

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 06/22/2017

Version 1.2

SECTION 1. Identification**Product identifier**

Product number	PX1490
Product name	Potassium Hydroxide Pellets
CAS-No.	1310-58-3

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

Identified uses	Reagent for analysis
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Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation 290 Concord Road, Billerica, MA 01821, United States of America General Inquiries: +1-978-715-4321 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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SECTION 2. Hazards identification**GHS Classification**

Corrosive to Metals, Category 1, H290
Acute toxicity, Category 4, Oral, H302
Skin corrosion, Category 1A, H314
Serious eye damage, Category 1, H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling*Hazard pictograms*

Signal Word
Danger

Hazard Statements

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

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Precautionary Statements

P234 Keep only in original container.

P260 Do not breathe dusts or mists.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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.

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/doctor.

P321 Specific treatment (see supplemental first aid instructions on this label).

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

P405 Store locked up.

P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula KOH HKO (Hill)

Molar mass 56.11 g/mol

Hazardous ingredients

Chemical name (Concentration)

CAS-No.

potassium hydroxide (>= 90 % - <= 100 %)

1310-58-3

Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

General advice

First aider needs to protect himself.

Inhalation

After inhalation: fresh air. Call in physician.

Skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

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Eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

Ingestion

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation!). Call a physician immediately. Do not attempt to neutralize.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Risk of blindness!

Irritation and corrosion, Cough, Shortness of breath

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapors.

Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

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Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

No aluminum, tin, or zinc containers.

No metal containers.

Tightly closed. Dry.

Store at room temperature.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Ingredients

Basis	Value	Threshold limits	Remarks
<i>potassium hydroxide 1310-58-3</i>			
ACGIH	Ceiling Limit Value:	2 mg/m ³	
NIOSH/GUIDE	Recommended exposure limit (REL):	2 mg/m ³	
Z1A	Ceiling Limit Value:	2 mg/m ³	

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Tightly fitting safety goggles

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
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Glove thickness: 0.11 mm
Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment:
protective clothing

Respiratory protection
required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer. These measures have to be properly documented.

SECTION 9. Physical and chemical properties

Physical state	solid
Color	colorless
Odor	odorless
Odor Threshold	Not applicable
pH	ca. 14 at 56 g/l 68 °F (20 °C)
Melting point	680 °F (360 °C)
Boiling point/boiling range	2,421 °F (1,327 °C) at 1,013 hPa
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	does not ignite
Lower explosion limit	Not applicable

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Upper explosion limit	Not applicable
Vapor pressure	at 68 °F (20 °C) Not applicable
Relative vapor density	No information available.
Density	2.04 g/cm ³ at 68 °F (20 °C)
Relative density	No information available.
Water solubility	1,130 g/l at 68 °F (20 °C)
Partition coefficient: n-octanol/water	Not applicable
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	Not applicable
Corrosion	May be corrosive to metals.

SECTION 10. Stability and reactivity

Reactivity

exothermic dissolution process with water

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Risk of explosion with:

Tetrahydrofuran, Peroxides, sodium azide, benzoyl chloride, Calcium, in powder form, carbides, Chlorine, halogen oxides, organic nitro compounds, phosphorus, nonmetallic oxides, chlorine dioxide, Fluorine, magnesium, Nitroso compound, nitrogen trichloride

Exothermic reaction with:

acetonitrile, Acrolein, Aldehydes, Alcohols, acetic acid, Halogenated hydrocarbon, halogen-halogen compounds, Peroxides, hydrogen sulfide, hydrogen peroxide, vinyl acetate, Reducing agents, Acids, Acid chlorides, Acid anhydrides, peroxi compounds, Methanol, Chloroform

Risk of ignition or formation of inflammable gases or vapors with:

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Aluminum, Ammonium salts, Germanium, anhydrides, Oxides of phosphorus, azides, Lead, Copper, Copper alloys, Tin, Zinc

Release of:

Hydrogen

Conditions to avoid

no information available

Incompatible materials

animal/vegetable tissues, glass, various plastics, Metals

Hazardous decomposition products

no information available

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact, Ingestion

Target Organs

Eyes

Skin

Respiratory system

Cornea

Acute oral toxicity

LD50 Rat: 333 mg/kg

OECD Test Guideline 425

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity

Corrosive to respiratory system.

Symptoms: burns of mucous membranes, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Skin irritation

Rabbit

Result: Causes burns.

(IUCLID)

In vitro study

Result: Corrosive

OECD Test Guideline 431

Causes severe burns.

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Eye irritation

Rabbit

Result: Causes serious eye damage.

OECD Test Guideline 405

Causes serious eye damage.

Risk of blindness!

Sensitization

Sensitization test: Guinea pig

Result: negative

(IUCLID)

Genotoxicity in vitro

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

(IUCLID)

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

After uptake:

pain, oedema, Vomiting, shock, death

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish

LC50 *Gambusia affinis* (Mosquito fish): 80 mg/l; 96 h (IUCLID)

Persistence and degradability

Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

Partition coefficient: n-octanol/water

Not applicable

Mobility in soil

No information available.

Additional ecological information

Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

Neutralization possible in waste water treatment plants.

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

UN number

UN 1813

Proper shipping name

POTASSIUM HYDROXIDE, SOLID

Class

8

Packing group

II

Environmentally hazardous

--

Air transport (IATA)

UN number

UN 1813

Proper shipping name

POTASSIUM HYDROXIDE, SOLID

Class

8

Packing group

II

Environmentally hazardous

--

Special precautions for user

no

Sea transport (IMDG)

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Product name

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UN number

UN 1813

Proper shipping name

POTASSIUM HYDROXIDE, SOLID

Class

8

Packing group

II

Environmentally hazardous

--

Special precautions for user

yes

EmS

F-A S-B

SECTION 15. Regulatory information

United States of America

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Ingredients

potassium hydroxide

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Ingredients

potassium hydroxide

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

DEA List I

Not listed

DEA List II

Not listed

US State Regulations

Massachusetts Right To Know

Ingredients

potassium hydroxide

Pennsylvania Right To Know

Ingredients

potassium hydroxide

New Jersey Right To Know

Ingredients

potassium hydroxide

California Prop 65 Components

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This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Labeling

Hazard pictograms



Signal Word

Danger

Hazard Statements

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

Precautionary Statements

Prevention

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

Response

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

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

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Full text of H-Statements referred to under sections 2 and 3.

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

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

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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