

World Headquarters
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MSDS No: M00285

SAFETY DATA SHEET

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

Product Name: EGTA Solution
Catalog Number: 2229726

HACH LANGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49 -(0)211 -52880

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

SDS Number: M00285
Chemical Name: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Use of the substance/preparation: Chelating 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 -026101029, Netherlands: +31 -(0)30 -2748888, Switzerland: +41 -(0)1 -2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS

Sodium Hydroxide

EEC Number: 2151855
CAS No.: 131073
Percent Range: 1,0 - 5,0
Percent Range Units: weight / volume
Ingredient EEC Symbol: Xi - IRRITATING
Ingredient R phrase(s) (R phrase details given in Heading 16): R 36 R 38
TLV: 2 mg/m³
PEL: 2 mg/m³
EU Occupational Exposure Limits: 2 mg/m³

Ethylenebis(oxethylenetriamino)tetraacetic Acid (EGTA)

EEC Number: 2006512
CAS No.: 67425
Percent Range: 1,0 - 5,0
Percent Range Units: weight / volume
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

Demineralized Water

EEC Number: 2317912
CAS No.: 7732185
Percent Range: 90,0 - 100,0
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 established
PEL: Not established
EU Occupational Exposure Limits: Not established

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, yellow liquid
Odor: None
EU Symbols: Xi - IRRITATING
R PHRASES: R 36/38: Irritating to eyes and skin.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): Causes irritation
Skin Contact (EC): Causes irritation
Skin Absorption (EC): None Reported
Target Organs (SA E): None Reported
Ingestion (EC): None reported
Target Organs (Ing E): None Reported
Inhalation: May cause: irritation of nose and throat
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 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.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
Hazardous Combustion Products: This material will not burn.
Fire / Explosion Hazards: This product will not burn or explode.
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 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. 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 soap solution.

Evacuation Procedure: Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin clothing Do not breathe mist or vapors. Wash thoroughly y after handling. Maintain general industrial hygiene practices when using this product.

Storage: Store between 10° and 25°C. Protect from: heat

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Chelating Reagent

8. EXPOSURE CONTROLS / 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 splash 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. Protect from: heat

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, yellow liquid

Physical State: Liquid

Odor: None

pH: >13

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 95.5 °C (204 °F)

Melting Point: Not applicable

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): 1,03

Evaporation Rate (water = 1): 1,43

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: 81,1 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Extreme temperatures
Reactivity / Incompatibility: Incompatible with: acids
Hazardous Decomposition: Heating to decomposition releases: carbon dioxide carbon monoxide nitrogen oxides
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: Sodium Hydroxide: Oral rat at LDLo = 500 mg/kg; EGTA: Oral rat LD50 = 3587 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. TRANSPORT INFORMATION

I.C.A.O.:

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

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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

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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: Xi - IRRITATING

R PHRASES: R 36/38: Irritating to eyes and skin.

S PHRASES: S 2: Keep out of reach of children. S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

16. OTHER INFORMATION

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Technical Judgment. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Vendor Information.

R PHRASES: R 36/38: Irritating to eyes and skin.

Use of the substance/preparation: Chelating 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.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA THAT HAS BEEN 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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MSDS No: M00284

SAFETY DATA SHEET

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

Product Name: Alkali Solution for Calcium and Magnesium Test
Catalog Number: 2241732

HACH LANGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49 -(0)211 -52880

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

SDS Number: M00284

Chemical Name: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Use of the substance/preparation: Buffer

CAS No.: Not applicable

Hazard: Causes burns. Toxic.

