



# Shenzhen Sinsche Technology Co.,Ltd

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Nitrate Nitrogen Reagent B1

**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:** Determination of Ozone

**Date of MSDS Preparation:**

**Day:** 21

**Month:** June

**Year:** 2020

### 2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
Ammonium sulfamate	231-871-7	7773-06-0	<3%
Acetic acid	200-580-7	64-19-7	<25%
Demineralized Water	231-791-2	7732-18-5	>70%

Hazard Symbols: XI

Risk Phrases: 36

### 3 - HAZARDS IDENTIFICATION

#### CHS Classification

#### Most Important Hazards

According to ABNT NBR 14725-2

Acute toxicity - Oral	Category 5
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Acute aquatic toxicity	Category 3

#### Label elements

**Signal word** - Danger

#### Hazard statements

H303 - May be harmful if swallowed

H314 - Causes severe skin burns and eye damage



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H402 - Harmful to aquatic life



Corrosion

## **Precautionary statements**

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

P273 - Avoid release to the environment

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking

P233 - Keep container tightly closed

P240 - Ground and bond container and receiving equipment

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

P242 - Use non-sparking tools

P243 - Take action to prevent static discharges

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

## **Other Hazards Known**

Not applicable

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## **➔ Section 4 - FIRST AID MEASURES**

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

Skin:

Get medical aid immediately. Immediately flush skin with plenty of water for at least 15



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minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

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.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

Effects may be delayed. May be partially metabolized to cyanide in the body.

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## ➤ Section 5 - FIRE FIGHTING MEASURES

General Information:

Containers can build up pressure if exposed to heat and/or fire. 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. Use water spray to keep fire-exposed containers cool.

Extinguishing Media:

Use water spray to cool fire-exposed containers. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

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## ➤ Section 6 - ACCIDENTAL RELEASE MEASURES

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

Spills/Leaks:

Avoid runoff into storm sewers and ditches which lead to waterways.

Clean up spills immediately, observing precautions in the Protective Equipment section.

Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust.

Provide ventilation.

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## ➤ Section 7 - HANDLING and STORAGE

Handling:

Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale.



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## Storage:

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

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## 🔗 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.

Exposure Limits CAS# 64-19-7: United States OSHA: 10 ppm TWA; 25 mg/m<sup>3</sup> TWA  
Belgium - TWA: 10 ppm VLE; 25 mg/m<sup>3</sup> VLE Belgium - STEL: 15 ppm VLE; 38 mg/m<sup>3</sup> VLE  
France - VLE: 10 ppm VLE; 25 mg/m<sup>3</sup> VLE Germany: 10 ppm TWA; 25 mg/m<sup>3</sup> TWA  
Japan: 10 ppm OEL; 25 mg/m<sup>3</sup> OEL Malaysia: 10 ppm TWA; 25 mg/m<sup>3</sup> TWA  
Netherlands: 10 ppm MAC; 25 mg/m<sup>3</sup> MAC Russia: 5 mg/m<sup>3</sup> TWA Spain: 10 ppm  
VLA-ED; 25 mg/m<sup>3</sup> VLA-ED Spain: 15 ppm VLA-EC; 37 mg/m<sup>3</sup> VLA-EC CAS# 75-05-8:  
United Kingdom, WEL - TWA: 40 ppm TWA; 68 mg/m<sup>3</sup> TWA United Kingdom, WEL -  
STEL: 60 ppm STEL; 102 mg/m<sup>3</sup> STEL United States OSHA: 40 ppm TWA; 70 mg/m<sup>3</sup> TWA  
Belgium - TWA: 40 ppm VLE; 68 mg/m<sup>3</sup> VLE Belgium - STEL: 60 ppm VLE; 102 mg/m<sup>3</sup>  
VLE France - VME: 40 ppm VME; 70 mg/m<sup>3</sup> VME Germany: 20 ppm TWA; 34 mg/m<sup>3</sup>  
TWA Germany: Skin absorber Malaysia: 40 ppm TWA; 67 mg/m<sup>3</sup> TWA Netherlands: 40  
ppm MAC; 70 mg/m<sup>3</sup> MAC Russia: 10 mg/m<sup>3</sup> TWA Spain: 40 ppm VLA-ED; 68 mg/m<sup>3</sup>  
VLA-ED Spain: 60 ppm VLA-EC; 102 mg/m<sup>3</sup> VLA-EC CAS# 121-44-8: United Kingdom,  
WEL - TWA: 2 ppm TWA; 8 mg/m<sup>3</sup> TWA United Kingdom, WEL - STEL: 4 ppm STEL; 17  
mg/m<sup>3</sup> STEL United States OSHA: 25 ppm TWA; 100 mg/m<sup>3</sup> TWA Belgium - TWA: 1 ppm  
VLE; 4.2 mg/m<sup>3</sup> VLE Belgium - STEL: 3 ppm VLE; 12.6 mg/m<sup>3</sup> VLE France - VLE: 10 ppm  
VLE; 40 mg/m<sup>3</sup> VLE Germany: 1 ppm TWA; 4.2 mg/m<sup>3</sup> TWA Germany: Skin absorber  
Malaysia: 1 ppm TWA; 4.1 mg/m<sup>3</sup> TWA Netherlands: 10 ppm STEL; 40 mg/m<sup>3</sup> STEL  
Netherlands: 5 ppm MAC; 20 mg/m<sup>3</sup> MAC Russia: 10 mg/m<sup>3</sup> TWA Spain: 2 ppm  
VLA-ED; 8.4 mg/m<sup>3</sup> VLA-ED Spain: 3 ppm VLA-EC; 12.6 mg/m<sup>3</sup> VLA-EC CAS# 7732-18-5:  
Personal Protective Equipment Eyes: Wear chemical splash goggles.

