



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hardness(L) Reagent R1

Supplier: Shenzhen Sinsche Technology Co.,Ltd.

ADD: 4/F , T3 Building, Silicon Valley Compound, Qingquan Road, Longhua Street, Longhua District, Shenzhen City, P.RC 518109.

Tel: +86 (755) 82127315 Fax: +86 (755) 82127860

Email:Sinsche@sinsche.com

Emergency telephone:+86 (755) 82127315 (Mon-Fri 08:30- 18:00)

Chemical Name: Not applicable

CAS No.: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

PIN: NA

Intended Use: Laboratory Use Determination of Hardness

Date of MSDS Preparation:

Day: 21

Month: June

Year: 2020

2. HAZARDS IDENTIFICATION

CHS Classification

Skin corrosion/irritation	Category2 - (H315)
Serious eye damage/eye irritation	Category 2A - (H319)

Label elements

Signal word - Warning

Hazard statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation



Exclamation mark

Precautionary statements



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P280 - Wear protective gloves/protective clothing/eye protection/face protection

P302 + P352 - IF ON SKIN: Wash with plenty of water and soap

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 + P364 - Take off contaminated clothing and wash it before reuse

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

Other Hazards Known

Not applicable

No information found.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical Family

Mixture.

Name	EC No.	CAS-No.	Content
Propionic acid	201-176-3	79-09-4	<5%
Calmagite	No	3147-14-6	<1%
Demineralized Water	231-791-2	7732-18-5	>95%

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.

Flash Point: Not applicable

Method: Not applicable

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Autoignition Temperature: Not applicable

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

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.

D.O.T. Emergency Response Guide Number: None

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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves

Inhalation Protection: adequate ventilation

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

TLV: Not established

PEL: Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Very dark red solution.

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Not determined

pH: 2-4

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 97° C (207° F)

Melting Point: Not applicable

Specific Gravity/ Relative Density (water = 1; air =1): 0.995

Evaporation Rate (water = 1): 1.02

Volatile Organic Compounds Content: Not applicable

Coefficient of Water / Oil: Not applicable

Solubility:



Water: Soluble

Acid: Soluble

Other: Not determined

Metal Corrosivity:

Steel: 0.042 in/yr

Aluminum: 0.004 in/yr

10. STABILITY AND 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

Ingredient Toxicological Data: Propionic Acid: Oral rat LD50 = 2600 mg/kg

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product.

Ingredient Ecological Information: Propionic Acid: BOD-20: 1.4 g oxygen/g; 96-h LC50 - fathead minnow: >1000 mg/l

13. DISPOSAL CONSIDERATIONS

Special Instructions (Disposal): Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. 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.

Empty Containers: Rinse three times with an appropriate solvent.

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.

14. TRANSPORT INFORMATION

T.D.G.:

Proper Shipping Name: Not Currently Regulated

Hazard Class: NA

UN Number/PIN: NA



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Packing Group: NA

Subsidiary Risk: 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

National Inventories:

Canadian Inventory Status: All ingredients of this product are DSL Listed.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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.

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.



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hardness(L) Reagent R2

Supplier: Shenzhen Sinsche Technology Co.,Ltd.

ADD: 4/F , T3 Building, Silicon Valley Compound, Qingquan Road, Longhua Street, Longhua District, Shenzhen City, P.RC 518109.