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 -026101029, Netherlands: +31 (0)30 -2748888, Switzerland: +41 (0)1 -2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS

Sodium Hydroxide

EEC Number: 2151855

CAS No.: 1310732

Percent Range: 20,0 - 30,0

Percent Range Units: weight / volume

Ingredient EEC Symbol: C - CORROSIVE

Ingredient R phrase(s) (R phrase 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: 50,0 - 60,0

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 established

PEL: Not established

EU Occupational Exposure Limits: Not established

Nitrioltriethanol

EEC Number: 2030498

CAS No.: 102-71-6

Percent Range: 15,0 - 25,0

Percent Range Units: volume / volume
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable
TLV: 5mg/m³
PEL: Not established
EU Occupational Exposure Limits: 5 mg/m³

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, colorless to light yellow liquid
Odor: Ammonia
EU Symbols: C - CORROSIVE
R PHRASES: 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): Causes: severe burns May cause: liver damage kidney damage
Target Organs (Ing E): Liver Kidneys
Inhalation: Causes: severe burns
Target Organs (Inh E): None Reported
Medical Conditions Aggravated: Pre -existing: Eye conditions Skin conditions Respiratory conditions
Chronic Effects: Triethanolamine has caused liver and kidney damage in laboratory animals.
Cancer / Reproductive Toxicity Information:
This product does NOT contain any IARC listed chemicals.

Additional Cancer / Reproductive Toxicity Information: Contains: an experimental carcinogen.
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 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: During a fire, corrosive and toxic gases may be generated by thermal decomposition.
Hazardous Combustion Products: Toxic fumes of: carbon monoxide, carbon dioxide. nitrogen oxides.
Fire / Explosion Hazards: None reported
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 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: If conditions warrant, increase the size of the evacuation. any quantity is spilled.

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 container tightly closed when not in use.

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Buffer

8. EXPOSURE CONTROLS / 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: safety glasses with top and side shields

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.

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, colorless to light yellow liquid

Physical State: Liquid

Odor: Ammonia

pH: 13

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 97 °C (207 °F)

Melting Point: Not applicable

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): 1,258

Evaporation Rate (water = 1): 0,36

Volatile Organic Compounds Content: Not determined

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

Solubility:

Water: Soluble

Acid: Not determined

Other: Not determined

Metal Corrosivity:

Steel: 0,12 in/yr

Aluminum: 400 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Extreme temperatures
Reactivity / Incompatibility: Incompatible with: oxidizers acids
Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: carbon dioxide carbon monoxide nitrogen oxides
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: Nitrotriethanol: Cytogenetic analysis - human lymphocytes - 100 µmol/l; Sister Chromatid exchange - human lymphocytes - 1 mmol/l; Oral mouse LDLo = 16 g/kg/64W -C - Carcinogenic effects

Reproductive Effects Data: None reported

Ingredient Toxicological Data: Sodium Hydroxide oral rat LD50 = 40 mg/kg; 2 -2:2" -Nitrotriethanol oral rat LD50 = 8000 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. TRANSPORT INFORMATION

I.C.A.O.:

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

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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

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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

--

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

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992 -1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332 -2983. In-house information. Technical Judgment. NIOSH Registry of Toxic Effects of Chemical Substances, 1985 -86. Cincinnati: U.S. Department of Health and Human Services, April, 1987. 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. Vendor Information.

R PHRASES: R 35: Causes severe burns.

Use of the substance/preparation: Buffer

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.

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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MSDS No: M00340

SAFETY DATA SHEET

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

Product Name: Calcium and Magnesium Indicator Solution
Catalog Number: 2241832

HACH LA NGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49 -(0)211 -52880

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

SDS Number: M00340

Chemical Name: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Use of the substance/preparation: Indicator for calcium Indicator for Magnesium.

CAS No.: Not applicable

Hazard: May cause irritation.

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 -026101029, Netherlands: +31 -(0)30 -2748888, Switzerland: +41 -(0)1 -2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS

Propionic acid

EEC Number: 2011763

CAS No.: 79094

Percent Range: 1,0 - 5,0

Percent Range Units: volume / volume

Ingredient EEC Symbol: Not applicable

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

TLV: 10 ppm

PEL: 10 ppm

EU Occupational Exposure Limits: 10 ppm (31 mg/m³); STEL 20 ppm (62 mg/m³)