### 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.

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## 🔗 Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid



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Color: clear to white

Odor: Not available.

pH: 9.2

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: Solution

Molecular Weight: 0

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## 🔥 Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Excess heat.

Incompatibilities with Other Materials:

Oxidizing agents, reducing agents, acids, bases, alkali metals, fluorine, nitric acid, perchlorates, sulfuric acid, chlorosulfonic acid, oleum, dinitrogen tetroxide, sulfites, indium, moisture, Attacks some forms of plastics, rubbers, and coatings., nitrating agents, N-fluoro compounds (e.g. perfluorourea + acetonitrile), lanthanide perchlorates, iron (III) perchlorate, 2-Cyano-2-propyl nitrate, trichlorosilane, diphenyl sulfoxide.

Hazardous Decomposition Products:

Hydrogen cyanide, nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

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## 🔥 Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 64-19-7: AF1225000 CAS# 75-05-8: AL7700000 CAS# 121-44-8: YE0175000 CAS# 7732-18-5: ZC0110000 LD50/LC50:

CAS# 64-19-7: Draize test, rabbit, skin: 50 mg/24H Mild; Inhalation, mouse: LC50 = 5620 ppm/1H; Oral, rat: LD50 = 3310 mg/kg; Skin, rabbit: LD50 = 1060 uL/kg.

CAS# 75-05-8: Draize test, rabbit, eye: 100 uL/24H Moderate; Inhalation, mouse: LC50 = 2693 ppm/1H; Inhalation, rabbit: LC50 = 2828 ppm/4H; Inhalation, rat: LC50 = 7551 ppm/8H; Oral, mouse: LD50 = 269 mg/kg; Oral, rabbit: LD50 = 50 mg/kg; Oral, rat: LD50 = 2460 mg/kg; Skin, rabbit: LD50 = >2 gm/kg.



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CAS# 121-44-8: Inhalation, mouse: LC50 = 6 gm/m<sup>3</sup>; Oral, mouse: LD50 = 546 mg/kg;

Oral, rat: LD50 = 460 mg/kg; Skin, rabbit: LD50 = 570 uL/kg.

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

Carcinogenicity:

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

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

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

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

Other:

See actual entry in RTECS for complete information.

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## 🔗 Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Fathead Minnow: 1150 ppm; 24 Hr; TLm (hard water) Fish: Fathead Minnow: 1000

mg/L; 96 Hr; TLm (soft water) Fish: Bluegill/Sunfish: 1850 mg/L; 96 Hr; TLm (soft

water) Fish: Fathead Minnow: 1640 mg/L; 96 Hr; LC50 (flow-bioassay) Fish: Fathead

Minnow: 1640 mg/L; 96 Hr; EC50 (flow-bioassay) Other Biodegradable.

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## 🔗 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.

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## 🔗 Section 14 - TRANSPORT INFORMATION

IATA

Shipping Name: Not regulated.

