



Shenzhen Sinsche Technology Co.,Ltd

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Aluminum 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 Reagent Determination of ammonium nitrogen

Date of MSDS Preparation:

Day: 18

Month: June

Year: 2020

2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
Octyl phenoxy poly ethoxy	212-889-4	9002-93-1	<0.1%
Etanol	200-578-6	64-17-5	<40%
Chromeazurol S	216-787-0	1667-99-8	<0.01%
1-Hexadecylpyridinium bromide	205-428-3	140-72-7	<0.01%
Demineralized Water	231-791-2	7732-18-5	>40%

Hazard Symbols: T+

Risk Phrases: 22 26 36/37/38

Section 3 - HAZARDS IDENTIFICATION

CHS Classification

Most Important Hazards

According to ABNT NBR 14725-2

Acute toxicity - Oral	Category 5
Skin corrosion/irritation	Category 3
Acute aquatic toxicity	Category 3

Label elements

Signal word - Warning

Hazard statements



Shenzhen Sinsche Technology Co.,Ltd

H303 - May be harmful if swallowed

H316 - Causes mild skin irritation

H402 - Harmful to aquatic life



Precautionary statements

P312 - Call a POISON CENTER or doctor if you feel unwell

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

P273 - Avoid release to the environment

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

Other Hazards Known

Not applicable

Section 4 - FIRST AID MEASURES

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin:

In case of contact, immediately flush skin with plenty of water.

Remove contaminated clothing and shoes. Get medical aid. Wash clothing before reuse.

Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration.

If breathing is difficult, give oxygen.

Notes to Physician:

Section 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Runoff from fire control or dilution water may cause pollution.

Extinguishing Media:



Shenzhen Sinsche Technology Co.,Ltd

Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions.

Provide ventilation. Evacuate unnecessary personnel. Approach spill from upwind.

Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not breathe dust. Do not breathe spray or mist. Use only with adequate ventilation or respiratory protection.

Storage:

Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits CAS# 140-72-7: Personal Protective Equipment Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Powder

Color: white

Odor: characteristic odor

pH: 5.2 (10g/l H₂O)

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: Not available.



Shenzhen Sinsche Technology Co.,Ltd

Freezing/Melting Point: 63-69 deg C

Autoignition Temperature: Not available.

Flash Point: Not available.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: Not available.

Solubility in water: Soluble.

Specific Gravity/Density:

Molecular Formula: Not available.

Molecular Weight: Not available.

Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Dust generation, confined spaces.

Incompatibilities with Other Materials:

Strong oxidizing agents.

Hazardous Decomposition Products:

Nitrogen oxides, carbon monoxide, carbon dioxide, hydrogen bromide.

Hazardous Polymerization: Has not been reported

Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 140-72-7: UU4848000 LD50/LC50:

CAS# 140-72-7: Oral, rat: LD50 = 475 mg/kg.

Sensitization test (guinea pig): negative for the chloride.

Carcinogenicity:

1-Hexadecylpyridinium bromide - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

Section 12 - ECOLOGICAL INFORMATION

Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - TRANSPORT INFORMATION

IATA

Not regulated as a hazardous material.

IMO

Not regulated as a hazardous material.

RID/ADR



Not regulated as a hazardous material.

Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T+

Risk Phrases:

R 22 Harmful if swallowed.

R 26 Very toxic by inhalation.

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28A After contact with skin, wash immediately with plenty of water.

S 36/37 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 140-72-7: No information available.

Canada

CAS# 140-72-7 is listed on Canada's DSL List.

CAS# 140-72-7 is not listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 140-72-7 is listed on the TSCA inventory.

16 Other information

Rev. No./Repl. SDS Generated

version 1

DISCLAIMER



Shenzhen Sinsche Technology Co.,Ltd

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



Shenzhen Sinsche Technology Co.,Ltd

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Aluminum 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 Reagent Determination of ammonium nitrogen

Date of MSDS Preparation:

Day: 18

Month: June

Year: 2020

2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
Ethylenediamine	203-468-6	107-15-3	<25%
Hydrogen chloride	231-595-7	7647-01-0	<30%
Demineralized Water	231-791-2	7732-18-5	>50%

Hazard Symbols: Not listed

Risk Phrases: Not listed

Section 3 - HAZARDS IDENTIFICATION

CHS Classification

Most Important Hazards

According to ABNT NBR 14725-2

Acute toxicity - Oral	Category 5
Skin corrosion/irritation	Category 1
Acute aquatic toxicity	Category 3
Corrosive to metals	Category 1- (H290)
Serious eye damage/eye irritation	Category 1- (H318)

Label elements

Signal word - Warning



Hazard statements

H290-May be corrosive to metals

H314-Causes severe skin burns and eye damage



Precautionary statement

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

🔗 Section 4 - FIRST AID MEASURES

Eyes: Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed.