Demineralized Water

EEC Number: 2317912

CAS No.: 7732185

Percent Range: >95,0

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 established

PEL: Not established

EU Occupational Exposure Limits: Not established

Other component

EEC Number: Not applicable

CAS No.: Not applicable

Percent Range: < 0,1

Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: Not established

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Very dark red solution.
Odor: Not determined
EU Symbols: Not applicable
R PHRASES: Not applicable

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): May cause irritation
Skin Contact (EC): None reported
Skin Absorption (EC): No effects anticipated
Target Organs (SA E): Not applicable
Ingestion (EC): None reported
Target Organs (Ing E): None Reported
Inhalation: No effects anticipated
Target Organs (Inh E): Not applicable
Medical Conditions Aggravated: Pre-existing: Eye 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. Call physician if irritation develops.
Ingestion (First Aid): Give large quantities of water. Call physician immediately.
Inhalation: None required.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
Hazardous Combustion Products: This material will not burn.
Fire / Explosion Hazards: This product will not burn or explode.
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 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: Stop spilled material from being released to the environment.

Clean -up Technique: Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Dilute with a large excess of water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate as needed to perform spill clean -up. If conditions warrant, increase the size of the evacuation.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Keep container tightly closed when not in use.

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Indicator for calcium Indicator for Magnesium.

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: 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

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes Wash thoroughly after handling.

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Very dark red solution.

Physical State: Liquid

Odor: Not determined

pH: 2,65

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 97° C (207° F)

Melting Point: Not applicable

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): 0,995

Evaporation Rate (water = 1): 1,02

Volatile Organic Compounds Content: Not applicable

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

Solubility:

Water: Soluble

Acid: Soluble

Other: Not determined

Metal Corrosivity:

Steel: 0,042 in/yr

Aluminum: 0,004 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Extreme temperatures Evaporation

Reactivity / Incompatibility: None reported

Hazardous Decomposition: Heating to decomposition releases toxic fumes of carbon monoxide and carbon dioxide.
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: Propionic Acid: Oral rat LD50 = 2600 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. TRANSPORT INFORMATION

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

--

ICAO Hazard Class: NA

ICAO Subsidiary Risk: NA

ICAO UN/ID Number: NA

ICAO Packing Group: NA

I.M.O.:

I.M.O. Proper Shipping Name: Not Currently Regulated

--

I.M.O. Hazard Class: NA

I.M.O. Subsidiary Risk: NA

I.M.O. UN Number: NA

I.M.O. Packing Group: NA

A.D.R.:

A.D.R. Proper Shipping Name: Not Currently Regulated

--

A.D.R. Hazard Class: NA

A.D.R. Subsidiary Risk: NA

A.D.R. UN -Number: NA

A.D.R. Packing Group: NA

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 or are placed on the market in quantities less than 10 kg per year.

EEC Number: Not applicable

EEC LABEL COPY:

EU Symbols: Not applicable

R PHRASES: Not applicable

S PHRASES: Not applicable

16. OTHER INFORMATION

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992 -1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332 -2983. In-house information. Technical Judgment. NIOSH Registry of Toxic Effects of Chemical Substances, 1985 -86. Cincinnati: U.S. Department of Health and Human Services, April, 1987.

R PHRASES: Not applicable

Use of the substance/preparation: Indicator for calcium Indicator for Magnesium.

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.

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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(970) 669 -3050

MSDS No: M00282

SAFETY DATA SHEET

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

Product Name: EDTA Solution 1M
Catalog Number: 2241926

HACH LANGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49 -(0)211 -52880

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

SDS Number: M00282
Chemical Name: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Use of the substance/preparation: pH indicator for total kjeldahl nitrogen
CAS No.: Not applicable
Hazard: May cause eye irritation.
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 -026101029, Netherlands: +31 -(0)30 -2748888, Switzerland: +41 -(0)1 -2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS

Demineralized Water

EEC Number: 2317912
CAS No.: 7732185
Percent Range: 50,0 - 60,0
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 established
PEL: Not established
EU Occupational Exposure Limits: Not established

