

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

PL Phosphorus LR 1

Revision date 11-18-2021 Revision Number 2

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

1.1. Product identifier

Product Code(s) PL153-KIT

Product Name PL Phosphorus LR 1

Unique Formula Identifier (UFI) SSP3-YPPA-VU1J-TAND

Pure substance/mixture

Contains Sodium hydroxide

Mixture

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

Recommended use Conditioning reagent

Uses advised against Others

1.3. Details of the supplier of the safety data sheet

Manufacturer

Water-I.D. GmbH Daimlerstr. 20

76344 Eggenstein, Germany

Tel.: +49 (0) 721 78 20 29 0, Fax: +49 (0) 721 78 20 29 11

Website: www.water-id.com

EHS / Compliance: lab@water-id.com

1.4. Emergency telephone number

Emergency Telephone Poison Control Centre Munich

Tel.: +49 (0) 89 19 24 0

Germany

24 hours service

Languages: German, English

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 1 Sub-category A - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

2.2. Label elements

Contains Sodium hydroxide



Signal word Danger

Hazard statements

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

Precautionary Statements - EU (§28, 1272/2008)

P260 - Do not breathe dust/fume/gas/mist/vapours/spray

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

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

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

P310 - Immediately call a POISON CENTER or doctor

P331 - Do NOT induce vomiting

Additional information

This product requires tactile warnings if supplied to the general public. This product requires child resistant fastenings if supplied to the general public.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Sodium hydroxide 1310-73-2	10-20	No data available	215-185-5	Skin Corr. 1A (H314)	Eye Irrit. 2 :: 0.5%<=C<2% Skin Corr. 1A :: C>=5% Skin Corr. 1B :: 2%<=C<5% Skin Irrit. 2 :: 0.5%<=C<2%		

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
			hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Sodium hydroxide 1310-73-2	325	1350			

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical

attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical

advice/attention.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present

and easy to do. Continue rinsing. Get immediate medical advice/attention.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Get immediate medical advice/attention.

Ingestion Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water.

Never give anything by mouth to an unconscious person. Get immediate medical

advice/attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Wear personal protective clothing (see section 8).

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

Symptoms Burning sensation.

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

Note to doctors Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated.

Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may

occur with moist rales, frothy sputum, and high pulse pressure.

SECTION 5: Firefighting measures

5.1. Extinguishing media

surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the

chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate

ventilation. Use personal protective equipment as required. Evacuate personnel to safe

areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Should not be released into the

environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning upTake up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated

clothing and wash it before reuse.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do

not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach

of children. Protect from moisture. Store locked up. Store away from other materials.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bu	ılgaria	Croatia
Sodium hydroxide 1310-73-2	ı	TWA: 2 mg/m ³ STEL 4 mg/m ³	-	TWA: 2	2.0 mg/m ³	STEL: 2 mg/m ³
Chemical name	Cyprus	Czech Republic	Denmark	Es	stonia	Finland
Sodium hydroxide 1310-73-2	-	TWA: 1 mg/m ³ Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³		1 mg/m³ : 2 mg/m³	Ceiling: 2 mg/m ³
Chemical name	France	Germany	Germany MAK	Gı	reece	Hungary
Sodium hydroxide 1310-73-2	TWA: 2 mg/m ³	-	-		2 mg/m ³ : 2 mg/m ³	TWA: 1 mg/m ³ STEL: 2 mg/m ³
Chemical name	Ireland	Italy	Italy REL	L	atvia	Lithuania
Sodium hydroxide 1310-73-2	STEL: 2 mg/m ³	-	Ceiling: 2 mg/m ³	TWA: (0.5 mg/m ³	Ceiling: 2 mg/m ³
Chemical name	Luxembourg	Malta	Netherlands	No	orway	Poland
Sodium hydroxide 1310-73-2	•	-	-	Ceiling	y: 2 mg/m³	STEL: 1 mg/m ³ TWA: 0.5 mg/m ³
Chemical name	Portugal	Romania	Slovakia	Slo	ovenia	Spain
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³	TWA: 2 mg/m ³		-	STEL: 2 mg/m ³
Chemical name	Sweden		Switzerland		Uni	ted Kingdom
Sodium hydroxide 1310-73-2		/: 1 mg/m³ e KGV: 2 mg/m³	TWA: 2 mg/m ³ STEL: 2 mg/m ³		STEL: 2 mg/m ³	

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL)
Predicted No Effect Concentration
(PNEC)

No information available. No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protectionNo protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do

not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical stateLiquidAppearanceLiquidColourcolourlessOdourOdourless.