Extensive irrigation with water is required (at least 30 minutes). SPEEDY ACTION IS

CRITICAL! Skin:



Shenzhen Sinsche Technology Co.,Ltd

Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion:

Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately. Give milk of magnesia.

Inhalation:

Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician:

Do NOT use sodium bicarbonate in an attempt to neutralize the acid.

Antidote: Do NOT use oils or ointments in eye.

🔥 Section 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Not flammable, but reacts with most metals to form flammable hydrogen gas. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Reaction with water may generate much heat which will increase the concentration of fumes in the air. Containers may explode when heated.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. Do NOT get water inside containers. Do NOT use straight streams of water. Most foams will react with the material and release corrosive/toxic gases. Cool containers with flooding quantities of water until well after fire is out.



Shenzhen Sinsche Technology Co.,Ltd

➤ Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Large spills may be neutralized with dilute alkaline solutions of soda ash, or lime. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

➤ Section 7 - HANDLING and STORAGE

Handling:

Remove contaminated clothing and wash before reuse. Contents may develop pressure upon prolonged storage. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes.

Storage:

Store in a cool, dry place. Do not store in direct sunlight. Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area. Do not store in metal containers.

➤ Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment Eyes: Wear chemical goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure. Wear neoprene or polyvinyl chloride gloves to prevent exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever



workplace conditions warrant a respirator's use.

🔗 Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: liquid

Appearance: yellow

Odor: Odorless

pH: 6-7

Vapor Pressure: 5.7 mm Hg @ 0 deg C

Viscosity: Not available.

Boiling Point: 81.5-110 deg C @ 760 mmHg

Freezing/Melting Point: -74 deg C

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: Not available.

Solubility in water: Miscible.

Specific Gravity/Density: Not available.

Molecular Formula: Not available.

Molecular Weight: Not available.

🔗 Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Light, metals, excess heat.

Incompatibilities with Other Materials:

Bases, acetic anhydride, alkali metals, aluminum, amines, copper, copper alloys, fluorine, iron, sodium hydroxide, steel, sulfuric acid, vinyl acetate, zinc, potassium permanganate, cesium acetylene carbide, rubidium acetylene carbide, rubidium carbide, sodium, chlorosulfonic acid, oleum, carbonates, perchloric acid, calcium phosphide, metal oxides, acetates, cesium carbide, beta-propiolactone, ethyleneimine, propylene oxide, lithium silicides, alcohols + hydrogen cyanide, 2-aminoethanol, ammonium



Shenzhen Sinsche Technology Co.,Ltd

hydroxide, calcium carbide, 1,1-difluoroethylene, ethylene diamine, magnesium boride, mercuric sulfate, silver perchlorate + carbon tetrachloride, uranium phosphide.

Hazardous Decomposition Products:

Hydrogen chloride, chlorine, carbon monoxide, carbon dioxide, hydrogen gas.

Hazardous Polymerization: Will not occur.

➤ Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 7647-01-0: MW4025000 CAS# 7732-18-5: ZC0110000 LD50/LC50:

CAS# 7647-01-0: Inhalation, mouse: LC50 = 1108 ppm/1H; Inhalation, rat: LC50 = 3124 ppm/1H; Oral, rabbit: LD50 = 900 mg/kg.

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.

Carcinogenicity:

Hydrogen chloride - IARC: Group 3 carcinogen Water - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Other:

See actual entry in RTECS for complete information.

➤ Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Bluegill/Sunfish: 3.6 mg/L; 48 Hr; Lethal (unspecified) Fish: Bluegill/Sunfish: LD50; 96 Hr; pH 3.0-3.5 Other For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

➤ Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

➤ Section 14 - TRANSPORT INFORMATION

IATA

No information available.

IMO

No information available.

RID/ADR



Shenzhen Sinsche Technology Co.,Ltd

No information available.

🔗 Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN C

Risk Phrases:

R 35 Causes severe burns.

R 20 Harmful by inhalation.

Safety Phrases:

S 9 Keep container in a well-ventilated place.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7647-01-0: 1

CAS# 7732-18-5: No information available.

United Kingdom Occupational Exposure Limits

CAS# 7647-01-0: OES-United Kingdom, TWA 1 ppm TWA; 2 mg/m³ TWA

CAS# 7647-01-0: OES-United Kingdom, STEL 5 ppm STEL; 8 mg/m³ STEL

CAS# 7647-01-0: OES-United Kingdom, STEL 5 ppm STEL; 8 mg/m³ STEL

Canada

CAS# 7647-01-0 is listed on Canada's DSL List.

