

# SAFETY DATA SHEET

## ( SDS )

This safety data sheet complies with the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008, (EU) No. 2015/830

Revision Date 01-Apr-2024

WAI2 - EGHS - EUROPEAN

Revision Number 6

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product Identifier

Product Name pH 1.68 Buffer

Product No 910168  
Unique Formula Identifier (UFI) Not applicable

REACH registration number Not applicable

Pure substance/mixture Mixture

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

Recommended Use Use as laboratory reagent

Uses advised against No Information available

#### 1.3. Details of the supplier of the safety data sheet

Manufacturer, Importer, Supplier Thermo Fisher Scientific©  
Water and Lab Products  
22 Alpha Road  
Chelmsford, MA 01824, USA  
1-978-232-6000

E-mail address [wlp.techsupport@thermofisher.com](mailto:wlp.techsupport@thermofisher.com)

Made in USA

1.4. Emergency telephone number 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)

**SECTION 2. HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture****Classification - Mixture**

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Corrosion/Irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)

**2.2. Label elements****Signal Word**

Warning

**Hazard Statements**

H319 - Causes serious eye irritation

H315 - Causes skin irritation

**Precautionary Statements**

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

P264 - Wash face, hands and any exposed skin thoroughly after handling

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P337 + P313 - If eye irritation persists: Get medical advice/attention

P362 - Take off contaminated clothing and wash before reuse

**2.3. Other hazards**

Contains a known or suspected endocrine disruptor

**General Hazards**

This product does not contain any known or suspected endocrine disruptors

Toxic to terrestrial vertebrates

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Component	EC No	CAS No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567	REACH Reg. No
Water	EEC No. 231-791-2	7732-18-5	90 - 100%	Not classified	No information available
Potassium Tetroxalate	-	6100-20-5	0 - 10%	-	No information available

Component	CAS No	Specific concentration limits (SCL's)	M-Factor	Component notes
Water	7732-18-5	-	-	-
Potassium Tetroxalate	6100-20-5	-	-	-

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

<b>General Advice</b>	Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician or poison control center immediately.
<b>Self-Protection of the First Aider</b>	No special precautions required.

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

<b>Most important symptoms and effects</b>	See section 11, See section 2 for more information
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### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician</b>	Treat symptomatically
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## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

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

#### **Unsuitable Extinguishing Media**

No information available

### 5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

### 5.3. Advice for firefighters

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

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

<b>Personal Precautions</b>	Use personal protective equipment as required. Evacuate personnel to safe areas.
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### 6.2. Environmental precautions

<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system.
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**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** Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

**Reference to Other Sections**

Refer to protective measures listed in Sections 7 and 8

See Section 8 for information on appropriate personal protective equipment

See Section 12 for additional Ecological Information

See Section 13 for additional waste treatment information

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling****Advice on safe handling**

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

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities****Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Protect from direct sunlight.

**7.3. Specific end use(s)****Specific Use(s)**

Use as laboratory reagent

**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**

Contains no substances with occupational exposure limit values

**Biological limit values**

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

**Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

**Derived No Effect Level (DNEL)**

No information available

**Predicted No Effect Concentration (PNEC)**

No information available.

**8.2. Exposure controls****Engineering Measures** None under normal use conditions**Personal protective equipment****Eye/face Protection** Wear chemical splash goggles and face shield. If splashes are likely to occur:. Goggles.**Skin and body protection** Wear protective gloves/protective clothing.**Respiratory Protection** No protective equipment is needed under normal use conditions.  
**Recommended Filter type:** Particle filter.**Environmental exposure controls** Prevent product from entering drains Do not allow material to contaminate ground water system Local authorities should be advised if significant spillages cannot be contained**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid
<b>Appearance</b>	No information available
<b>Odor</b>	None
<b>Odor Threshold</b>	No information available
<b>pH</b>	1.68
<b>PH Range</b>	0.13 - 3.18

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

**Explosive Properties** No information available  
**Oxidizing Properties** No information available

**9.2. 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

**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

No information available

**10.2. Chemical stability**

Stable under normal conditions

**Explosion Data**

Sensitivity to Mechanical Impact None  
Sensitivity to Static Discharge None

**10.3. Possibility of hazardous reactions**

None under normal processing

**10.4. Conditions to avoid**

Extremes of temperature and direct sunlight

**10.5. Incompatible materials**

No information available

**10.6. Hazardous decomposition products**

Thermal decomposition can lead to release of irritating gases and vapors

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Product Information****Acute Toxicity**

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity.

