

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name pH 4.01 Buffer

Product Number(s) 910104

Pure substance/mixture Mixture

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

Recommended Use Use as laboratory reagent

Uses advised against No Information available

Manufacturer/Supplier

Thermo Fisher Scientific©
Water and Lab Products
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Made in USA

Emergency Telephone 24 Hour Emergency Phone Number
CHEMTREC®
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: 1-703-527-3887
(collect calls accepted)

2. HAZARDS IDENTIFICATION**Classification****OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label Elements**Emergency Overview**

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Light red

Physical State Liquid

Odor Odorless

Safety data sheet available on request

Precautionary Statements

Do not handle until all safety information has been read and understood.

Hazards not otherwise classified (HNOC)

No information available

Other Information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %	Trade Secret
Water	7732-18-5	90 - 100%	*
Potassium Hydrogen Phthalate	877-24-7	0 - 10%	*
Potassium Hydroxide	1310-58-3	0 - 10%	*
Amaranth Red No. 27	915-67-3	0 - 10%	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**First aid measures****General Advice**

Use first aid treatment according to the nature of the injury. Get medical attention immediately if symptoms occur. Show this safety data sheet to the doctor in attendance.

Eye Contact

Rinse thoroughly with plenty of water, also under the eyelids. Obtain medical attention.

Skin Contact

Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. If skin reactions occur, contact a physician.

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, obtain medical attention.

Ingestion Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Call a physician or Poison Control Center immediately.

Protection of First-aiders Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms and effects, both acute and delayed

Most important symptoms/effects No information available

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media

No information available

Specific Hazards Arising from the Chemical

No information available

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Use personal protective equipment. Refer to Section 8. Evacuate personnel to safe areas.
Environmental Precautions Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

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 Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling To avoid risks to human health and the environment, comply with the instructions for use
Wear personal protective equipment
Avoid breathing dust/fume/gas/mist/vapours/spray
Ensure adequate ventilation, especially in confined areas

Conditions for Safe Storage, Including any Incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place

Store at room temperature in the original container
Keep away from direct sunlight

Incompatible Products No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium Hydroxide 1310-58-3	Ceiling: 2 mg/m ³	(Vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face Protection Wear chemical splash goggles. If splashes are likely to occur, wear: Face-shield.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection None required under normal usage. In case of inadequate ventilation wear respiratory protection.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Appearance Light red
Odor Odorless
Odor Threshold No information available
pH Range No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point/freezing point	No information available	
Boiling Point/Range	~ 100 °C / 212 °F	
Flash Point (High in °C)	N/A	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor Density	No information available	
Specific Gravity	No information available	
Water Solubility	soluble	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition Temperature		
Decomposition Temperature	No information available	
Kinematic Viscosity	No information available	
Dynamic viscosity	No information available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other Information

Softening Point No information available
 Molecular Weight No information available
 VOC Content(%) No information available
 Density No Information available
 Bulk Density No information available

10. STABILITY AND REACTIVITY

Reactivity

No Information available

Chemical Stability

Stable under normal conditions

Possibility of Hazardous Reactions

None under normal processing

Conditions to Avoid

Extremes of temperature and direct sunlight

Incompatible Materials

No information available

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation No information available
 Eye Contact No information available
 Skin Contact No information available
 Ingestion No information available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Potassium Hydrogen Phthalate 877-24-7	3200 mg/kg (Rat)	-	-
Potassium Hydroxide 1310-58-3	284 mg/kg (Rat)	-	-

Information on Toxicological Effects

Symptoms No information available

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

Sensitization No information available
 Mutagenic Effects No information available
 Carcinogenicity No information available.
 Reproductive Effects No information available
 STOT - single exposure No information available

STOT - repeated exposure No information available

Aspiration hazard No information available

Numerical measures of toxicity - Product Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Water Flea
Potassium Hydroxide 1310-58-3	-	80 mg/L LC50 96 h	-

Persistence and Degradability

No information available

Bioaccumulation/ Accumulation

No information available

Mobility

No information available.

Component	log Pow
Potassium Hydroxide 1310-58-3	0.83

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Improper disposal or reuse of this container may be dangerous and illegal.

Component	CAWAST
Potassium Hydroxide 1310-58-3	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

USINV Complies
CANINV Complies
EINECS/ELINCS Complies
ENCS Does not Comply
IECSC Complies
KECL Complies
PICCS Complies
AICS Complies

USINV/ TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CANINV/ DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
IECSC - Chinese 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

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard No
Chronic Health Hazard No
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium Hydroxide 1310-58-3	1000 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs	RQ
Potassium Hydroxide 1310-58-3	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Potassium Hydroxide 1310-58-3	X	X	X

U.S. EPA Label Information

No information available

16. OTHER INFORMATION

Prepared By Environmental, Health and Safety

Prepared For Thermo Fisher Scientific Inc.©

Issue Date No information available

Revision Date 18-May-2015

Expiration Date SDS is valid 3 years from revision date. Contact wai.techservbev@thermofisher.com for the latest revision.

Reason for revision Update to CLP Format

Disclaimer

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End of Safety Data Sheet