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

MSDS No: M00216

SAFETY DATA SHEET

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

Product Name: Potassium Hydroxide Solution 8 N
Catalog Number: 28249

HACH LANGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49-(0)211-52880
E-mail:SDS@hach-lange.de

Emergency Telephone Numbers:
(Poison Information Center Mainz)
(+49 (0) 6131 19240) 24 HR

Responsible Department:
HACH LANGE LTD
Unit 1, Chestnut Road
Western Industrial Estate, IRL-Dublin 12 Ireland
+353(0)1 4602522
E-mail: info@hach-lange.ie

Office numbers are not 24 hr numbers.

HACH LANGE LTD
Pacific Way
Salford, GB-Manchester United Kingdom M50 1DL
+44 (0)161 872 14 87
E-mail: info@hach-lange.co.uk

SDS Number: M00216
Chemical Name: Not Applicable
Chemical Formula: Not Applicable
Chemical Family: Not applicable
Use of the substance/preparation: Calcium determination Hardness determination Buffer
CAS No.: Not Applicable
Hazard: Causes severe burns.
Safety Data Sheet written according to Regulation (EU) No. 1907/2006 (REACH):
Date of MSDS Preparation:
Day: 01
Month: October
Year: 2010

2. HAZARDS IDENTIFICATION

Emergency Overview:
Appearance: Clear, colorless liquid
Odor: Irritating
EU Symbols: C - CORROSIVE
R PHRASES: R 22: Harmful if swallowed. R 35: Causes severe burns.
Protective Equipment:
Potential Health Effects:
Eye Contact (EC): Causes severe burns
Skin Contact (EC): Causes severe burns
Skin Absorption (EC): None Reported
Target Organs (SA E): None Reported
Ingestion (EC): Harmful Causes: abdominal pain vomiting Can cause: death

Target Organs (Ing E): None Reported
Inhalation: Causes: severe burns sneezing coughing discomfort bronchospasm Can cause: death
Target Organs (Inh E): None Reported
Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions Respiratory conditions
Chronic Effects: None reported
Cancer / Reproductive Toxicity Information:
This product does NOT contain any IARC listed chemicals.
Additional Cancer / Reproductive Toxicity Information: None reported
Toxicologically Synergistic Products: None reported

3. COMPOSITION / INFORMATION ON INGREDIENTS

Demineralized Water
EEC Number: 2317912
CAS No.: 7732-18-5
Percent Range: 50,0 - 60,0
Percent Range Units: volume / volume
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: Not established

Potassium Hydroxide
EEC Number: 2151813
CAS No.: 1310-58-3
Percent Range: 40,0 - 50,0
Percent Range Units: weight / volume
Ingredient EEC Symbol: C - CORROSIVE Xn - HARMFUL
Ingredient R phrase(s): R 22: Harmful if swallowed. R 35: Causes severe burns.
TLV: 2 mg/m^3 Ceiling
PEL: 2 mg/m^3 Ceiling
EU Occupational Exposure Limits: 2 mg/m^3

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.
Skin Contact (First Aid): Wash skin with plenty of water for 15 minutes. Remove contaminated clothing. Call physician immediately.
Ingestion (First Aid): Do not induce vomiting. Give 1-2 glasses of water. Call physician immediately. Never give anything by mouth to an unconscious person.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
Hazardous Combustion Products: This material will not burn.
Fire / Explosion Hazards: Contact with metals gives off hydrogen gas which is flammable
Static Discharge: None reported.
Mechanical Impact: None reported
Extinguishing Media: Water.
Extinguishing Media NOT To Be Used: Not applicable
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.
Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment.
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 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.
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.

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
Special Packaging Instructions: Not applicable
Use of the substance/preparation: Calcium determination Hardness determination Buffer

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

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: safety glasses with top and side shields
Skin / Hand Protection: disposable latex gloves lab coat
Inhalation Protection: laboratory fume hood
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
EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid
Physical State: Liquid
Odor: Irritating
pH: 14
Vapor Pressure: 450,5 mm Hg @ 100 °C
Vapor Density (air = 1): Not determined
Boiling Point: > 100 °C >212 °F
Melting Point: Not determined
Flash Point: Not applicable
Method: Not applicable
Autoignition Temperature: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Specific Gravity/ Relative Density (water = 1; air =1): 1,3
Evaporation Rate (water = 1): 0,18
Volatile Organic Compounds Content: Not applicable
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
Water: Soluble
Acid: Soluble
Other: Not determined
Metal Corrosivity:
Steel: Not determined
Aluminum: 21,311 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Extreme temperatures
Reactivity / Incompatibility: May react violently in contact with: acids metals organic peroxides combustible materials
Hazardous Decomposition: Contact with metals may release flammable hydrogen gas.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:
LD50: None Reported
LC50: None Reported
Dermal Toxicity Data: None Reported
Skin and Eye Irritation Data: None Reported
Mutation Data: None Reported
Reproductive Effects Data: None Reported
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Ingredient Toxicological Data: Potassium Hydroxide Oral Rat LD50 = 365mg/kg
This product does NOT contain any IARC listed chemicals.

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product.
Ingredient Ecological Information: --
No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

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

I.C.A.O.:
I.C.A.O. Proper Shipping Name: Potassium Hydroxide Solution
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ICAO Hazard Class: 8
ICAO Subsidiary Risk: NA
ICAO UN/ID Number: UN1814
ICAO Packing Group: II
I.M.O.:
I.M.O. Proper Shipping Name: Potassium Hydroxide Solution
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I.M.O. Hazard Class: 8
I.M.O. Subsidiary Risk: NA
I.M.O. UN Number: UN1814
I.M.O. Packing Group: II
A.D.R.:
A.D.R. Proper Shipping Name: Potassium Hydroxide Solution
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A.D.R Hazard Class: 8
A.D.R. Subsidiary Risk: NA
A.D.R. UN-Number:: UN1814
A.D.R. 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

National Inventories:
EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.
EEC Number: Not applicable
EEC LABEL COPY:
EU Symbols: C - CORROSIVE
R PHRASES: R 22: Harmful if swallowed. R 35: Causes severe burns.
S PHRASES: S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Ingredients: Potassium Hydroxide;

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.

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.