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

MSDS No: M00305

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Buffer Solution Hardness 1 pH 10.1 ± 0.1
Catalog Number: 42432

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

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M00305
Chemical Name: Not applicable
CAS Number: Not applicable
Additional CAS No. (for hydrated forms): Not applicable
Chemical Formula: Not applicable
Chemical Family: Mixture
Intended Use: Laboratory Reagent Hardness determination

2. HAZARDS IDENTIFICATION

GHS Classification:
Hazard categories: . Serious Eye Damage/Eye Irritation:Eye Irrit. 2 Skin Corrosion/Irritation: Skin Irrit. 2 Hazardous to the Aquatic Environment: Aquatic Chronic 3
GHS Label Elements:
WARNING

Hazard statements: . Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.
Precautionary statements: Wear protective gloves / protective clothing / eye protection / face protection. If eye irritation persists: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. Dispose of contents/container according to state, local, federal or national regulations. Handle environmental release according to local, state, federal, provincial requirements. Wear eye protection. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician if you feel unwell.
HMIS:
Health: 1
Flammability: 1
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.
NFPA:
Health: 2
Flammability: 1
Reactivity: 0
Symbol: Not applicable
WHMIS Hazard Classification: Class D, Division 2, Subdivision B - Toxic material (other toxic effects)
WHMIS Symbols: Other Toxic Effects

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Aminomethylpropanol

CAS Number: 124-68-5
Chemical Formula: $C_4H_{11}NO$
GHS Classification: Flam. Liq. 4, H227; Acute Tox. 5 -Orl, H303; Acute Tox. 5 -Derm, H313; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Aquatic Chronic 3, H412
Percent Range (Trade Secret): < 50
Percent Range Units: weight / weight
PEL: Not established
TLV: Not established

WHMIS Symbols: CorrosiveFlammable / Combustible

Acetic Acid

CAS Number: 64-19-7
Chemical Formula: $C_2H_4O_2$
GHS Classification: Flam. Liq 3, H226; Skin Corr. 1A, H314
Percent Range (Trade Secret): < 10.0
Percent Range Units: weight / weight
PEL: 10 ppm (25 mg/m^3)
TLV: 10 ppm (25 mg/m^3)

WHMIS Symbols: CorrosiveFlammable / Combustible

Magnesium acetate

CAS Number: 142-72-3
Chemical Formula: Mg(C2H6O2)2
GHS Classification: Not hazardous per GHS regulations
Percent Range (Trade Secret): < 1.0
Percent Range Units: weight / weight
PEL: 15 mg/m3 as inhalable dust; 5 mg/m3 as respirable dust
TLV: 10 mg/m3 as inhalable dust; 3 mg/m3 as respirable dust

WHMIS Symbols: Not applicable

Hazardous Components according to GHS: No

Demineralized Water

CAS Number: 7732-18-5
Chemical Formula: H_2O
GHS Classification: Not a dangerous substance according to GHS.
Percent Range (Trade Secret): 35.0 - 45.0
Percent Range Units: weight / weight
PEL: Not established
TLV: Not established

WHMIS Symbols: Not applicable

Ethylenediaminetetraacetic Acid, Magnesium Disodium Salt

CAS Number: 14402-88-1
Chemical Formula: $C_{10}H_{12}MgN_2O_8Na_2$
GHS Classification: Not hazardous per GHS classification criteria
Percent Range (Trade Secret): < 1.0
Percent Range Units: weight / weight
PEL: Not established
TLV: Not established

WHMIS Symbols: Other Toxic Effects

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.
Advice to doctor: Treat symptomatically.
Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician if irritation develops.
Skin Contact (First Aid): Wash skin with plenty of water. Call physician if irritation develops. Remove contaminated clothing.
Inhalation: Remove to fresh air. Give artificial respiration if necessary.
Ingestion (First Aid): Give large quantities of water. If you feel unwell, contact a physician. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material is not classified as flammable according to GHS criteria. Can burn in fire, releasing toxic vapors.
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.
Extinguishing Media: Water. Dry chemical. Carbon dioxide Alcohol foam.
Extinguishing Media NOT To Be Used: Not applicable
Fire / Explosion Hazards: May react violently with: strong oxidizers
Hazardous Combustion Products: Toxic fumes of: nitrogen oxides. carbon monoxide, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Spill Response 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.
Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.
Clean-up Technique: If permitted by regulation, Cover spilled material with a dry acid, such as citric or boric. Scoop up slurry into a large beaker. Dilute with a large excess of water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a weak acid solution. Otherwise, Pick up spill for disposal and place in a closed container Dispose of in accordance with local, state and federal regulations or laws.
Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.
DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin clothing Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.
Storage: Store away from: oxidizers Protect from: heat
Flammability Class: Class IIIB

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Maintain general industrial hygiene practices when using this product.
Personal Protective Equipment:
Eye Protection: chemical splash goggles
Skin Protection: lab coat nitrile gloves In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.
Inhalation Protection: adequate ventilation
Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: mist/vapor Wash thoroughly after handling. Keep away from: oxidizers
TLV: Not established
PEL: Not established