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7647-01-0 is listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 7647-01-0: OEL-AUSTRALIA:TWA 5 ppm (7 mg/m³)

OEL-AUSTRIA:TWA 5 ppm (7 mg/m³)

OEL-BELGIUM:STEL 5 ppm (7.7 mg/m³)

OEL-DENMARK:STEL 5 ppm (7 mg/m³)

OEL-FINLAND:STEL 5 ppm (7 mg/m³);Skin

OEL-FRANCE:STEL 5 ppm (7.5 mg/m³)



Shenzhen Sinsche Technology Co.,Ltd

OEL-GERMANY:TWA 5 ppm (7 mg/m³)

OEL-HUNGARY:STEL 5 mg/m³

OEL-JAPAN:STEL 5 ppm (7.5 mg/m³)

OEL-THE NETHERLANDS:TWA 5 ppm (7 mg/m³)

OEL-THE PHILIPPINES:TWA 5 ppm (7 mg/m³)

OEL-POLAND:TWA 5 mg/m³

OEL-RUSSIA:STEL 5 ppm (5 mg/m³)

OEL-SWEDEN:STEL 5 ppm (8 mg/m³)

OEL-SWITZERLAND:TWA 5 ppm (7.5 mg/m³);STEL 10 ppm (15 mg/m³)

OEL-THAILAND:TWA 5 ppm (7 mg/m³)

OEL-TURKEY:TWA 5 ppm (7 mg/m³)

OEL-UNITED KINGDOM:TWA 5 ppm (7 mg/m³);STEL 5 ppm (7 mg/m³)

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA

CAS# 7647-01-0 is listed on the TSCA inventory.

CAS# 7732-18-5 is listed on the TSCA inventory.



Shenzhen Sinsche Technology Co.,Ltd

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Aluminum 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 Reagent Determination of ammonium nitrogen

Date of MSDS Preparation:

Day: 18

Month: June

Year: 2020

2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
4-Nitrophenol	202-811-7	100-02-7	<0.1%
Ethanol	200-578-6	64-17-5	>95%

Hazard Symbols: F

Risk Phrases: 11

Section 3 - HAZARDS IDENTIFICATION

CHS Classification

Most Important Hazards

According to ABNT NBR 14725-2

Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Specific target organ toxicity (repeated exposure)	Category 2
Specific target organ toxicity (single exposure)	Category 3
Serious eye damage/eye irritation	Category 2A

Label elements



Shenzhen Sinsche Technology Co.,Ltd

Signal word - Danger

Hazard statements

H225 - Highly flammable liquid and vapor

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H373 - May cause damage to organs through prolonged or repeated exposure

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness



Precautionary statement

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P240 - Ground/bond container and receiving equipment

P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment

P242 - Use only non-sparking tools

P243 - Take precautionary measures against static discharge

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

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P271 - Use only outdoors or in a well-ventilated area

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

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P403 + P235 - Store in a well-ventilated place. Keep cool

P314 - Get medical advice/attention if you feel unwell

P362 - Take off contaminated clothing and wash before reuse

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

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

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position 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

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



Shenzhen Sinsche Technology Co.,Ltd

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

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

P405 - Store locked up

Other Hazards Known

Not applicable

➤ **Section 4 - FIRST AID MEASURES**

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

Skin:

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water.

Never give anything by mouth to an unconscious person. Get medical aid immediately.

Induce vomiting by giving one teaspoon of Syrup of Ipecac.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

➤ **Section 5 - FIRE FIGHTING MEASURES**

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air.

Vapors can travel to a source of ignition and flash back. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable Liquid. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use



Shenzhen Sinsche Technology Co.,Ltd

water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Autoignition Temperature: Not available.

Flash Point: 13 deg C (55.40 deg F) NFPA Rating: Not published.

Explosion Limits, Lower: 2.1 Upper: 36.0

🔦 Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Water spray may reduce vapor but may not prevent ignition in closed spaces.

🔦 Section 7 - HANDLING and STORAGE

Handling:

Use with adequate ventilation. Ground and bond containers when transferring material.

Avoid contact with eyes, skin, and clothing.

Empty containers retain product residue, (liquid and/or vapor), and can be dangerous.

Keep container tightly closed. Avoid contact with heat, sparks and flame. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

🔦 Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.



Shenzhen Sinsche Technology Co.,Ltd

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134. Always use a NIOSH-approved respirator when necessary.