Hazard Class:

UN Number:

Packing Group:

IMO

Shipping Name: Not regulated.

Hazard Class:

UN Number:

Packing Group:

RID/ADR

Shipping Name: Not regulated.

Hazard Class:

UN Number:

Packing group:



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USA RQ: CAS# 64-19-7: 5000 lb final RQ; 2270 kg final RQ

USA RQ: CAS# 75-05-8: 5000 lb final RQ; 2270 kg final RQ

USA RQ: CAS# 121-44-8: 5000 lb final RQ; 2270 kg final RQ

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## 🔗 Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36 Irritating to eyes.

Safety Phrases:

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

S 36/37 Wear suitable protective clothing and gloves.

WGK (Water Danger/Protection)

CAS# 64-19-7: 1

CAS# 75-05-8: 2

CAS# 121-44-8: 1

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

Canada

CAS# 64-19-7 is listed on Canada's DSL List.

CAS# 75-05-8 is listed on Canada's DSL List.

CAS# 121-44-8 is listed on Canada's DSL List.

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

CAS# 64-19-7 is listed on Canada's Ingredient Disclosure List.

CAS# 75-05-8 is listed on Canada's Ingredient Disclosure List.

CAS# 121-44-8 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# 64-19-7 is listed on the TSCA inventory.

CAS# 75-05-8 is listed on the TSCA inventory.

CAS# 121-44-8 is listed on the TSCA inventory.

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

**MATERIAL SAFETY DATA SHEET**



# Shenzhen Sinsche Technology Co.,Ltd

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Nitrate Nitrogen Reagent B2

**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:** Determination of Ozone

**Date of MSDS Preparation:**

**Day:** 21

**Month:** June

**Year:** 2020

## 2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
Thymol	201-944-8	89-83-8	< 2%
Etanol	200-578-6	64-17-5	> 94%

Hazard Symbols: XI

Risk Phrases: 36/37/38

## 3 - HAZARDS IDENTIFICATION

### CHS Classification

#### Most Important Hazards

According to ABNT NBR 14725-2

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

### Label elements

Signal word - Danger





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## **Hazard statements**

H225 - Highly flammable liquid and vapor

H319 - Causes serious eye irritation

H336 - May cause drowsiness or dizziness

## **Precautionary statements**

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

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

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

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

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

P233 - Keep container tightly closed

P240 - Ground/bond container and receiving equipment

P242 - Use only non-sparking tools

P243 - Take precautionary measures against static discharge

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

P235 - Keep cool

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

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

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

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

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

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

P405 - Store locked up

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

## **Other Hazards Known**

Not applicable

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## ➤ Section 4 - FIRST AID MEASURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. Do NOT allow victim to rub eyes or keep eyes closed.

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.

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. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

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## ➤ 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.

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## ➤ 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. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section.

Provide ventilation.

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## ➤ Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed.

Avoid ingestion and inhalation.

Storage:



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

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## ➤ 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# 89-83-8: CAS# 1310-73-2: United Kingdom, WEL - STEL: 2 mg/m<sup>3</sup>

STEL United States OSHA: 2 mg/m<sup>3</sup> TWA Belgium - TWA: 2 mg/m<sup>3</sup> VLE France - VME: 2

mg/m<sup>3</sup> VME Germany: 2 mg/m<sup>3</sup> TWA (inhalable fraction) Japan: 2 mg/m<sup>3</sup> Ceiling

Malaysia: 2 mg/m<sup>3</sup> Ceiling Spain: 2 mg/m<sup>3</sup> VLA-EC CAS# 7447-40-7: Russia: 5 mg/m<sup>3</sup>

TWA CAS# 7732-18-5: 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.

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## ➤ Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear liquid

Color: colorless

Odor: odorless

pH: Not available

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: > 100 deg C

Freezing/Melting Point: < 0 deg C

Autoignition Temperature: Not available.

Flash Point: Not available.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature:

Solubility in water: Soluble.

Specific Gravity/Density: 1.0

Molecular Formula: Solution

Molecular Weight: 0

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## ➤ Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Acids.

Hazardous Decomposition Products:

Hydrogen chloride, carbon monoxide, carbon dioxide, sodium oxide, oxides of potassium.

Hazardous Polymerization: Has not been reported.

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## ➤ Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 89-83-8: XP2275000 CAS# 1310-73-2: WB4900000 CAS# 7447-40-7: TS8050000

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

CAS# 89-83-8: Oral, mouse: LD50 = 640 mg/kg; Oral, rat: LD50 = 980 mg/kg.