Odour threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Melting point / freezing pointNo data availableNone knownBoiling point / boiling rangeNo data availableNone knownFlammability (solid, gas)No data availableNone knownFlammability Limit in AirNone known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash pointNo data availableNone knownAutoignition temperatureNo data availableNone knownDecomposition temperatureNone known

pH 14.0 None known

pH (as aqueous solution) No data available No information available

Kinematic viscosity No data available None known **Dynamic viscosity** No data available None known No data available Water solubility None known Solubility(ies) No data available None known None known **Partition coefficient** No data available No data available Vapour pressure None known No data available Relative density None known

Bulk density
No data available
Liquid Density
No data available

Relative vapour density No data available None known

Particle characteristics

Particle Size No information available Particle Size Distribution No information available

9.2. Other information

9.2.1. Information with regards to physical hazard classes Not applicable

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Exposure to air or moisture over prolonged periods.

10.5. Incompatible materials

Incompatible materials Acids. Bases. Oxidising agent.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Corrosive by inhalation.

(based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Pulmonary edema can be fatal.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye

damage. (based on components). Corrosive to the eyes and may cause severe damage

including blindness. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Corrosive. (based on

components). Causes burns.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung

damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 1,949.60 mg/kg **ATEmix (dermal)** 8,098.40 mg/kg

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

Component Information

Revision date 11-18-2021

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium hydroxide	= 325 mg/kg (Rat)	= 1350 mg/kg (Rabbit)	

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes burns.

Serious eye damage/eye irritation Classification based on data available for ingredients. Risk of serious damage to eyes.

Causes burns.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposureNo information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

Unknown aquatic toxicityContains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium hydroxide	-	LC50: =45.4mg/L (96h,	-	-
		Oncorhynchus mykiss)		

12.2. Persistence and degradability

Persistence and degradability No information available.

PL153-KIT - PL Phosphorus LR 1

Revision date 11-18-2021

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

No information available. Mobility in soil

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Sodium hydroxide	The substance is not PBT / vPvB PBT assessment does
	not apply

12.6. Endocrine disrupting properties

No information available. **Endocrine disrupting properties**

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

14.1 UN number or ID number UN1824

14.2 UN proper shipping name Sodium hydroxide solution

14.3 Transport hazard class(es)

14.4 Packing group

UN1824, Sodium hydroxide solution, 8, II Description

14.5 Environmental hazards Not applicable

14.6 Special precautions for user

Special Provisions A3, A803 **ERG Code** 8L

IMDG

14.1 UN number or ID number UN1824

14.2 UN proper shipping name Sodium hydroxide solution

14.3 Transport hazard class(es) 14.4 Packing group

Description UN1824, Sodium hydroxide solution, 8, II NP

14.5 Marine pollutant

14.6 Special precautions for user

Special Provisions

EmS-No F-A, S-B No information available

14.7 Maritime transport in bulk according to IMO instruments

No information available

Revision date 11-18-2021

RID

14.1 UN number or ID number UN1824

14.2 UN proper shipping name Sodium hydroxide solution

14.3 Transport hazard class(es) 8
14.4 Packing group |

Description UN1824, Sodium hydroxide solution, 8, II

14.5 Environmental hazards Not applicable

14.6 Special precautions for user

Special Provisions None **Classification code** C5

ADR

14.1 UN number or ID number UN1824

14.2 UN proper shipping name Sodium hydroxide solution

14.3 Transport hazard class(es)14.4 Packing group

Description UN1824, Sodium hydroxide solution, 8, II, (E)

14.5 Environmental hazards Not applicable

14.6 Special precautions for user

Special ProvisionsNoneClassification codeC5Tunnel restriction code(E)

SECTION 15: Regulatory information

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

Complies **TSCA DSL/NDSL** Complies **EINECS/ELINCS** Complies Complies **ENCS IECSC** Complies **KECL** Complies **PICCS** Complies Complies **AICS**

Leaend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H314 - Causes severe skin burns and eye damage

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value * Skin designation

Classification procedure				
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used			
Acute oral toxicity	Calculation method			
Acute dermal toxicity	Calculation method			
Acute inhalation toxicity - gas	Calculation method			
Acute inhalation toxicity - Vapour	Calculation method			
Acute inhalation toxicity - dust/mist	Calculation method			
Skin corrosion/irritation	Calculation method			
Serious eye damage/eye irritation	Calculation method			
Respiratory sensitisation	Calculation method			
Skin sensitisation	Calculation method			
Mutagenicity	Calculation method			
Carcinogenicity	Calculation method			
Reproductive toxicity	Calculation method			
STOT - single exposure	Calculation method			
STOT - repeated exposure	Calculation method			
Acute aquatic toxicity	Calculation method			
Chronic aquatic toxicity	Calculation method			
Aspiration hazard	Calculation method			
Ozone	Calculation method			

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

PL153-KIT - PL Phosphorus LR 1

Revision date 11-18-2021

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision date

11-18-2021

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet