

SAFETY DATA SHEET

Be Right[™]

Issue Date 04-Mar-2021	Revision Date 26-Jan-2024	Version 11.3	Page 1 / 14
	1. IDENTIFICAT	ION	
<u>Product identifier</u> Product Name	Buffer Solution Hardness 1 pH 10	.1 ± 0.1	
Other means of identification			
Product Code(s)	42426		
Safety data sheet number	M00305		
Recommended use of the chemical and restrictions on use			
Recommended Use	Laboratory reagent. Hardness det	ermination.	
Uses advised against	Consumer use.		
Restrictions on use	For Laboratory Use Only.		
Details of the supplier of the safety data sheet			
Manufacturer Address			

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Chronic aquatic toxicity	Category 3

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word Warning



Hazard statements

H315 - Causes skin irritation H319 - Causes serious eye irritation H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P332 + P313 - If skin irritation occurs: Get medical attention
P362 - Take off contaminated clothing and wash before reuse
P280 - Wear protective gloves, protective clothing, eye protection, and face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical attention
P273 - Avoid release to the environment
P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards Known

Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

<u>Mixture</u>

Chemical	Family
Chemical	nature

Mixture. aqueous solution.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
2-Amino-2-methyl-1-propanol	124-68-5	40 - 50%	-
Acetic acid	64-19-7	<10%	-
Magnesium acetate	142-72-3	<1%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing.
Mant in anti-ut a martine and affe	and both power and delayed

Most important symptoms and effects, both acute and delayed

Symptoms

Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians 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	Caution: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	No information available.
Hazardous combustion products	Nitrogen oxides. Carbon monoxide, Carbon dioxide.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

U.S. Notice	Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.
Personal precautions, protective ec	quipment and emergency procedures
Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.
Other Information	Refer to protective measures listed in Sections 7 and 8.
Environmental precautions	
Environmental precautions	Prevent further leakage or spillage if safe to do so.
Methods and material for containm	ent 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 (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.
Reference to other sections	See section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

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

contaminated clothing and wash before reuse.

Conditions for safe storage,	including any	y incom	patibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Flammability class	Class IIIB

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Acetic acid	STEL: 15 ppm	TWA: 10 ppm	IDLH: 50 ppm
CAS#: 64-19-7	TWA: 10 ppm	TWA: 25 mg/m ³	TWA: 10 ppm
		(vacated) TWA: 10 ppm	TWA: 25 mg/m ³
		(vacated) TWA: 25 mg/m ³	STEL: 15 ppm
			STEL: 37 mg/m ³

Appropriate engineering controls Engineering Controls

Showers Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

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. Wear breathing apparatus if exposed to vapors/dusts/aerosols.

Hand ProtectionWear suitable gloves. Impervious gloves. Gloves must be inspected prior to use. The
selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and
the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or
nitrile rubber category III according to EN 374-1:2016. Barrier creams may help to protect
the exposed areas of skin.

- **Eye/face protection** If splashes are likely to occur, wear safety glasses with side-shields.
- Skin and body protection Wear suitable protective clothing. Long sleeved clothing.
- **General Hygiene Considerations** Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.
- **Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

Thermal hazards

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state		Liquid		
Appearance	aqueous solution		Color	Colorless to light yellow
Odor	Vinegar		Odor threshold	No data available

None under normal processing.

Property	Values	Remarks • Method
Molecular weight	No data available	
рН	10.0	
Melting point / freezing point	-16 °C / 3.2 °F	
Initial boiling point and boiling range	104 °C / 219.2 °F	
Evaporation rate	0.97 (water = 1)	
Vapor pressure	23.027 mm Hg / 3.07 kPa at 25 °C / 77 °	۴
Relative vapor density	0.6	
Specific gravity - VALUE 1	1.033	
Partition coefficient	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

Other information

Metal Corrosivity

Steel Corrosion Rate Aluminum Corrosion Rate 0.05 mm/yr / 0 in/yr

Volatile Organic Compounds (VOC) Content

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
2-Amino-2-methyl-1-propanol	124-68-5	No data available	-
Acetic acid	64-19-7	No data available	Х
Magnesium acetate	142-72-3	No data available	-

Explosive properties

Upper explosion limit

No data available

EN / AGHS

Lower explosion limit

Flammable properties

Flash point Method

Flammability Limit in Air Upper flammability limit: Lower flammability limit:

Oxidizing properties

Bulk density

Product NameBuffer Solution Hardness 1 pH 10.1 ± 0.1Revision Date26-Jan-2024Page6 / 14

No data available

> 97 °C / 206.6 °F CC (closed cup)

No data available No data available

No data available.

No data available

10. STABILITY AND REACTIVITY

Reactivity Not applicable.

<u>Chemical stability</u> Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization

None under normal processing.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products

Nitrogen oxides. Carbon dioxide. Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

May cause irritation of respiratory tract.
Irritating to eyes. Causes serious eye irritation.
Causes skin irritation.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Redness. May cause redness and tearing of the eyes.

Acute toxicity

Based on available data, the classification criteria are not met

Mixture

No data available.

Ingredient Acute Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
2-Amino-2-methyl-1-p ropanol (40 - 50%) CAS#: 124-68-5	Rat LD₅₀	2900 mg/kg	None reported	None reported	IUCLID
Acetic acid (<10%) CAS#: 64-19-7	Rat LD ₅₀	3310 mg/kg	None reported	None reported	Vendor SDS

Unknown Acute Toxicity

0.0023% of the mixture consists of ingredient(s) of unknown toxicity.

Acute Toxicity Estimations (ATE)

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

ATEmix (oral)	No information available mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

Skin corrosion/irritation

Classification based on data available for ingredients. Irritating to skin.

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Acetic acid (<10%) CAS#: 64-19-7	Standard Draize Test	Rabbit	0.050 mg	None reported	Corrosive to skin	HSDB

Serious eye damage/irritation

Classification based on data available for ingredients. Irritating to eyes.

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data No data available.

Respiratory or skin sensitization

EN / AGHS

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Sensitization Data

Test data reported below.

Skin Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
2-Amino-2-methyl-1-p ropanol (40 - 50%) CAS#: 124-68-5	Buehler Test	Guinea pig	Not confirmed to be a skin sensitizer	IUCLID

STOT - single exposure

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Single Exposure Data No data available.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

No data available.

Carcinogenicity

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
2-Amino-2-methyl-1-propa	124-68-5	-	-	-	-
nol					
Acetic acid	64-19-7	-	-	-	-
Magnesium acetate	142-72-3	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA	Does not apply

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Mixture invitro Data

EN / AGHS

No data available.

Substance invitro Data

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
2-Amino-2-methyl-1-p ropanol (40 - 50%) CAS#: 124-68-5	Mutation in microorganisms	Salmonella typhimurium	5 mg/plate	None reported	Negative	ECHA

Mixture invivo Data

No data available.

Substance invivo Data

No data available.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Reproductive Toxicity Data

Test data reported below.

Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
2-Amino-2-methyl-1-p ropanol (40 - 50%) CAS#: 124-68-5	Rat NOAEL	300 mg/kg	15 days	No reproductive or developmental toxic effects observed	ECHA

Aspiration hazard

Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

EcotoxicityHarmful to aquatic life with long lasting effects.Unknown aquatic toxicity0.0023% of the mixture consists of components(s) of unknown hazards to the aquatic
environment.

<u>Mixture</u>

Aquatic Acute Toxicity No data available.

Aquatic Chronic Toxicity No data available.

Substance

Aquatic Acute Toxicity Test data reported below.

Fish

EN	1	AGHS			

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Acetic acid (<10%) CAS#: 64-19-7	96 hours	Pimephales promelas	LC50	79 mg/L	GESTIS

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
2-Amino-2-methyl-1-p ropanol (40 - 50%) CAS#: 124-68-5	48 Hours	Daphina magna	EC50	65 mg/L	ECHA
Acetic acid (<10%) CAS#: 64-19-7	48 Hours	None reported	LC50	90.1 mg/L	GESTIS

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Mixture

No data available.