Tel: +86 (755) 82127315 Fax: +86 (755) 82127860

Email:Sinsche@sinsche.com

Emergency telephone:+86 (755) 82127315 (Mon-Fri 08:30- 18:00)

Chemical Name: Not applicable

CAS No.: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

PIN: NA

Intended Use: Laboratory Use Determination of Hardness

Date of MSDS Preparation:

Day: 21

Month: June

Year: 2020

2. HAZARDS IDENTIFICATION

CHS Classification

Most Important Hazards

According to ABNT NBR 14725-2

Corrosive to metals	Category 1 - (H290)
Skin corrosion/irritation	Category 1 - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

Label elements

Signal word - Danger

Hazard statements

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage



Corrosion

Precautionary statements



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- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant
P234 - Keep only in original packaging
P390 - Absorb spillage to prevent material damage

Other Hazards Known

Not applicable

4. COMPOSITION / INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical Family Mixture.

Name	EC No.	CAS-No.	Content
Sodium Hydroxide	215-185-5	1310-73-2	<20%
Triethanolamine	203-049-8	102-71-6	<20%
Demineralized Water	231-791-2	7732-18-5	>60%

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.

Flash Point: Not applicable

Method: Not applicable

Flammability Limits:



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Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Autoignition Temperature: Not applicable

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

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.

D.O.T. 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: Keep container tightly closed when not in use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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 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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless to light yellow liquid



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Physical State: Liquid

Molecular Weight: Not applicable

Odor: Ammonia

pH: 12-13

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 97 °C (207 °F)

Melting Point: Not applicable

Specific Gravity/ Relative Density (water = 1; air =1): 1.258

Evaporation Rate (water = 1): 0.36

Volatile Organic Compounds Content: Not determined

Coefficient of Water / Oil: Not applicable

Solubility:

Water: Soluble

Acid: Not determined

Other: Not determined

Metal Corrosivity:

Steel: 0.12 in/yr

Aluminum: 400 in/yr

10. STABILITY AND 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''-Nitrotriethanol oral rat LD50 =8000 mg/kg

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product.

Ingredient Ecological Information: --



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No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

Special Instructions (Disposal): Work in an approved fume hood. 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. Allow cold water to run for 5 minutes to completely flush the system.

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

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.

14. TRANSPORT INFORMATION

T.D.G.:

Proper Shipping Name: Sodium Hydroxide Solution

Hazard Class: 8

PIN: 1824

Group: II

Subsidiary Risk: 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

National Inventories:

Canadian Inventory Status: All ingredients of this product are DSL Listed.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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.

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.



Shenzhen Sinsche Technology Co.,Ltd

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HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE
RESULTS TO BE OBTAINED FROM THE USE THEREOF.



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hardness(L) Reagent R3

Supplier: Shenzhen Sinsche Technology Co.,Ltd.

ADD: 4/F , T3 Building, Silicon Valley Compound, Qingquan Road, Longhua Street, Longhua District, Shenzhen City, P.RC 518109.

Tel: +86 (755) 82127315 Fax: +86 (755) 82127860

Email:Sinsche@sinsche.com

Emergency telephone:+86 (755) 82127315 (Mon-Fri 08:30- 18:00)

Chemical Name: Not applicable

CAS No.: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

PIN: NA

Intended Use: Laboratory Use Determination of Hardness

Date of MSDS Preparation:

Day: 21

Month: June

Year: 2020

2. HAZARDS IDENTIFICATION

CHS Classification

Corrosive to metals	Category 1 - (H290)
Skin corrosion/irritation	Category 1 - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

Label elements

Signal word - Danger

Hazard statements

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage



Corrosion

Precautionary statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray



Shenzhen Sinsche Technology Co.,Ltd

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

P363 - Wash contaminated clothing before reuse

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

P234 - Keep only in original packaging

P390 - Absorb spillage to prevent material damage

Other Hazards Known

Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical Family

Mixture.

Name	EC No.	CAS-No.	Content
Sodium hydroxide	231-639-5	215-185-5	1-5%
Ethylenebis(oxyethylen enitrilo)tetraac	200-651-2	67-42-5	1-5%
Demineralized Water	231-791-2	7732-18-5	>90%

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.

Flash Point: Not applicable

Method: Not applicable

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Autoignition Temperature: Not applicable



Shenzhen Sinsche Technology Co.,Ltd

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

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.