➤ Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: colourless

Odor: aromatic odor

pH: Not available.

Vapor Pressure: 44 mm Hg @20C

Vapor Density: >1.0

Evaporation Rate: >1

Viscosity: Not available.

Boiling Point: 64-83C

Freezing/Melting Point: Not available.

Decomposition Temperature: Not available.

Solubility: Soluble.

Specific Gravity/Density: Not available.

Molecular Formula: Not available.

Molecular Weight: Not available.

➤ Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stability unknown This material may be sensitive to peroxide formation.

Conditions to Avoid:

High temperatures, incompatible materials, ignition sources.

Incompatibilities with Other Materials:

None reported, acids (mineral, non-oxidizing, e.g. hydrochloric acid, hydrofluoric acid, muriatic acid, phosphoric acid), acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulfuric acid), acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), azo, diazo, and hydrazines (e.g. dimethyl



Shenzhen Sinsche Technology Co.,Ltd

hydrazine, hydrazine, methyl hydrazine), isocyanates (e.g. methyl isocyanate), metals (alkali and alkaline, e.g. cesium, potassium, sodium), nitrides (e.g. potassium nitride, sodium nitride), peroxides and hydroperoxides (organic, e.g. acetyl peroxide, benzoyl peroxide, butyl peroxide, methyl ethyl ketone peroxide), epoxides (e.g. butyl glycidyl ether), oxidizing agents (strong, e.g. bromine, hydrogen peroxide, nitrogen dioxide, potassium nitrate), reducing agents (strong, e.g. aluminum carbide, chlorosilane, hydrogen phosphide, lithium hydride), water reactive substances (e.g. acetic anhydride, alkyl aluminum chloride, calcium carbide, ethyl dichlorosilane), Isopropanol is susceptible to autoxidation and therefore should be classified as peroxidizable..

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported

➤ Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 64-17-5: KQ6300000 CAS# 67-56-1: PC1400000 CAS# 67-63-0: NT8050000

CAS# 7732-18-5: ZC0110000 LD50/LC50:

CAS# 64-17-5: Inhalation, mouse: LC50 =39 gm/m³/4H; Inhalation, rat: LC50 =20000 ppm/10H; Oral, mouse: LD50 = 3450 mg/kg; Oral, rabbit: LD50 = 6300 mg/kg; Oral, rat: LD50 = 7060 mg/kg.

CAS# 67-56-1: Inhalation, rat: LC50 =64000 ppm/4H; Oral, mouse: LD50 = 7300 mg/kg; Oral, rabbit: LD50 = 14200 mg/kg; Oral, rat: LD50 = 5628 mg/kg; Skin, rabbit: LD50 = 15800 mg/kg.

CAS# 67-63-0: Oral, mouse: LD50 = 3600 mg/kg; Oral, rabbit: LD50 = 6410 mg/kg; Oral, rat: LD50 = 5045 mg/kg; Skin, rabbit: LD50 = 12800 mg/kg.

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.

Carcinogenicity:

Ethanol - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Methanol - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Isopropanol - IARC: Group 3 carcinogen Water - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Other:

See actual entry in RTECS for complete information.

➤ Section 12 - ECOLOGICAL INFORMATION



Shenzhen Sinsche Technology Co.,Ltd

For further information, contact Fisher Scientific.

🔗 Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

🔗 Section 14 - TRANSPORT INFORMATION

CDG/CPL

Shipping Name: ETHANOL

Hazard Class: 3

UN Number: 1170

Packing Group: II

IMO

No information available.

IATA

No information available.

RID/ADR

No information available.

Canadian TDG

No information available.

🔗 Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F

Risk Phrases:

R 11 Highly flammable.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 7 Keep container tightly closed.

WGK (Water Danger/Protection)

CAS# 64-17-5: 0



Shenzhen Sinsche Technology Co.,Ltd

CAS# 67-56-1: 1

CAS# 67-63-0: 1

CAS# 7732-18-5:

Canada

CAS# 64-17-5 is listed on Canada's DSL/NDSL List.

CAS# 67-56-1 is listed on Canada's DSL/NDSL List.

CAS# 67-63-0 is listed on Canada's DSL/NDSL List.

CAS# 7732-18-5 is listed on Canada's DSL/NDSL List.

WHMIS: Not available.

CAS# 64-17-5 is listed on Canada's Ingredient Disclosure List.

CAS# 67-56-1 is listed on Canada's Ingredient Disclosure List.