CAS# 1310-73-2: Draize test, rabbit, eye: 400 ug Mild; Draize test, rabbit, eye: 1%

Severe; Draize test, rabbit, eye: 50 ug/24H Severe; Draize test, rabbit, eye: 1 mg/24H

Severe; Draize test, rabbit, skin: 500 mg/24H Severe.

CAS# 7447-40-7: Draize test, rabbit, eye: 500 mg/24H Mild; Oral, mouse: LD50 = 1500 mg/kg; Oral, rat: LD50 = 2600 mg/kg.

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

Carcinogenicity:

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

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

Potassium chloride - Not listed by ACGIH, IARC, or NTP.

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

Other:

See actual entry in RTECS for complete information.

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## ➤ Section 12 - ECOLOGICAL INFORMATION

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## ➤ Section 13 - DISPOSAL CONSIDERATIONS

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

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## ➤ 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.

USA RQ: CAS# 1310-73-2: 1000 lb final RQ; 454 kg final RQ

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## 🔗 Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

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

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 89-83-8: 2

CAS# 1310-73-2: 1

CAS# 7447-40-7: 1

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

Canada

CAS# 89-83-8 is listed on Canada's DSL List.

CAS# 1310-73-2 is listed on Canada's DSL List.

CAS# 7447-40-7 is listed on Canada's DSL List.

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

CAS# 89-83-8 is not listed on Canada's Ingredient Disclosure List.

CAS# 1310-73-2 is listed on Canada's Ingredient Disclosure List.

CAS# 7447-40-7 is not listed on Canada's Ingredient Disclosure List.

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

US FEDERAL

TSCA

CAS# 89-83-8 is listed on the TSCA inventory.

CAS# 1310-73-2 is listed on the TSCA inventory.

CAS# 7447-40-7 is listed on the TSCA inventory.

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

## MATERIAL SAFETY DATA SHEET



# Shenzhen Sinsche Technology Co.,Ltd

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Nitrate Nitrogen Reagent B3

**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:** Determination of Ozone

**Date of MSDS Preparation:**

**Day:** 21

**Month:** June

**Year:** 2020

## 2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
Silver Sulfate	233-653-7	10294-26-5	<2%
Sulfuric acid	231-639-5	7664-93-9	>95%

Hazard Symbols: C

Risk Phrases: 35

## 3 - HAZARDS IDENTIFICATION

### GHS Classification:

Corrosive to metals	Category 1
Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1
Aquatic Acute Toxicity	Category 1

### GHS Label Elements:

Danger



Signal word - Danger

Hazard statements



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- H290 - May be corrosive to metals
- H302 - Harmful if swallowed
- H311 - Toxic in contact with skin
- H314 - Causes severe skin burns and eye damage
- H410 - Very toxic to aquatic life with long lasting effects

## **Precautionary statements**

- P270 - Do not eat, drink or smoke when using this product
- P302 + P352 - IF ON SKIN: Wash with plenty of water and soap
- 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/ shower
- P363 - Wash contaminated clothing before reuse
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P405 - Store locked up
- 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
- P273 - Avoid release to the environment
- P391 - Collect spillage
- P501 - Dispose of contents/ container to an approved waste disposal plant
- P234 - Keep only in original container
- P390 - Absorb spillage to prevent material damage

## **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.

**Inhalation:**



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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:

Monitor arterial blood gases, chest x-ray, and pulmonary function tests if respiratory tract irritation or respiratory depression is evident. Treat dermal irritation or burns with standard topical therapy. Effects may be delayed. Do NOT use sodium bicarbonate in an attempt to neutralize the acid.

---

## 🔥 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. Use water spray to keep fire-exposed containers cool. Substance is noncombustible. Contact with water can cause violent liberation of heat and splattering of the material. Contact with metals may evolve flammable hydrogen gas. Runoff from fire control or dilution water may cause pollution. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.

Strong dehydrating agent, which may cause ignition of finely divided materials on contact. Oxides of sulfur may be produced in fire.

Extinguishing Media:

Use extinguishing media most appropriate for the surrounding fire.

Do NOT get water inside containers. If water is used, care should be taken, since it can generate heat and cause spattering if applied directly to sulfuric acid.

