

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

MSDS No: M02376

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Free Ammonia Reagent Solution, 4ML

Catalog Number: 2877336

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: M02376

Chemical Name: Not applicable

CAS Number: Not applicable

Additional CAS No. (for hydrated forms): Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Intended Use: Determination of ammonium nitrogen

2. HAZARDS IDENTIFICATION

GHS Classification:

Hazard categories: Skin Corrosion/Irritation: Skin Corr. 1A

GHS Label Elements:

DANGER



Hazard statements: . May be corrosive to metals. Causes severe skin burns and eye damage.

Contact with acids liberates toxic gas.

Precautionary statements: Wash thoroughly after handling. Wear protective gloves / protective clothing / eye protection / face protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Do not breathe dust/fume/gas/mist/vapours/spray. Wear eye protection. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove victim/person to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Dispose of contents/container according to state, local, federal or national regulations.

HMIS:

Health: 3

Flammability: 0

Reactivity: 1

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 3

Flammability: 0

Reactivity: 1

Symbol: Not applicable

WHMIS Hazard Classification: Class E - Corrosive material

WHMIS Symbols: Corrosive

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Potassium Hydroxide

CAS Number: 1310-58-3

Chemical Formula: KOH

GHS Classification: Acute Tox. 4 - Or1, H302; Skin Corr. 1A, H314; Met Corr. 1, H290; Aquatic Acute 3, H402

Percent Range: 10-15

Percent Range Units: weight / volume

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: Corrosive/Acute Poison

Sodium Hypochlorite

CAS Number: 7681-52-9

Chemical Formula: NaOCl

GHS Classification: Skin Corr. 1B, H314; Aquatic Acute 1, H400

Percent Range: < 0.1

Percent Range Units: volume / volume

PEL: Not established

TLV: Not established (0.5 ppm as chlorine)

WHMIS Symbols: Corrosive/Other Toxic Effects

Hazardous Components according to GHS: No

Demineralized Water

CAS Number: 7732-18-5

Chemical Formula: H₂O

GHS Classification: Not a dangerous substance according to GHS.

Percent Range: > 90.0

Percent Range Units: volume / volume

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

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.

Skin Contact (First Aid): Remove contaminated clothing. Wash skin with plenty of water for 15 minutes. Call physician immediately.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

Ingestion (First Aid): Do not induce vomiting. Give 1-2 glasses of water. Never give anything by mouth to an unconscious person. Call physician immediately.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

Extinguishing Media: Water.

Extinguishing Media NOT To Be Used: Not applicable

Fire / Explosion Hazards: Contact with metals gives off hydrogen gas which is flammable

Hazardous Combustion Products: This material will not burn.

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.

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: 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. Use sulfuric or citric acid to lower pH. Use soda ash or sodium bicarbonate to increase pH. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a weak acid solution.

Evacuation Procedure: Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled. If conditions warrant, increase the size of the evacuation.

DOT Emergency Response Guide Number: 154

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: acids metals organic peroxides combustible materials Protect from: heat freezing

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Have an eyewash station nearby. Have a safety shower nearby. Use a fume hood to avoid exposure to dust, mist or vapor. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: chemical splash goggles

Skin Protection: disposable latex gloves lab coat

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: mist/vapor Wash thoroughly after handling. Protect from: heat freezing

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, colorless liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Irritating

Odor Threshold: Not determined

pH: 13.3

Metal Corrosivity:

Corrosivity Classification:

Steel: Not determined

Aluminum: Not determined

Specific Gravity/ Relative Density (water = 1; air =1): Not determined

Viscosity: Not determined

Solubility:

Water: Miscible

Acid: Reactive

Other: Not determined

Partition Coefficient (n-octanol / water): Not applicable

Coefficient of Water / Oil: Not applicable

Melting Point: Not determined

Decomposition Temperature: Not determined

Boiling Point: Not determined

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined
Evaporation Rate (water = 1): Not determined
Volatile Organic Compounds Content: Not applicable
Flammable Properties: Material will not burn.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not applicable
Explosive Properties:
Not classified according to GHS criteria.
Oxidizing Properties:
Not classified according to GHS criteria.
Reactivity Properties:
Not classified 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: acids metals organic peroxides combustible materials
Hazardous Decomposition: Contact with metals may release flammable hydrogen gas.
Conditions to Avoid: Extreme temperatures

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.
Toxicologically Synergistic Products: None reported
Acute Toxicity: Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data
ATE Oral Rat LD50 = 2649mg/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: Corrosive to skin.
Eye Damage: Corrosive 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.
Potassium hydroxide: Cytogenic analysis rat Ascites tumor: 180 mg/Kg; Cytogenic analysis hamster Ovary: 12 mmol/L;
Sodium hypochlorite: Cytogenic analysis in human lymphocytes @ 100 ppm/24Hr: Sister chromatid exchange in human embryo @ 149 mg/L;
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: Harmful Causes: abdominal pain vomiting Can cause: death
Inhalation: Causes: severe burns sneezing coughing discomfort bronchospasm Can cause: death
Skin Absorption: None Reported
Chronic Effects: None reported
Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions Respiratory conditions

12. ECOLOGICAL INFORMATION

Product Ecological Information:

No ecological data available for this product.

Ingredient Ecological Information: Sodium hypochlorite: Fish Toxicity: LC50 (48 hr) rainbow trout 0.07 mg/L; LC50 (96 hr) fathead minnow 5.9 mg/L; KOH: 96 hr *Gambusia affinis* LC50 = 80 mg/L

CEPA statement: Water, Potassium Hydroxide: Persistent, Not bioaccumulative or inherently toxic to aquatic organisms.

CEPA statement: Sodium Hypochlorite: Inherently toxic to aquatic organisms, not persistent or bioaccumulative.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: D002

Special Instructions (Disposal): Dilute material with excess water making a weaker than 5% solution. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Open cold water tap completely, slowly pour the reacted material to the drain. Flush system with plenty of water.

Empty Containers: Dispose of empty container as normal trash. Rinse three times with an appropriate solvent. 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: Potassium Hydroxide, Solution

Hazard Class: 8

Subsidiary Risk: NA

ID Number: UN1814

Packing Group: II

T.D.G.:

Proper Shipping Name: Potassium Hydroxide, Solution

Hazard Class: 8

Subsidiary Risk: NA

UN Number/PIN: 1814

Packing Group: II

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Potassium Hydroxide Solution

Hazard Class: 8

Subsidiary Risk: NA

ID Number: UN1814

Packing Group: II

I.M.O.:

Proper Shipping Name: Potassium Hydroxide Solution

Hazard Class: 8

Subsidiary Risk: NA

ID Number: UN1814

Packing Group: II

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): Potassium hydroxide 1000 lbs.
304 EHS RQ (40 CFR 355): Not applicable
Clean Water Act (40 CFR 116.4): Potassium hydroxide - RQ 1000 lbs.
RCRA: Contains RCRA regulated substances. See Section 13, EPA Waste ID Number.

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): None

California Perchlorate Rule CCR Title 22 Chap 33: No

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 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: Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Technical Judgment. In-house information. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. 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: H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H400 Very toxic to aquatic life.

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: 16

Month: June

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.

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