For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, yellow liquid
Physical State: Liquid
Molecular Weight: Not applicable
Odor: Vinegar
Odor Threshold: Not established
pH: 10.0
Metal Corrosivity:
Corrosivity Classification: Not classified as corrosive to metals according to GHS criteria.
Steel: 0.002 in/yr
Aluminum: Not determined
Specific Gravity/ Relative Density (water = 1; air =1): 1.033
Viscosity: Not determined
Solubility:
Water: Soluble
Acid: Soluble
Other: Not determined
Partition Coefficient (n-octanol / water): Not applicable
Coefficient of Water / Oil: Not determined
Melting Point: -16 °C (3 °F)
Decomposition Temperature: Not determined
Boiling Point: 104.5 °C (220 °F)
Vapor Pressure: 23 mm Hg @ 25 °C (77 °F)
Vapor Density (air = 1): 0.6
Evaporation Rate (water = 1): 0.97
Volatile Organic Compounds Content: Not determined
Flammable Properties: Material is not classified as flammable according to GHS criteria. Can burn in fire, releasing toxic vapors.
Flash Point: > 97.2 °C (> 207 °F)
Method: Closed cup
Flammability Limits:
Lower Explosion Limits: Not determined
Upper Explosion Limits: Not determined
Autoignition Temperature: Not determined
Explosive Properties:
Not classified according to GHS criteria.
Oxidizing Properties:
Not classified according to GHS criteria.
Reactivity Properties:
Not classifed as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.
Gas under Pressure:
Not classified according to GHS criteria.
Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Mechanical Impact: None reported
Static Discharge: None reported.
Reactivity / Incompatibility: May react violently in contact with: oxidizers
Hazardous Decomposition: Toxic fumes of: nitrogen oxides carbon dioxide carbon monoxide
Conditions to Avoid: Extreme temperatures

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: Summary of findings reported in the literature follow.
Acetic acid exists only in a ionized form, therefore it is not included in determining the hazards of the mixture.

Toxicologically Synergistic Products: None reported
Acute Toxicity: Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data Route Data Given Below Based on classification principles, the classification criteria are not met.
Oral Rat LD50 = 5566 mg/kg
Dermal Rabbit LD50 = 3839 mg/kg
Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.
Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.
Skin Corrosion/Irritation: Irritating to skin.
Eye Damage: Irritating to eyes.
Sensitization: Based on classification principles, the classification criteria are not met.
CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): Based on classification principles, the classification criteria are not met.
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.
This product does NOT contain any OSHA listed carcinogens.
Symptoms/Effects:
Ingestion: May cause: abdominal pain gastrointestinal tract irritation nausea diarrhea vomiting
Inhalation: No effects anticipated Large doses may cause: respiratory tract irritation
Skin Absorption: May be harmful if absorbed through skin.
Chronic Effects: Chronic overexposure may cause eye irritation skin irritation
Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions Respiratory conditions

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
Do not place in landfil. Recycle appropriately. Do not release into the environment.
Method Used for Estimation of Aquatic Toxicity of Mixture CEPA Categorization: Not Persistent or Bioaccumulative. Not inherently toxic to aquatic organisms. M-factor (Multiplier) for highly toxic ingredients: 1
Ingredient Ecological Information: Aminomethylpropanol: 96 hr Pleuronectes platessa LC50 = 184 mg/L; 48 hr Daphnia magna EC50 = 193 mg/L; 24 hr Daphina magna EC50 = 65 mg/L; 72 hr Scenedesmus subspicatus EC50 = 520 mg/L
CEPA categorization for ingredients are as follows:
Aminomethylpropanol: Not persistent, bioaccumulative or inherently toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable
Special Instructions (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. Otherwise, Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.
Empty Containers: Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste.
NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.:
D.O.T. Proper Shipping Name: Not Currently Regulated
--
Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA

T.D.G.:
Proper Shipping Name: Not Currently Regulated
--
Hazard Class: NA
Subsidiary Risk: NA
UN Number/PIN: NA
Packing Group: NA
I.C.A.O.:
I.C.A.O. Proper Shipping Name: Not Currently Regulated
--
Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA
I.M.O.:
Proper Shipping Name: Not Currently Regulated
--
Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA
Additional Information: There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:
O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)
E.P.A.:
S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard
S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.
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302 (EHS) TPQ (40 CFR 355): Not applicable
304 CERCLA RQ (40 CFR 302.4): Acetic acid 5000 lbs.
304 EHS RQ (40 CFR 355): Not applicable
Clean Water Act (40 CFR 116.4): Acetic acid - RQ 5000 lbs.
RCRA: Contains no RCRA regulated substances.
State Regulations:
California Prop. 65: No Prop. 65 listed chemicals are present in this product.
Identification of Prop. 65 Ingredient(s): Not applicable
California Perchlorate Rule CCR Title 22 Chap 33: Not applicable
Trade Secret Registry: Not applicable
National Inventories:
U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).
CAS Number: Not applicable
Canadian Inventory Status: All ingredients of this product are DSL/NDSL Listed.
EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.
Australian Inventory (AICS) Status: All ingredients are listed.
New Zealand Inventory (NZIoC) Status: All components either listed or exempt.
Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.
Japan (ENCS) Inventory Status: All components either listed or exempt.
China (PRC) Inventory (MEP) Status: All components either listed or exempt.

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. In-house information. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Technical Judgment. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992.

Complete Text of H phrases referred to in Section 3: H315 Causes skin irritation. H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects.

Revision Summary: . Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Date of MSDS Preparation:

Day: 11

Month: December

Year: 2014

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

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.