CAS# 67-63-0 is listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 64-17-5: OEL-AUSTRALIA:TWA 1000 ppm (1900 mg/m³). OEL-BELGIUM:TWA 1000 ppm (1880 mg/m³). OEL-CZECHOSLOVAKIA:TWA 1000 mg/m³;STEL 5000

mg/m³. OEL-DENMARK:TWA 1000 ppm (1900 mg/m³). OEL-FINLAND:TWA 1000 ppm

(1900 mg/m³);STEL 1250 ppm (2400 mg/m³). OEL-FRANCE:TWA 1000 ppm (1900 mg/m³);STEL 5000 pp. OEL-GERMANY:TWA 1000 ppm (1900 mg/m³).

OEL-HUNG

ARY:TWA 1000 mg/m³;STEL 3000 mg/m³. OEL-THE NETHERLANDS:TWA 1000 ppm (

1900 mg/m³). OEL-THE PHILIPPINES:TWA 1000 ppm (1900 mg/m³).

OEL-POLAND

:TWA 1000 mg/m³. OEL-RUSSIA:STEL 1000 mg/m³. OEL-SWEDEN:TWA 1000 ppm (

1900 mg/m³). OEL-SWITZERLAND:TWA 1000 ppm (1900 mg/m³).

OEL-THAILAND:T

WA 1000 ppm (1900 mg/m³). OEL-TURKEY:TWA 1000 ppm (1900 mg/m³).

OEL-UN

ITED KINGDOM:TWA 1000 ppm (1900 mg/m³) JAN9. OEL IN BULGARIA, COLOMBIA

, JORDAN, KOREA check ACGIH TLV. OEL IN NEW ZEALAND, SINGAPORE, VIETNA

M check ACGI TLV

CAS# 67-56-1: OEL-ARAB Republic of Egypt:TWA 200 ppm (260 mg/m³);Ski



Shenzhen Sinsche Technology Co.,Ltd

n. OEL-AUSTRALIA:TWA 200 ppm (260 mg/m³);STEL 250 ppm;Skin.
OEL-BELGIU
M:TWA 200 ppm (262 mg/m³);STEL 250 ppm;Skin.
OEL-CZECHOSLOVAKIA:TWA 10
0 mg/m³;STEL 500 mg/m³. OEL-DENMARK:TWA 200 ppm (260 mg/m³);Skin. OEL-
FINLAND:TWA 200 ppm (260 mg/m³);STEL 250 ppm;Skin. OEL-FRANCE:TWA
200
ppm (260 mg/m³);STEL 1000 ppm (1300 mg/m³). OEL-GERMANY:TWA 200 ppm (2
60 mg/m³);Skin. OEL-HUNGARY:TWA 50 mg/m³;STEL 100 mg/m³;Skin JAN9.
OEL
-JAPAN:TWA 200 ppm (260 mg/m³);Skin. OEL-THE NETHERLANDS:TWA 200
ppm (
260 mg/m³);Skin. OEL-THE PHILIPPINES:TWA 200 ppm (260 mg/m³). OEL-POLA
ND:TWA 100 mg/m³. OEL-RUSSIA:TWA 200 ppm;STEL 5 mg/m³;Skin.
OEL-SWEDEN
:TWA 200 ppm (250 mg/m³);STEL 250 ppm (350 mg/m³);Skin. OEL-SWITZERLAN
D:TWA 200 ppm (260 mg/m³);STEL 400 ppm;Skin. OEL-THAILAND:TWA 200 ppm
(260 mg/m³). OEL-TURKEY:TWA 200 ppm (260 mg/m³). OEL-UNITED
KINGDOM:TW
A 200 ppm (260 mg/m³);STEL 250 ppm;Skin. OEL IN BULGARIA, COLOMBIA, JO
RDAN, KOREA check ACGIH TLV. OEL IN NEW ZEALAND, SINGAPORE,
VIETNAM ch
eck ACGI TLV
CAS# 67-63-0:. OEL-AUSTRALIA:TWA 400 ppm (980 mg/m³);STEL 500 ppm (12
25 mg/m³). OEL-BELGIUM:TWA 400 ppm (985 mg/m³);STEL 500 ppm (1230 mg/m
3). OEL-DENMARK:TWA 200 ppm (490 mg/m³);Skin. OEL-FRANCE:STEL 400
ppm
(980 mg/m³). OEL-GERMANY:TWA 400 ppm (980 mg/m³). OEL-JAPAN:STEL 400
p
pm (980 mg/m³). OEL-THE NETHERLANDS:TWA 400 ppm (980 mg/m³);Skin.
OEL-
THE PHILIPPINES:TWA 400 ppm (980 mg/m³). OEL-RUSSIA:STEL 400 ppm (10 m
g/m³). OEL-SWEDEN:TWA 150 ppm (350 mg/m³);STEL 250 ppm (600 mg/m³). OE
L-SWITZERLAND:TWA 400 ppm (980 mg/m³);STEL 800 ppm.
OEL-TURKEY:TWA 200
ppm (500 mg/m³). OEL-UNITED KINGDOM:TWA 400 ppm (980 mg/m³);STEL 500
ppm;Skin. OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH
TLV. OE



Shenzhen Sinsche Technology Co.,Ltd

L IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA

CAS# 64-17-5 is listed on the TSCA inventory.