---

## 🔥 Section 6 - ACCIDENTAL RELEASE MEASURES

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

Spills/Leaks:

Avoid runoff into storm sewers and ditches which lead to waterways.

Clean up spills immediately, observing precautions in the Protective Equipment section.

Carefully scoop up and place into appropriate disposal container. Provide ventilation. Do not get water inside containers. Cover with dry earth, dry sand, or other non-combustible material followed with plastic sheet to minimize spreading and contact with water.

---

## 🔥 Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

Do not allow water to get into the container because of violent reaction. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Discard contaminated shoes.





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Use only with adequate ventilation. Do not breathe spray or mist. Do not use with metal spatula or other metal items. Inform laundry personnel of contaminant's hazards.

Storage:

Do not store near combustible materials. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not store near alkaline substances. Store protected from moisture. Ideally, sulfuric acid should be stored in isolation from all other chemicals in an approved acid or corrosives safety cabinet.

---

## 🔗 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. Use a corrosion-resistant ventilation system.

Exposure Limits CAS# 7664-93-9: United States OSHA: 1 mg/m<sup>3</sup> TWA Belgium - TWA: 1 mg/m<sup>3</sup> VLE Belgium - STEL: 3 mg/m<sup>3</sup> VLE France - VME: 1 mg/m<sup>3</sup> VME France - VLE: 3 mg/m<sup>3</sup> VLE Germany: 0.5 mg/m<sup>3</sup> TWA (inhalable fraction, battery manufacture, metal working in a close Japan: 1 mg/m<sup>3</sup> Ceiling Malaysia: 1 mg/m<sup>3</sup> TWA Netherlands: 1 mg/m<sup>3</sup> MAC Russia: 1 mg/m<sup>3</sup> TWA Spain: 1 mg/m<sup>3</sup> VLA-ED Spain: 3 mg/m<sup>3</sup> VLA-EC

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: oily - clear colorless to yellow

Odor: odorless

pH: 0.3 (1N solution)

Vapor Pressure: < 0.001 mm Hg @ 20 deg C

Viscosity: 21 mPas @ 25 C

Boiling Point: 290-338 deg C

Freezing/Melting Point: 10 deg C

Autoignition Temperature: Not available.

Flash Point: Not applicable.



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Explosion Limits, lower: Not available.  
Explosion Limits, upper: Not available.  
Decomposition Temperature: 340 deg C  
Solubility in water: Soluble with much heat  
Specific Gravity/Density: Not available.  
Molecular Formula: mixture  
Molecular Weight: Not available.

---

## ➤ Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Sulfuric acid reacts vigorously, violently or explosively with many organic and inorganic chemicals and with water.

Conditions to Avoid:

Excess heat, exposure to moist air or water, Note: Use great caution in mixing with water due to heat evolution that causes explosive spattering. Always add the acid to water, never the reverse..

Incompatibilities with Other Materials:

Metals, oxidizing agents, reducing agents, bases, acrylonitrile, chlorates, finely powdered metals, nitrates, perchlorates, permanganates, epichlorohydrin, aniline, carbides, fulminates, picrates, organic materials, flammable liquids.

Hazardous Decomposition Products:

Oxides of sulfur.

Hazardous Polymerization: Has not been reported.

---

## ➤ Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 7664-93-9: WS5600000 LD50/LC50:

CAS# 7664-93-9: Draize test, rabbit, eye: 250 ug Severe; Inhalation, mouse: LC50 = 320 mg/m<sup>3</sup>/2H; Inhalation, mouse: LC50 = 320 mg/m<sup>3</sup>; Inhalation, rat: LC50 = 510 mg/m<sup>3</sup>/2H; Inhalation, rat: LC50 = 510 mg/m<sup>3</sup>; Oral, rat: LD50 = 2140 mg/kg.

Not available.

Carcinogenicity:

Sulfuric acid - ACGIH: A2 - Suspected Human Carcinogen (contained in strong inorg California: carcinogen, initial date 3/14/03 (listed as Strong inorgan NTP: Known carcinogen (listed as Strong inorganic acid mists co IARC: Group 1 carcinogen Other: See actual entry in RTECS for complete information.

