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

MSDS No: M00554

SAFETY DATA SHEET

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

Product Name: Sodium Hydroxide $3,636 \pm 0,020 \text{ N}$

Catalog Number: 1438001

HACH LANGE GmbH Emergency Telephone Numbers: Willstätterstrasse 11 (Poison Information Center Main)

40549 Düsseldorf, Germany (+49 (0) 6131 19240) 24 HR

+49 -(0)211 -52880

SDS Number: M00554

Chemical Name: Not applicableChemical Formula: Not applicableChemical Family: Not applicable

Use of the substance/preparation: Laboratory Reagent

CAS No.: Not applicable Hazard: Causes burns.

Date of MSDS Preparation:

Day: 12 Month: 01 Year: 2006

Additional Emergency Response Numbers: Austria: +49 (0)6131 19240, Belgium: +32 -(0)70 -245245, France: +33

(0)1-40370404, Italy: +39 -0266101029, Netherlands: +31 -(0)30-2748888, Switzerland: +41 -(0)1-2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS

Sodium Hydroxide

EEC Number: 2151855 **CAS No.:** 13107-22 **Percent Range:** 5,0 - 15,0

Percent Range Units: weight / weight
Ingredient EEC Symbol: C - CORROSIVE

Ingredient R phrase(s) (R ph rase details given in Heading 16): R 35

TLV: 2 mg/m³ *PEL:* 2 mg/m³

EU Occupational Exposure Limits: 2 mg/m³

Demineralized Water

EEC Number: 2317912 *CAS No.:* 7732185

Percent Range: 80,0 - 90,0

Percent Range Units: volume / volume **Ingredient EEC Symbol:** Not applicable

Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable

TLV: Not establishedPEL: Not established

EU Occupational Exposure Limits: Not established

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, colorless liquid

Odor: None

EU Symbols: C - CORROSIVE

R PHRASES: R 35: Causes severe burns.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): Ca uses burns
Skin Contact (EC): Causes burns
Skin Absorption (EC): None Reported
Target Organs (SA E): None Reported

Ingestion (EC): Harmful Causes: severe burns Can cause: rapid pulse and respirations vomiting shock collapse

Target Organs (Ing E): None Reported

Inhalation: Causes: burns

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

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

imme diately.

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. Ca ll physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.

Hazardous Combustion Products: None reported

Fire / Explosion Hazards: May react violently with: strong acids flam mable liquids organic materials

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Use media appropriate to surrounding fire conditions

Extinguishing Media NOT To Be Used: Not applicable

Fire Fighting Inst ruction: 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: Releases of this material m ay contaminate the environment. Absorb spilled liquid with non reactive sorbent material. Stop spilled material from being released to the environment. Dike the spill to contain material for later disposal.

Clean -up Technique: Cover spilled material with a dry acid, such as citric or boric. Scoop up slurry into a large beaker. 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 spi Il 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: Keep away from: acids flammable liquids organic material Store in a cool, dry place.

Special Packaging Instructions: Not applicable
Use of the substance/preparation: Laboratory Reagent

8. EXPOSURE CO NTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Have a safety shower nearby. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: chemical splas h goggles

Skin / Hand 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. Kee p away from: acids/acid fumes organic materials

TLV: Not established PEL: Not established

EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid

Physical State: Liquid

Odor: None *pH:* >14

Vapor Pressure: Not determined

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 (water = 1): 1,136
Evaporation Rate (water = 1): 0,26

Volatile Organic Compounds Content: Not applicable Partition Coefficient (n -octanol/water): Not applicable

Solubility:

Water: Soluble Acid: Soluble

Other: Not determined Metal Corrosivity:
Steel: 0,00 in/yr

Aluminum: >20 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Heat Evaporation Extreme temperatures

Reactivity / Incompatibility: May react violently in contact with: strong acids flammable liquids aluminum tin zinc

nitromethane nitro compounds halogenated organic compounds

Hazardous Decomposition:None reportedHazardous Polymerization:Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:

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LD50: None reported LC50: None reported
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Dermal Toxicity Data: None reported Skin and Eye Irritation Data: None reported

Mutation Data: None reported

Reprod uctive Effects Data: None reported

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Ingredient Toxicological Data: Sodium Hydroxide: Oral rat LD _{Lo} = 500 mg/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. TR ANSPORT INFORMATION

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I.C.A.Q.:
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I.C.A.O. Proper Shipping Name: Sodium Hydroxide Solution

ICAO Hazard Class: 8
ICAO Subsidiary Risk: NA
ICAO UN/ID Number: UN1824
ICAO Packing Group: II

I.M.O.:

I.M.O. Proper Shipping Name: Sodium Hydroxide Solution

I.M.O. Hazard Class: 8
I.M.O. Subsidiary Risk: NA

I.M.O. UN Number: UN1824 *I.M.O. Packing Group:* II

A.D.R.:

A.D.R. Proper Shipping Name: Sodium Hydroxide Solution

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A.D.R Hazard Class: 8
A.D.R. Subsidiary Risk: NA
A.D.R. UN -Number:: 1824
A.D.R. Packing Group: II

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible

dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping

Name: Chemical Kit Hazard Class: 9 UN Number 3316

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 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

37/39: Wear suitable 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).

16. OTHER INFORMATION

Refere nces: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). 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. Technical Judgment. In -house information. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, Main National Fire Protection Association, 1991. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989.

R PHRASES: R 35: Causes severe burns.

Use of the substance/preparation: Laboratory Reagent

Revision Summary: Updates in Section(s) 14,

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.

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