CAS# 67-56-1 is listed on the TSCA inventory.

CAS# 67-63-0 is listed on the TSCA inventory.

CAS# 7732-18-5 is listed on the TSCA inventory.



Shenzhen Sinsche Technology Co.,Ltd

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Aluminum 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 Reagent Determination of ammonium nitrogen

Date of MSDS Preparation:

Day: 18

Month: June

Year: 2020

2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
Ammonia	231-635-3	1336-21-6	<10%
Demineralized Water	231-791-2	7732-18-5	>90%

Hazard Symbols: C N

Risk Phrases: 34 50

3 - HAZARDS IDENTIFICATION

CHS Classification

Most Important Hazards

According to ABNT NBR 14725-2

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

Label elements

Signal word - Danger

Hazard statements

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage



Shenzhen Sinsche Technology Co.,Ltd

H412 - Harmful to aquatic life with long lasting effects



Exclamation mark

Corrosion

Precautionary statement

PP260 - 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

P273 - Avoid release to the environment

P270 - Do not eat, drink or smoke when using this product

Other Hazards Known

Not applicable

➤ Section 4 - FIRST AID MEASURES

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Get medical aid immediately. Wash clothing before reuse.

Ingestion:

If swallowed, do NOT induce vomiting. Get medical aid immediately.

If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.



Shenzhen Sinsche Technology Co.,Ltd

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

After inhalation exposure, observe for 24 to 72 hours as pulmonary edema may be delayed.

🔥 Section 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Ammonium hydroxide itself is non-combustible. However concentrated ammonia solutions may give off ammonia vapours. Ammonia gas is generally not considered a serious fire or explosion hazard because ammonia/air mixtures are difficult to ignite. A relatively high concentration of ammonia gas must be present in order for ignition to occur. However, a large and intense energy source may cause ignition and/or explosion in a confined space.

Extinguishing Media:

Use extinguishing media most appropriate for the surrounding fire.

🔥 Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Neutralize spill with a weak acid such as vinegar or acetic acid. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Approach spill from upwind.

🔥 Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Discard contaminated shoes. Do not breathe vapor. Use only with adequate ventilation.

Storage:

Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry,



Shenzhen Sinsche Technology Co.,Ltd

well-ventilated area away from incompatible substances. Corrosives area. Isolate from oxidizing materials and acids. Walls, floors, shelving, fittings, lighting and ventilation systems in storage area should be made from carbon steel or stainless steel which do not react with ammonium hydroxide.

➤ Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits CAS# 1336-21-6: CAS# 7664-41-7: United Kingdom, WEL - TWA: 25 ppm TWA (anhydrous); 18 mg/m³ TWA (anhydrous) United Kingdom, WEL - STEL: 35 ppm STEL (anhydrous); 25 mg/m³ STE (anhydrous) United States OSHA: 50 ppm TWA; 35 mg/m³ TWA Belgium - TWA: 20 ppm VLE; 14 mg/m³ VLE Belgium - STEL: 50 ppm VLE; 36 mg/m³ VLE France - VME: 25 ppm VME; 18 mg/m³ VME France - VLE: 50 ppm VLE; 36 mg/m³ VLE Germany: 50 ppm TWA; 35 mg/m³ TWA Japan: 25 ppm OEL; 17 mg/m³ OEL Malaysia: 25 ppm TWA; 17 mg/m³ TWA Netherlands: 50 ppm STEL; 36 mg/m³ STEL Netherlands: 20 ppm MAC; 14 mg/m³ MAC Russia: 20 mg/m³ TWA Spain: 20 ppm VLA-ED; 14 mg/m³ VLA-ED Spain: 50 ppm VLA-EC; 36 mg/m³ VLA-EC CAS# 7732-18-5: Personal Protective Equipment Eyes: Wear chemical splash goggles and face shield.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

➤ Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: colorless

Odor: strong odor - ammonia-like

pH: 13.6

Vapor Pressure: 557 mm Hg @ 21 deg C

Viscosity: Not available.

