

**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 2**

Revision date 11-17-2021

Revision Number 2

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

**1.1. Product identifier**

**Product Code(s)** PL153-KIT, PL154-KIT, PL153-10g, PL154-10g  
**Product Name** PL Phosphorus 2  
**Unique Formula Identifier (UFI)** CWS7-Q3NX-JU1W-5PD5  
**Pure substance/mixture** Substance  
 Contains Potassium persulfate

**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

<b>Acute toxicity - Oral</b>	Category 4 - (H302)
<b>Skin corrosion/irritation</b>	Category 2 - (H315)
<b>Serious eye damage/eye irritation</b>	Category 2 - (H319)
<b>Respiratory sensitisation</b>	Category 1 - (H334)
<b>Skin sensitisation</b>	Category 1 - (H317)
<b>Specific target organ toxicity — single exposure</b>	Category 3 - (H335)
Category 3 Respiratory irritation	
<b>Oxidising solids - (H272)</b>	

**2.2. Label elements**

231-781-8  
Contains Potassium persulfate



**Signal word**  
Danger

**Hazard statements**

H272 - May intensify fire; oxidiser  
H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H335 - May cause respiratory irritation

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

P220 - Keep away from clothing and other combustible materials  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P280 - Wear protective gloves and eye/face protection  
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor

**Additional information**

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

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

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)
Potassium persulfate 7727-21-1	100	No data available	231-781-8	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) STOT SE 3 (H335) Ox. Sol. 3 (H272)			

**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 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Potassium persulfate 7727-21-1	802	10000			

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. Wash off immediately with soap and plenty of water for at least 15 minutes.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. May produce an allergic reaction. Get immediate medical advice/attention.
<b>Self-protection of the first aider</b>	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. Use personal protective equipment as required. See section 8 for more information.

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

<b>Symptoms</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation.
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### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Note to doctors</b>	May cause sensitisation in susceptible persons. Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	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** Product is or contains a sensitiser. May cause sensitisation by inhalation and skin contact. May cause sensitisation by skin contact.

### 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** 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.

### 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 up** Take 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. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash it before reuse. Avoid breathing vapours or mists.

**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.

### 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. Store locked up.

### 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	Bulgaria	Croatia
Potassium persulfate 7727-21-1	-	-	TWA: 0.1 mg/m <sup>3</sup>	-	-
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Potassium persulfate 7727-21-1	-	-	TWA: 2 mg/m <sup>3</sup>	-	-
Chemical name	Ireland	Italy	Italy REL	Latvia	Lithuania
Potassium persulfate 7727-21-1	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup> Sensitizer	-	TWA: 0.1 mg/m <sup>3</sup>	-	-
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Potassium persulfate 7727-21-1	-	-	-	TWA: 2 mg/m <sup>3</sup> STEL: 4 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Potassium persulfate 7727-21-1	TWA: 0.1 mg/m <sup>3</sup>	-	-	-	TWA: 0.1 mg/m <sup>3</sup> sensitizer

**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)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls****Personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves. Impervious gloves.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing.

**Respiratory protection** No 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.

**Environmental exposure controls** No information available.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

**Physical state** Solid  
**Appearance** Powder

Colour	white
Odour	Odourless.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	No data available	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
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known
Relative density	No data available	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 None known based on information supplied.

### 10.5. Incompatible materials

**Incompatible materials** Strong acids. Strong bases. Strong oxidising agents.

#### 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

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause sensitisation in susceptible persons. (based on components). May cause irritation of respiratory tract.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause sensitisation by skin contact. Causes skin irritation.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation". Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Harmful if swallowed. (based on components).

##### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.

##### Numerical measures of toxicity

##### Acute toxicity

##### Unknown acute toxicity

##### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium persulfate	= 802 mg/kg ( Rat )	> 10000 mg/kg ( Rabbit )	> 42.9 mg/L ( Rat ) 1 h

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

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Irritating to skin.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.
<b>Respiratory or skin sensitisation</b>	May cause sensitisation by inhalation. May cause sensitisation by skin contact.
<b>Germ cell mutagenicity</b>	No information available.

<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	May cause respiratory irritation.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	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** The environmental impact of this product has not been fully investigated.

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation** No information available.

**12.4. Mobility in soil**

**Mobility in soil** No information available.

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

Chemical name	PBT and vPvB assessment
Potassium persulfate	The substance is not PBT / vPvB PBT assessment does not apply

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**12.7. Other adverse effects**

No information available.



**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Do not reuse empty containers.

**SECTION 14: Transport information****IATA**

<b>14.1 UN number or ID number</b>	UN1492
<b>14.2 UN proper shipping name</b>	Potassium persulphate
<b>14.3 Transport hazard class(es)</b>	5.1
<b>14.4 Packing group</b>	III
<b>Description</b>	UN1492, Potassium persulphate, 5.1, III
<b>14.5 Environmental hazards</b>	Not applicable
<b>14.6 Special precautions for user</b>	
<b>Special Provisions</b>	A803
<b>ERG Code</b>	5L

**IMDG**

<b>14.1 UN number or ID number</b>	UN1492
<b>14.2 UN proper shipping name</b>	Potassium persulphate
<b>14.3 Transport hazard class(es)</b>	5.1
<b>14.4 Packing group</b>	III
<b>Description</b>	UN1492, Potassium persulphate, 5.1, III
<b>14.5 Marine pollutant</b>	NP
<b>14.6 Special precautions for user</b>	
<b>Special Provisions</b>	None
<b>EmS-No</b>	F-A, S-Q No information available
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	No information available

**RID**

<b>14.1 UN number or ID number</b>	UN1492
<b>14.2 UN proper shipping name</b>	Potassium persulphate
<b>14.3 Transport hazard class(es)</b>	5.1
<b>14.4 Packing group</b>	III
<b>Description</b>	UN1492, Potassium persulphate, 5.1, III
<b>14.5 Environmental hazards</b>	Not applicable
<b>14.6 Special precautions for user</b>	
<b>Special Provisions</b>	None
<b>Classification code</b>	O2

**ADR**

<b>14.1 UN number or ID number</b>	UN1492
<b>14.2 UN proper shipping name</b>	Potassium persulphate
<b>14.3 Transport hazard class(es)</b>	5.1
<b>14.4 Packing group</b>	III
<b>Description</b>	UN1492, Potassium persulphate, 5.1, III, (E)
<b>14.5 Environmental hazards</b>	Not applicable
<b>14.6 Special precautions for user</b>	
<b>Special Provisions</b>	None
<b>Classification code</b>	O2
<b>Tunnel restriction code</b>	(E)

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****France****Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number	Title
Potassium persulfate 7727-21-1	RG 65, RG 66	-

**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**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

**Legend:**

**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**

H272 - May intensify fire; oxidiser

H302 - Harmful if swallowed

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 - May cause respiratory irritation

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: Exposure controls/personal protection**

TWA TWA (time-weighted average)

Ceiling Maximum limit value

STEL

\*

STEL (Short Term Exposure Limit)

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
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)

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**

11-17-2021

**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**

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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**