



SAFETY DATA SHEET

Revision Date 09-Aug-2023

WAI1 - AGHS - OSHA

Revision Number 6

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

Product Identifier

Product Name PerpHect Buffer 4.01

Product No 910425

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

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)

E-mail address wlp.techsupport@thermofisher.com

Made in USA

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

Precautionary Statements

Storage

Store in a closed container

Disposal

Dispose of contents in accordance with all local, regional, national and international guidelines.

Hazards not otherwise classified (HNOC)

No information available

Other Information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
Water	7732-18-5	>90.0%
Potassium Hydrogen Phthalate	877-24-7	0.1 - 1.0%
Potassium Hydroxide	1310-58-3	<0.1%
Amaranth Red No. 27	915-67-3	<0.1%

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

4. FIRST AID MEASURES

Description of 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 immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
Self-Protection of the First Aider	No special precautions required.

Most important symptoms and effects, both acute and delayed

Most important symptoms and effects	None reasonably foreseeable
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically
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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	Ensure adequate ventilation. Use personal protective equipment as required.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional Ecological Information. Vapors may accumulate to form explosive concentrations.

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 Wear personal protective equipment/face protection
 Ensure adequate ventilation
 Avoid contact with skin, eyes or clothing
 Avoid ingestion and inhalation

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
 Protect from direct sunlight

Incompatible Products No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

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

Legend

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value

OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits

NIOSH - National Institute for Occupational Safety and Health IDLH - Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Measures None under normal use conditions

Individual protection measures, such as personal protective equipment

Eye/face Protection Wear chemical splash goggles and face shield. If splashes are likely to occur: Face protection shield.

Skin and Body Protection Wear protective gloves/protective clothing.

Respiratory Protection None under normal use conditions. 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 4.01
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(%)	0
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

Product Information

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	LD50 > 90 mL/kg (Rat)	-	-
Potassium Hydrogen Phthalate 877-24-7	LD50 > 3200 mg/kg (Rat)	-	-
Potassium Hydroxide 1310-58-3	LD50 = 284 mg/kg (Rat)	-	-
Amaranth Red No. 27 915-67-3	LD50 = 6 g/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 The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed
Potassium Hydrogen Phthalate	877-24-7	Not listed	Not listed	Not listed	Not listed
Potassium Hydroxide	1310-58-3	Not listed	Not listed	Not listed	Not listed
Amaranth Red No. 27	915-67-3	Not listed	Not listed	Not listed	Not listed

Reproductive Effects No information available

STOT - single exposure No information available

STOT - repeated exposure No information available
Target Organs None known.

Aspiration hazard No information available

Numerical measures of toxicity - Product Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

1.01% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Potassium Hydroxide 1310-58-3	-	LC50: = 80 mg/L, 96hr static (Gambusia affinis)	-

Persistence and Degradability

Bioaccumulation/ Accumulation

No information available

Mobility

Will likely be mobile in the environment due to its water solubility

Component	log Pow
Potassium Hydrogen Phthalate 877-24-7	-3.9
Potassium Hydroxide 1310-58-3	0.83
Amaranth Red No. 27 915-67-3	-5.13

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

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

United States of America Inventory	Complies
CANINV	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

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

CANINV/ DSL/NDL - 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 Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

CWA (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) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355)

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
Potassium Hydroxide 1310-58-3	1000 lb	-	1000 lb 454 kg

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

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 Regulatory Affairs

Prepared For Thermo Fisher Scientific Inc.©

Issue Date No information available

Revision Date 09-Aug-2023

Reason for revision SDS sections updated.

Disclaimer

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End of Safety Data Sheet