D.O.T. 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 between 10° and 25°C. Protect from: heat

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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 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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, yellow liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: None

pH: >13



Shenzhen Sinsche Technology Co.,Ltd

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 95.5 °C (204 °F)

Melting Point: Not applicable

Specific Gravity/ Relative Density (water = 1; air =1): 1.03

Evaporation Rate (water = 1): 1.43

Volatile Organic Compounds Content: Not applicable

Coefficient of Water / Oil: Not applicable

Solubility:

Water: Soluble

Acid: Soluble

Other: Not determined

Metal Corrosivity:

Steel: 0.00 in/yr

Aluminum: 81.1 in/yr

10. STABILITY AND 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

Ingredient Toxicological Data: Sodium Hydroxide: Oral rat LDLo = 500 mg/kg; EGTA: Oral rat LD50 = 3587 mg/kg

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

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. 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.



Shenzhen Sinsche Technology Co.,Ltd

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

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.

14. TRANSPORT INFORMATION

T.D.G.:

Proper Shipping Name: Sodium Hydroxide Solution

Hazard Class: 8

UN Number/PIN: 1824

Packing Group: II

Subsidiary Risk: 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.

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16. OTHER INFORMATION

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Legend:

NA - Not Applicable w/w - weight/weight

ND - Not Determined w/v - weight/volume

NV - Not Available v/v - volume/volume

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MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hardness(L) Reagent R4

Supplier: Shenzhen Sinsche Technology Co.,Ltd.

ADD: 4/F , T3 Building, Silicon Valley Compound, Qingquan Road, Longhua Street, Longhua District, Shenzhen City, P.R.C 518109.

Tel: +86 (755) 82127315 Fax: +86 (755) 82127860

Email:Sinsche@sinsche.com

Emergency telephone:+86 (755) 82127315 (Mon-Fri 08:30- 18:00)

Chemical Name: Not applicable

CAS No.: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

PIN: NA

Intended Use: Laboratory Use Determination of Hardness

Date of MSDS Preparation:

Day: 21

Month: June

Year: 2020

2. HAZARDS IDENTIFICATION

CHS Classification

Most Important Hazards

According to ABNT NBR 14725-2

Acute toxicity - Oral	Category 5 - (H303)
Serious eye damage/eye irritation	Category 1 - (H318)

Label elements

Signal word - Danger

Hazard statements

H303 - May be harmful if swallowed

H318 - Causes serious eye damage



Corrosion

Precautionary statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection



Shenzhen Sinsche Technology Co.,Ltd

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

Other Hazards Known

Not applicable

4. COMPOSITION / INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical Family

Mixture.

Name	EC No.	CAS-No.	Content
Sodium hydroxide	231-639-5	215-185-5	1-10%
Disodium edetate dihydrate	205-358-3	6381-92-6	<40%
Demineralized Water	231-791-2	7732-18-5	>50%

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.

Flash Point: Not applicable

Method: Not applicable

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Autoignition Temperature: Not applicable

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

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.



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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.

D.O.T. Emergency Response Guide Number: None

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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 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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: None

pH: 10-11

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 97° C (206.6° F)

Melting Point: Not determined

Specific Gravity/ Relative Density (water = 1; air =1): 1.18

Evaporation Rate (water = 1): 0.8

Volatile Organic Compounds Content: Not applicable

Coefficient of Water / Oil: Not applicable

Solubility:

Water: Soluble

Acid: Soluble

Other: Not determined



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Metal Corrosivity:

Steel: 0.0001 in/yr

Aluminum: 0.088 in/yr

10. STABILITY AND 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.

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

Special Instructions (Disposal): Work in an approved fume hood. 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. 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.

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

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.

14. TRANSPORT INFORMATION

T.D.G.:

Proper Shipping Name: Not Currently Regulated

Hazard Class: NA

UN Number/PIN: NA

Packing Group: NA

Subsidiary Risk: NA



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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:

Canadian Inventory Status: All ingredients of this product are DSL Listed.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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.

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.

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