---

## ➤ Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Bluegill/Sunfish: 49 mg/L; 48Hr; TLm (tap water @ 20C) Fish: Bluegill/Sunfish: 24.5 ppm; 48Hr; TLm (fresh water)

---



## ➤ Section 13 - DISPOSAL CONSIDERATIONS

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

---

## ➤ Section 14 - TRANSPORT INFORMATION

IATA

Shipping Name: SULPHURIC ACID

Hazard Class: 8

UN Number: 1830

Packing Group: II

IMO

Shipping Name: SULPHURIC ACID

Hazard Class: 8

UN Number: 1830

Packing Group: II

RID/ADR

Shipping Name: SULPHURIC ACID

Hazard Class: 8

UN Number: 1830

Packing group: II

USA RQ: CAS# 7664-93-9: 1000 lb final RQ; 454 kg final RQ

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## ➤ Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 35 Causes severe burns.

Safety Phrases:

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

S 30 Never add water to this product.

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# 7664-93-9: 2

Canada

CAS# 7664-93-9 is listed on Canada's DSL List.

CAS# 7664-93-9 is listed on Canada's Ingredient Disclosure List.



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US FEDERAL

TSCA

CAS# 7664-93-9 is listed on the TSCA inventory.



# Shenzhen Sinsche Technology Co.,Ltd

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Nitrate Nitrogen Reagent B4

**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:** Determination of Ozone

**Date of MSDS Preparation:**

**Day:** 21

**Month:** June

**Year:** 2020

### 2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
Ammonia	231-635-3	1336-21-6	<25-30%
Demineralized Water	231-791-2	7732-18-5	<70%

Hazard Symbols: C N

Risk Phrases: 34 50

### 3 - HAZARDS IDENTIFICATION

#### CHS Classification

#### Most Important Hazards

#### According to ABNT NBR 14725-2

Corrosive to metals	Category 1
Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Acute aquatic toxicity	Category 1

#### Label elements

**Signal word - Danger**

#### Hazard statements

H290 - May be corrosive to metals



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H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H335 - May cause respiratory irritation

H400 - Very toxic to aquatic life



## Precautionary statements

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

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

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

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

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

P273 - Avoid release to the environment

P391 - Collect spillage

P234 - Keep only in original packaging

P390 - Absorb spillage to prevent material damage

## 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



# Shenzhen Sinsche Technology Co.,Ltd

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.

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, 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/m<sup>3</sup> TWA (anhydrous) United Kingdom, WEL - STEL: 35 ppm STEL (anhydrous); 25 mg/m<sup>3</sup> STE (anhydrous) United States OSHA: 50 ppm TWA; 35 mg/m<sup>3</sup> TWA Belgium - TWA: 20 ppm VLE; 14 mg/m<sup>3</sup> VLE Belgium - STEL: 50 ppm VLE; 36 mg/m<sup>3</sup> VLE France - VME: 25 ppm VME; 18 mg/m<sup>3</sup> VME France - VLE: 50 ppm VLE; 36 mg/m<sup>3</sup> VLE Germany: 50 ppm TWA; 35 mg/m<sup>3</sup> TWA Japan: 25 ppm OEL; 17 mg/m<sup>3</sup> OEL Malaysia: 25 ppm TWA; 17 mg/m<sup>3</sup> TWA Netherlands: 50 ppm STEL; 36 mg/m<sup>3</sup> STEL Netherlands: 20 ppm MAC; 14 mg/m<sup>3</sup> MAC Russia: 20 mg/m<sup>3</sup> TWA Spain: 20 ppm VLA-ED; 14 mg/m<sup>3</sup> VLA-ED Spain: 50 ppm VLA-EC; 36 mg/m<sup>3</sup> 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





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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)  
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: NH<sub>4</sub>OH  
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<sub>x</sub>) and ammonia (NH<sub>3</sub>).

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/m<sup>3</sup>/2H; Inhalation, rabbit: LC50 = 7 gm/m<sup>3</sup>/1H; Inhalation, rat: LC50 = 2000 ppm/4H; Inhalation, rat: LC50 = 18600 mg/m<sup>3</sup>/5M; Inhalation, rat: LC50 = 7040 mg/m<sup>3</sup>/30M; Skin, rat: LD50 = 112000 mg/m<sup>3</sup>/15M; Skin, rat: LD50 = 71900 mg/m<sup>3</sup>/30M; Skin, rat: LD50 = 4840 mg/m<sup>3</sup>/60M.

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

Carcinogenicity:



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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



# Shenzhen Sinsche Technology Co.,Ltd

## 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.

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.