Other component

EEC Number: Not applicable
CAS No.: Not applicable
Percent Range: 0,01 - 0,1
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 established
PEL: Not established
EU Occupational Exposure Limits: Not established

EDTA Tetrasodium Salt

EEC Number: 200339
CAS No.: 64028
Percent Range: 40,0 - 50,0

Percent Range Units: weight / volume
Ingredient EEC Symbol: Xi - IRRITATING
Ingredient R phrase(s) (R phrase details given in Heading 16): R 36
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, colorless liquid
Odor: None
EU Symbols: Xi - IRRITATING
R PHRASES: R 36: Irritating to eyes.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): Causes irritation
Skin Contact (EC): May cause irritation
Skin Absorption (EC): None Reported
Target Organs (SA E): None Reported
Ingestion (EC): May cause: calcium deficiency in the blood Very large doses may cause: gastrointestinal tract irritation fever kidney damage
Target Organs (Ing E): Kidneys
Inhalation: No effects anticipated
Target Organs (Inh E): Not applicable
Medical Conditions Aggravated: None reported
Chronic Effects: Chronic overexposure may cause kidney damage
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. Call physician if irritation develops.
Ingestion (First Aid): Give large quantities of water. Call physician immediately.
Inhalation: None required.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
Hazardous Combustion Products: This material will not burn.
Fire / Explosion Hazards: None reported
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 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. 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 as needed to perform spill clean -up. If conditions warrant, increase the size of the evacuation.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin Do not breathe mist or vapors. Wash thoroughly after handling.

Storage: Protect from: heat freezing oxidizers

Special Packaging Instructions: Not applicable

Use of the substance/preparation: pH indicator for total kjeldahl nitrogen

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. 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: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin 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: None

pH: 10,3

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 97° C (206,6° 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): 1,18

Evaporation Rate (water = 1): 0,8

Volatile Organic Compounds Content: Not applicable

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

Solubility:

Water: Soluble

Acid: Soluble

Other: Not determined

Metal Corrosivity:

Steel: 0,0001 in/yr

Aluminum: 0,088 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Extreme temperatures
Reactivity / Incompatibility: Incompatible with: metals
Hazardous Decomposition: Heating to decomposition releases: carbon dioxide carbon monoxide nitrogen oxides
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

--

Ingredient Toxicological Data: --

No toxicological data available for the ingredients of this product.

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: BOD = 0,02 g/g COD = 0,54 g/g Fish Toxicity Bluegill LC50 = 410 mg/l/96 hours

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: Not Currently Regulated

--

ICAO Hazard Class: NA

ICAO Subsidiary Risk: NA

ICAO UN/ID Number: NA

ICAO Packing Group: NA

I.M.O.:

I.M.O. Proper Shipping Name: Not Currently Regulated

--

I.M.O. Hazard Class: NA

I.M.O. Subsidiary Risk: NA

I.M.O. UN Number: NA

I.M.O. Packing Group: NA

A.D.R.:

A.D.R. Proper Shipping Name: Not Currently Regulated

--

A.D.R Hazard Class: NA

A.D.R. Subsidiary Risk: NA

A.D.R. UN -Number:: NA

A.D.R. Packing Group: NA

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: Xi - IRRITATING

R PHRASES: R 36: Irritating to eyes.

S PHRASES: S 25: Avoid contact with eyes.

16. OTHER INFORMATION

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. In-house information. Technical Judgment. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. Sax, N. Irving and Richard J. Lewis, Sr., revised by. Hawley's Condensed Chemical Dictionary, Eleventh Ed. New York: Van Nostrand Reinhold Co., 1987. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Vendor Information. Patty, Frank A. Industrial Hygiene and Toxicology, 3rd Revised Edition. Volume 2. New York: A Wiley-Interscience Publication, 1981.

R PHRASES: R 36: Irritating to eyes.

Use of the substance/preparation: pH indicator for total kjeldahl nitrogen

Revision Summary: Updates in Section(s) 14,

Legend:

NA - Not Applicable	w/w - weight/weight
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