Bioaccumulation There is no data for this product **Mixture** No data available.

Partition coefficient

Mobility

Soil Organic Carbon-Water Partition Coefficient

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Not applicable

Not applicable

waste contractors for pertinent local information on the disposal of this article.

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
US EPA Waste Number	Not applicable
Special instructions for disposal	Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. If permitted by regulation. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Check with national, local municipal and state authorities and water to contract a participant local information on the diagonal of this action.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG	Not regulated
Note:	No special precautions necessary.

Additional information

15. REGULATORY INFORMATION

National Inventories	
TSCA	Complies
DSL/NDSL	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories	
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
TCSI	Complies
AICS	Complies
NZIoC	Complies

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

TCSI - Taiwan Chemical Substances Inventory

AICS - Australian Inventory of Chemical Substances

NZIOC - New Zealand Inventory of Chemicals

US 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

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable	CWA - Toxic Pollutants	CWA - Priority	CWA - Hazardous
EN / AGHS				Page 11/14

	Quantities		Pollutants	Substances
Acetic acid	5000 lb	-	-	Х
64-19-7				

<u>CERCLA</u>

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetic acid	5000 lb	-	RQ 5000 lb final RQ
64-19-7			RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

IMERC: Not applicable

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
2-Amino-2-methyl-1-propanol 124-68-5	Х	Х	Х
Acetic acid	Х	Х	Х
64-19-7			

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Acetic acid	180.0551	21 CFR 184.1005

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Special Comments

None

Additional information

Global Automotive Declarable Substance List (GADSL)

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thersholds
Magnesium acetate	Declarable Substance (FI)	1 %
142-72-3		0.1 %

NFPA and HMIS Classifications

NFPA	Health hazards - 2	Flammability - 1	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 2	Flammability - 1	Physical hazards - 0	Personal protection -
				Х
				- 1

EN / AGHS

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

ACGIH ATSDR CCRIS CDC CEPA CICAD ECHA EEA EPA ERMA ECOSARS FDA GESTIS HSDB INERIS IPCS INCHEM IUCLID NITE NIH NIOSH LOLI NDF NICNAS NIOSH IDLH OSHA PEEN RTECS SIDS SYKE USDA USDC WHO	n 8: EXPOSURE C	ACGIH (American Conference of Governmental Industrial Hygienists) ATSDR (Agency for Toxic Substances and Disease Registry) CCRIS (Chemical Carcinogenesis Research Information System) CDC (Center for Disease Control) CEPA (Canadian Environmental Protection Agency) CICAD (Concise International Chemical Assessment Documents) ECHA (The European Chemicals Agency) EEA (European Environment Agency) EFA (European Environment Agency) EFA (European Environmental Risk Management Authority) Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite TM FDA (Food & Drug Administration) GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance) HSDB (Hazardous Substances Data Bank) INERIS (The National Industrial Environment and Risks Institute) IPCS INCHEM (International Programme on Chemical Safety) IUCLID (The International Uniform Chemical Information Database) Japan National Institute of Technology and Evaluation (NITE) NIH (National Institute of Occupational Safety and Health) LOLI (List of Lists - An International Chemical Regulatory Database) no data Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) Immediately Dangerous to Life or Health OSHA (Occupational Safety and Health Administration of the US Department of Labor) PEEN (Pan European Ecological Network) RTECS (Registry of Toxic Effects of Chemical Substances) SIDS (Screening Information Dataset) for High Volume Chemicals The Finnish Environment Institute (SYKE) USDA (United States Department of Agriculture) USDA (United States Department of Commerce) WHO (World Health Organization)		
TWA	TWA (time-weight		STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowab	le Concentration	Ceiling	Ceiling Limit Value
Х	Listed		Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN* RSP+ C M	Skin designation Respiratory sensit Carcinogen mutagen	ization	SKN+ ** R	Skin sensitization Hazard Designation Reproductive toxicant
Prepared By		Hach Product Compli	ance Department	
Issue Date		04-Mar-2021		
Revision Date		26-Jan-2024		
Revision Note		None		

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

HACH COMPANY©2023

End of Safety Data Sheet