## MATERIAL SAFETY DATA SHEET

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION



# Shenzhen Sinsche Technology Co.,Ltd

**Product Name:** Nitrate Nitrogen Reagent B5

**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:** Determination of Ozone

**Date of MSDS Preparation:**

**Day:** 21

**Month:** June

**Year:** 2020

## 2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
Ammonia	231-635-3	1336-21-6	<2%
Deminerlized Water	231-791-2	7732-18-5	<98%

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 1
Serious eye damage/eye irritation	Category 1
Acute aquatic toxicity	Category 2

### Label elements

**Signal word - Danger**



Corrosion

### Hazard statements



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H314 - Causes severe skin burns and eye damage

H401 - Toxic to aquatic life

## **Precautionary statements**

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

P273 - Avoid release to the environment

## **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, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. 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:

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,



# Shenzhen Sinsche Technology Co.,Ltd

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. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Aqueous solutions containing <5% ammonia do not produce flammable vapors at any temperature.

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. Use with adequate ventilation. Keep container tightly closed. Avoid breathing vapor. Do not get in eyes. Avoid contact with skin and clothing.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. 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/m<sup>3</sup> TWA (anhydrous) United Kingdom, WEL - STEL: 35 ppm STEL (anhydrous); 25 mg/m<sup>3</sup> STE (anhydrous) United States OSHA: 50 ppm TWA; 35 mg/m<sup>3</sup> TWA Belgium - TWA: 20 ppm VLE; 14 mg/m<sup>3</sup> VLE Belgium - STEL: 50 ppm VLE; 36 mg/m<sup>3</sup> VLE France - VME: 25 ppm VME; 18 mg/m<sup>3</sup> VME France - VLE: 50 ppm VLE; 36 mg/m<sup>3</sup> VLE Germany: 50 ppm TWA; 35 mg/m<sup>3</sup> TWA Japan: 25 ppm OEL; 17 mg/m<sup>3</sup> OEL Malaysia: 25 ppm TWA; 17 mg/m<sup>3</sup> TWA Netherlands: 50 ppm STEL; 36 mg/m<sup>3</sup> STEL



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Netherlands: 20 ppm MAC; 14 mg/m<sup>3</sup> MAC Russia: 20 mg/m<sup>3</sup> TWA Spain: 20 ppm VLA-ED; 14 mg/m<sup>3</sup> VLA-ED Spain: 50 ppm VLA-EC; 36 mg/m<sup>3</sup> 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.

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## 🔗 Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: colorless

Odor: strong odor - ammonia-like

pH: alkaline

Vapor Pressure: < 112.5 mm Hg @ 20 deg C

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: -2.9 deg C

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

Flash Point: Not applicable.

Explosion Limits, lower: 15%

Explosion Limits, upper: 28%

Decomposition Temperature: Not available.

Solubility in water: Soluble.

Specific Gravity/Density: 0.98

Molecular Formula: NH<sub>4</sub>OH

Molecular Weight: 35.04

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## 🔗 Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

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:



# Shenzhen Sinsche Technology Co.,Ltd

Nitrogen oxides (NOx) and ammonia (NH3).

Hazardous Polymerization: Will not occur.

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## ➤ 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/m<sup>3</sup>/2H; Inhalation, rabbit: LC50 = 7 gm/m<sup>3</sup>/1H; Inhalation, rat: LC50 = 2000 ppm/4H; Inhalation, rat: LC50 = 18600 mg/m<sup>3</sup>/5M; Inhalation, rat: LC50 = 7040 mg/m<sup>3</sup>/30M; Skin, rat: LD50 = 112000 mg/m<sup>3</sup>/15M; Skin, rat: LD50 = 71900 mg/m<sup>3</sup>/30M; Skin, rat: LD50 = 4840 mg/m<sup>3</sup>/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.

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## ➤ 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

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## ➤ Section 13 - DISPOSAL CONSIDERATIONS

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

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## ➤ Section 14 - TRANSPORT INFORMATION

IATA

Shipping Name: AMMONIA SOLUTIONS

Hazard Class: 8

UN Number: 2672

Packing Group: III

IMO

Shipping Name: AMMONIA SOLUTIONS





# Shenzhen Sinsche Technology Co.,Ltd

Hazard Class: 8

UN Number: 2672

Packing Group: III

RID/ADR

Shipping Name: AMMONIA SOLUTIONS

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

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## 🔗 Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

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.