Boiling Point: 27 deg C

Freezing/Melting Point: -69 deg C

Autoignition Temperature: 651 deg C (1,203.80 deg F)



Shenzhen Sinsche Technology Co.,Ltd

Flash Point: Not available.
Explosion Limits, lower: 15%
Explosion Limits, upper: 28%
Decomposition Temperature: Not available.
Solubility in water: Soluble.
Specific Gravity/Density: 0.89
Molecular Formula: NH₄OH
Molecular Weight: 35.04

➤ Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures. Ammonium hydroxide is actually a solution of ammonia in water. Therefore the flammable properties of ammonia apply.

Conditions to Avoid:

High temperatures, confined spaces, Ammonia solutions are corrosive to copper, zinc, aluminum and their alloys..

Incompatibilities with Other Materials:

Strong oxidizing agents, acids, acrolein, halogens, mercury, hypochlorite, silver nitrate, acrylic acid, dimethyl sulfate, silver oxide.

Hazardous Decomposition Products:

Nitrogen oxides (NO_x) and ammonia (NH₃).

Hazardous Polymerization: Will not occur.

➤ Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 1336-21-6: BQ9625000 CAS# 7664-41-7: BO0875000 CAS# 7732-18-5:

ZC0110000 LD50/LC50:

CAS# 1336-21-6: Draize test, rabbit, eye: 250 ug Severe; Draize test, rabbit, eye: 44 ug Severe; Oral, rat: LD50 = 350 mg/kg.

CAS# 7664-41-7: Inhalation, mouse: LC50 = 4230 ppm/1H; Inhalation, mouse: LC50 = 4600 mg/m³/2H; Inhalation, rabbit: LC50 = 7 gm/m³/1H; Inhalation, rat: LC50 = 2000 ppm/4H; Inhalation, rat: LC50 = 18600 mg/m³/5M; Inhalation, rat: LC50 = 7040 mg/m³/30M; Skin, rat: LD50 = 112000 mg/m³/15M; Skin, rat: LD50 = 71900 mg/m³/30M; Skin, rat: LD50 = 4840 mg/m³/60M.

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.

Carcinogenicity:

Ammonium hydroxide - Not listed by ACGIH, IARC, or NTP.

Ammonia - Not listed by ACGIH, IARC, or NTP.

Water - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.



➤ Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Rainbow trout: LC50 = 0.008 mg/L; 24 Hr.; UnspecifiedFish: Fathead Minnow:
LC50 = 8.2 mg/L; 96 Hr.; UnspecifiedFish: Bluegill/Sunfish: LC50 = 0.024-0.093 mg/L;
48 Hr.; UnspecifiedWater flea Daphnia: EC50 =0.66 mg/L; 48 Hr.; 22 degrees C

➤ Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

➤ Section 14 - TRANSPORT INFORMATION

IATA

Shipping Name: AMMONIA SOLUTION

Hazard Class: 8

UN Number: 2672

Packing Group: III

IMO

Shipping Name: AMMONIA SOLUTION

Hazard Class: 8

UN Number: 2672

Packing Group: III

RID/ADR

Shipping Name: AMMONIA SOLUTION

Hazard Class: 8

UN Number: 2672

Packing group: III

USA RQ: CAS# 1336-21-6: 1000 lb final RQ; 454 kg final RQ

USA RQ: CAS# 7664-41-7: 100 lb final RQ; 45.4 kg final RQ

➤ Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C N

Risk Phrases:

R 34 Causes burns.

R 50 Very toxic to aquatic organisms.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately
with plenty of water and seek medical advice.



Shenzhen Sinsche Technology Co.,Ltd

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 1336-21-6: 2

CAS# 7664-41-7: 2

CAS# 7732-18-5: No information available.

Canada

CAS# 1336-21-6 is listed on Canada's DSL List.

CAS# 7664-41-7 is listed on Canada's DSL List.

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 1336-21-6 is listed on Canada's Ingredient Disclosure List.

CAS# 7664-41-7 is listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 1336-21-6 is listed on the TSCA inventory.

CAS# 7664-41-7 is listed on the TSCA inventory.

CAS# 7732-18-5 is listed on the TSCA inventory.



Shenzhen Sinsche Technology Co.,Ltd

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Aluminum Reagent R5

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 Reagent Determination of ammonium nitrogen

Date of MSDS Preparation:

Day: 18

Month: June

Year: 2020

2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
Nitric acid	231-714-2	7697-37-2	<2%
Demineralized Water	231-791-2	7732-18-5	>90%

Hazard Symbols: None Listed.

