peroxodisulphate; cresols; maleic anhydride; nitrophenol; phosphorus trioxide; hydrogen sulphide; tetrafluoropropanol; trichloroethene; vinyl acetate; sugars (reducing)

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:**

Finely powdered metals.

Strong acids.

Substances specifically listed in section 10.3 as incompatible.

· **10.6 Hazardous decomposition products:** Potassium oxide

## SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity**

Harmful if swallowed.

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

**1310-58-3 Potassium hydroxide**

Oral	LD50	333 mg/kg (rat)
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· **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.

· **Other information (about experimental toxicology):**

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

INHALATION RISK: Evaporation at 20°C is negligible. KOH is rapidly neutralised in air by carbon dioxide

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and therefore dust and vapour exposure are not expected.

· **Subacute to chronic toxicity:** Repeated or prolonged contact with skin may cause dermatitis.

· **Additional toxicological information:**

Corrosive. The substance is very corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion.

Inhalation of an aerosol of a solution of this substance may cause lung oedema. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.

KOH is a corrosive substance at concentrations of about 2% and higher. Between about 0.5% and 2.0%, it is irritating. Case reports on human accidents or intentional exposure confirm that the risk posed by KOH for human health originates from its corrosive properties.

· **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.

· **Ecotoxicological effects:**

· **Other information:**

The hazard of KOH for the environment is caused by the hydroxyl ion (pH effect). For this reason the effect of KOH on the organisms depends on the buffer capacity of the aquatic or terrestrial ecosystem.

· **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.

Emissions will lead to a local increase in pH in the aquatic environment.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

## 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).

Contact waste processors for recycling information.

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

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.

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- **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.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

<b>· 14.1 UN-Number</b>	UN1814
<b>· ADR, IMDG, IATA</b>	
<b>· 14.2 UN proper shipping name</b>	1814 POTASSIUM HYDROXIDE SOLUTION
<b>· ADR</b>	POTASSIUM HYDROXIDE SOLUTION
<b>· IMDG, IATA</b>	
<b>· 14.3 Transport hazard class(es)</b>	
<b>· ADR, IMDG, IATA</b>	
	
<b>· Class</b>	8 Corrosive substances.
<b>· Label</b>	8
<b>· 14.4 Packing group</b>	II
<b>· ADR, IMDG, IATA</b>	
<b>· 14.5 Environmental hazards:</b>	
<b>· Marine pollutant:</b>	No
<b>· 14.6 Special precautions for user</b>	Warning: Corrosive substances.
<b>· Danger code (Kemler):</b>	80
<b>· EMS Number:</b>	F-A,S-B
<b>· Segregation groups</b>	Alkalis
<b>· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
<b>· Transport/Additional information:</b>	
<b>· ADR</b>	
<b>· Limited quantities (LQ)</b>	1L
<b>· Transport category</b>	2
<b>· Tunnel restriction code</b>	E
<b>· UN "Model Regulation":</b>	UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, II

### 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.

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**· Relevant phrases**

H302 Harmful if swallowed.  
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  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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