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

**ATEmix (oral)** 22,714.00 mg/kg

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	LD50 > 90 mL/kg ( Rat )		

**Skin Corrosion/Irritation** Irritating to skin

**Serious eye damage/eye irritation** Irritating to eyes

**Sensitization** No information available

**Mutagenic Effects** No information available

**Carcinogenic effects** No information available

Reproductive Effects	No information available
(h) STOT-single exposure;	No data available
(i) STOT-repeated exposure;	No data available
Target Organs	None known.
Aspiration hazard	No information available

#### 11.2. Information on other hazards

Endocrine Disrupting Properties	Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.
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### SECTION 12. ECOLOGICAL INFORMATION

#### 12.1. Toxicity

Ecotoxicity effects	The product contains following substances which are hazardous for the environment.
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Harmful to aquatic life Harmful to aquatic life with long lasting effects  
0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

#### 12.2. Persistence and degradability

Persistence	Soluble in water, Persistence is unlikely, based on information available.
Degradation in sewage treatment plant	Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

<u>12.3. Bioaccumulative potential</u>	Bioaccumulation is unlikely
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#### 12.4. Mobility in soil

Highly mobile in soils

#### **Mobility**

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

No information available

#### 12.6. Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors

#### 12.7. Other adverse effects

Persistent Organic Pollutant	This product does not contain any known or suspected substance
Ozone Depletion Potential	This product does not contain any known or suspected substance

### SECTION 13. DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

Waste from Residues/Unused Products	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
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<b>Contaminated Packaging</b>	Dispose of this container to hazardous or special waste collection point.
<b>Other Information</b>	Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

<b>14.1 UN-No</b>	Not Regulated
<b>14.2 Proper Shipping Name</b>	Not Regulated
<b>14.3 Hazard Class</b>	Not Regulated
<b>14.4 Packing Group</b>	Not Regulated
<b>14.5 Marine Pollutant</b>	Not Applicable
<b>14.6 Special Provisions</b>	None
<b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	No information available

### ADR

<b>14.1. UN number</b>	Not Regulated
<b>14.2. UN proper shipping name</b>	Not Regulated
<b>14.3. Transport hazard class(es)</b>	Not Regulated
<b>14.4. Packing group</b>	Not Regulated

### ICAO

<b>14.1 UN-No</b>	Not Regulated
<b>14.2 Proper Shipping Name</b>	Not Regulated
<b>14.3 Hazard Class</b>	Not Regulated
<b>14.4 Packing Group</b>	Not Regulated
<b>14.5 Environmental hazard</b>	Not Applicable
<b>14.6 Special Provisions</b>	None

### IATA

<b>14.1 UN-No</b>	Not Regulated
<b>14.2 Proper Shipping Name</b>	Not Regulated
<b>14.3 Hazard Class</b>	Not Regulated
<b>14.4 Packing Group</b>	Not Regulated
<b>14.5 Environmental hazard</b>	Not Applicable
<b>14.6 Special Provisions</b>	None

## SECTION 15: REGULATORY INFORMATION

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

#### International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS), U.S.A. (TSCA).

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Water	7732-18-5	231-791-2	-	-	X	X	KE-35400	X	-
Potassium Tetroxalate	6100-20-5	-	-	-	-	X	-	-	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS



Water	7732-18-5	X	ACTIVE	X	-	X	X	X
Potassium Tetroxalate	6100-20-5	-	-	-	-	X	X	X

**Legend:** X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

## European Union

### Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Water	7732-18-5	-	-	-
Potassium Tetroxalate	6100-20-5	-	-	-

<https://echa.europa.eu/substances-restricted-under-reach>

### Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

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

### National Regulations

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

### WGK Classification

Water endangering class = 3 (self classification)

## 15.2. Chemical safety assessment

A Chemical safety assessment according to regulation (EC) No. 1907/2006 is not required

## SECTION 16: OTHER INFORMATION

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

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H302 - Harmful if swallowed  
H312 - Harmful in contact with skin

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

**CAS** - Chemical Abstracts Service

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

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical

Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**IECSC** - Chinese Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances

**WEL** - Workplace Exposure Limit  
**ACGIH** - American Conference of Governmental Industrial Hygienists  
**DNEL** - Derived No Effect Level  
**RPE** - Respiratory Protective Equipment  
**LC50** - Lethal Concentration 50%  
**NOEC** - No Observed Effect Concentration  
**PBT** - Persistent, Bioaccumulative, Toxic

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road  
**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code  
**OECD** - Organisation for Economic Co-operation and Development  
**BCF** - Bioconcentration factor  
**TWA** TWA (time-weighted average)  
**Ceiling** Maximum limit value

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals

**TWA** - Time Weighted Average  
**IARC** - International Agency for Research on Cancer  
Predicted No Effect Concentration (PNEC)  
**LD50** - Lethal Dose 50%  
**EC50** - Effective Concentration 50%  
**POW** - Partition coefficient Octanol:Water  
**vPvB** - very Persistent, very Bioaccumulative

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association  
**MARPOL** - International Convention for the Prevention of Pollution from Ships  
**ATE** - Acute Toxicity Estimate  
**VOC** - (Volatile Organic Compound)  
**STEL** STEL (Short Term Exposure Limit)

#### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>  
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

#### Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed  
H319 - Causes serious eye irritation  
H401 - Toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H400 - Very toxic to aquatic life

<b>Prepared By</b>	Regulatory Affairs
<b>Prepared For</b>	Thermo Fisher Scientific Inc.
<b>Issue Date</b>	No information available
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<b>Reason for revision</b>	SDS sections updated.
<b>Training Advice</b>	Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

**This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.**

#### Disclaimer

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**End of Safety Data Sheet**