Risk Phrases: None Listed.

3 - HAZARDS IDENTIFICATION

CHS Classification

Most Important Hazards

According to ABNT NBR 14725-2

Skin Corrosion/Irritation	Category 2
Serious eye damage/eye irritation	Category 2

Label elements

Signal word - Warning

Hazard statements

H315-Causes skin irritation

H319-Causes serious eye irritation



Precautionary statement

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 all 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

➤ Section 4 - FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Wash mouth out with water.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Antidote: None reported.

➤ Section 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media:

Use agent most appropriate to extinguish fire.



➤ Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

➤ Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Use only in a well-ventilated area.

Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

➤ Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits CAS# 7697-37-2: United Kingdom, WEL - TWA: 2 ppm TWA; 5.2 mg/m³ TWA United Kingdom, WEL - STEL: 4 ppm STEL; 10 mg/m³ STEL United States OSHA: 2 ppm TWA; 5 mg/m³ TWA Belgium - TWA: 2 ppm VLE; 5.3 mg/m³ VLE Belgium - STEL: 4 ppm VLE; 10 mg/m³ VLE France - VME: 2 ppm VME; 5 mg/m³ VME France - VLE: 4 ppm VLE; 10 mg/m³ VLE Germany: 2 ppm TWA; 5.2 mg/m³ TWA Japan: 2 ppm OEL; 5.2 mg/m³ OEL Malaysia: 2 ppm TWA; 5.2 mg/m³ TWA Netherlands: 0.5 ppm STEL; 1.3 mg/m³ STEL Russia: 2 mg/m³ TWA Spain: 2 ppm VLA-ED; 5.2 mg/m³ VLA-ED Spain: 4 ppm VLA-EC; 10 mg/m³ VLA-EC

Personal Protective Equipment Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European



Shenzhen Sinsche Technology Co.,Ltd

Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

➤ Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: Not available.

Odor: Not available.

pH: Not available.

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: Not available.

Autoignition Temperature: Not available.

Flash Point: Not available.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature:

Solubility in water:

Specific Gravity/Density:

Molecular Formula: HNO₃ mixture

Molecular Weight:

➤ Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Decomposes when in contact with air, light, or organic matter.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), alcohols and glycols (e.g. butyl alcohol, ethanol, methanol, ethylene glycol), aldehydes

(e.g.

acetaldehyde, acrolein, chloral hydrate, formaldehyde), amides (e.g.

butyramide, diethyltoluamide, dimethyl formamide), amines (aliphatic and aromatic, e.g.

dimethyl amine, propylamine, pyridine, triethylamine), azo, diazo, and hydrazines (e.g.

dimethyl hydrazine, hydrazine, methyl hydrazine), carbamates (e.g. carbanolate,

carbofuran), caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide,

potassium hydroxide, sodium hydroxide), cyanides (e.g.

potassium cyanide, sodium cyanide), dithiocarbamates (e.g. ferbam, maneb, metham,

thiram), esters (e.g. butyl acetate, ethyl acetate, propyl formate), ethers (e.g. dioxane,

furfuran, tetrahydrofuran (THF)), fluorides (inorganic, e.g. ammonium fluoride, calcium

fluoride, cesium fluoride), hydrocarbons (aromatic, e.g. benzene, chrysene, cumene,



Shenzhen Sinsche Technology Co.,Ltd

toluene), halo.

Hazardous Decomposition Products:

Oxides of nitrogen, irritating and toxic fumes and gases.

Hazardous Polymerization: Will not occur.

➤ Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 7697-37-2: QU5775000 QU5900000 LD50/LC50:

CAS# 7697-37-2: Inhalation, rat: LC50 = 260 mg/m³/30M; Inhalation, rat: LC50 = 130 mg/m³/4H; Inhalation, rat: LC50 = 67 ppm(NO₂)/4H.

Carcinogenicity:

Nitric acid - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

➤ Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Mollusk Cockle: 330-1000 mg/L; 48 Hrs.; Aerated Water Condition

➤ Section 13 - DISPOSAL CONSIDERATIONS

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

➤ Section 14 - TRANSPORT INFORMATION

IATA

No information available.

IMO

No information available.

RID/ADR

No information available.

USA RQ: CAS# 7697-37-2: 1000 lb final RQ; 454 kg final RQ

➤ Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives



Shenzhen Sinsche Technology Co.,Ltd

Hazard Symbols: Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 7697-37-2: 1

Canada

CAS# 7697-37-2 is listed on Canada's DSL List.

CAS# 7697-37-2 is listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 7697-37-2 is listed on the TSCA inventory.