



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Hardness(H) 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**



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

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## **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	<1%
Calmagite	No	3147-14-6	<1%
Demineralized Water	231-791-2	7732-18-5	>98%

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## **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.

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## **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

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## 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.

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## 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

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Very dark red solution.

**Physical State:** Liquid

**Molecular Weight:** Not applicable

**Odor:** Not determined

**pH:** Not applicable

**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

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## 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.

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## 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

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## 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

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## 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.

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## 14. TRANSPORT INFORMATION

**T.D.G.:**

**Proper Shipping Name:** Not Currently Regulated

**Hazard Class:** NA

**UN Number/PIN:** NA



# Shenzhen Sinsche Technology Co.,Ltd

**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.

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## 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.

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## 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.

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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

**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(H) 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**



# Shenzhen Sinsche Technology Co.,Ltd

- 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

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## **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	<1%
Triethanolamine	203-049-8	102-71-6	<1%
Demineralized Water	231-791-2	7732-18-5	>98%

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## **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.

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## **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:**



# Shenzhen Sinsche Technology Co.,Ltd

**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.

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## 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

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## 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.

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## 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

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear, colorless to light yellow liquid





# Shenzhen Sinsche Technology Co.,Ltd

**Physical State:** Liquid

**Molecular Weight:** Not applicable

**Odor:** Ammonia

**pH:** Not applicable

**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

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## 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.

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## 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

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --

No ecological data available for this product.

**Ingredient Ecological Information:** --



# Shenzhen Sinsche Technology Co.,Ltd

No ecological data available for the ingredients of this product.

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## 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.

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## 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.

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## 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.

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## 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.

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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

**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(H) 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

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## **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%

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## **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.

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## **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

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## 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

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## 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

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## 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

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## 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.

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## 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

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## 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.

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## 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.

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## 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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## 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.

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**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.

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ND - Not Determined w/v - weight/volume

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## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Hardness(H) 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.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**

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



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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

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## **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	1-10%
Disodium edetate dihydrate	205-358-3	6381-92-6	<40%
Demineralized Water	231-791-2	7732-18-5	>50%

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## **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.

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## **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.

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## **6. ACCIDENTAL RELEASE MEASURES**

**Spill Response Notice:**



# Shenzhen Sinsche Technology Co.,Ltd

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.

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

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## 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

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## 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

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear, colorless liquid

**Physical State:** Liquid

**Molecular Weight:** Not applicable

**Odor:** None

**pH:** Not applicable

**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



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**Acid:** Soluble

**Other:** Not determined

**Metal Corrosivity:**

**Steel:** 0.0001 in/yr

**Aluminum:** 0.088 in/yr

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## 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.

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## 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.

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## 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

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## 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.

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## 14. TRANSPORT INFORMATION

**T.D.G.:**

**Proper Shipping Name:** Not Currently Regulated

**Hazard Class:** NA

**UN Number/PIN:** NA



# Shenzhen Sinsche Technology Co.,Ltd

**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.

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## 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.

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## 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 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.

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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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