

MATERIAL SAFETY DATA SHEET

.....

Product Name: Fluoride 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: Determination of Ozone

Date of MSDS Preparation:

Day: 21
Month: June
Year: 2020

2 -COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content
Sulfuric acid	231-639-5	7664-93-9	<40%
Zirconyl chloride octahydrate	231-717-9	13520-92-8	<1%
2,7-Naphthalenedisulfonic acid,			
4,5-dihydroxy-3-[(4-sulfophenyl)azo]-,	245-803-9	23647-14-5	<10
trisodium salt			
Demineralized Water	231-791-2	7732-18-5	>50%

Hazard Symbols: C Risk Phrases: 35 3 HAZARDS IDENTIFICATION

Emergency Overview

Causes severe burns. Corrosive.

Potential Health Effects

Eye

Causes eye burns. May cause irreversible eye injury. The severity of injury depends on the concentration of the solution and the duration of exposure.

Skin:

Causes skin burns. The severity of injury depends on the concentration of the solution and the duration of exposure.

Ingestion:

May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns.

Inhalation:



Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Aspiration may lead to pulmonary edema. May cause systemic effects. Causes corrosive action on the mucous membranes.

Chronic:

Prolonged or repeated inhalation may cause nosebleeds, nasal congestion, erosion of the teeth, perforation of the nasal septum, chest pain and bronchitis. Prolonged or repeated eye contact may cause conjunctivitis. Effects may be delayed. Workers chronically exposed to sulfuric acid mists may show various lesions of the skin, tracheobronchitis, stomatitis, conjunctivitis, or gastritis.

Occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans.

4 - FIRST AID MEASURES

Eyes: Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin:

Get medical aid immediately. Immediately flush skin with plenty of 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.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. 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:

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.

Antidote: Do NOT use oils or ointments in eye

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. Substance is noncombustible. Containers may explode in the heat of a fire. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Contact with metals may evolve flammable hydrogen gas.

Extinguishing Media:

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

6 - ACCIDENTAL RELEASE MEASURES

 $\label{thm:constraints} \textbf{General Information: Use proper personal protective equipment as indicated in Section 8.}$

Spills/Leaks:

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

Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Cover with dry earth, dry sand, or other non-combustible material followed with plastic sheet to minimize spreading and contact with water.

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 ingest or inhale. Use only in a chemical fume hood. Discard contaminated shoes.

Storage:

Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area. Do not store near alkaline substances

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# 7664-93-9: United States OSHA: 1 mg/m3 TWA Belgium - TWA: 1 mg/m3 VLE Belgium - STEL: 3 mg/m3 VLE France - VME: 1 mg/m3 VME France - VLE: 3 mg/m3 VLE Germany: 0.5 mg/m3 TWA (inhalable fraction, battery manufacture, metal working in a close Japan: 1 mg/m3 Ceiling Malaysia: 1 mg/m3 TWA Netherlands: 1 mg/m3 MAC Russia: 1 mg/m3 TWA Spain: 1 mg/m3 VLA-ED Spain: 3 mg/m3 VLA-EC CAS# 7732-18-5: Personal Protective Equipment Eyes: Wear chemical splash goggles and face shield.

Skin:

Wear neoprene gloves, apron, and/or clothing.

Clothing:

Wear neoprene gloves, apron, and/or clothing.

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.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: Red

Odor: none reported

pH: <1.0

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: Not available.

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: Not available.

Specific Gravity/Density: >1.0

Molecular Formula: Mixture

Molecular Weight: Not available

10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures. Sulfuric acid reacts vigorously, violently or explosively with many organic and inorganic chemicals and with water.



Conditions to Avoid:

Mechanical shock, incompatible materials, metals, excess heat, combustible materials, organic materials, oxidizers, amines, bases.

Incompatibilities with Other Materials:

Bases, metals, strong oxidizing agents, strong reducing agents, strong dehydrating agents, organic materials, finely powdered metals, carbides, chlorates, cyanides (e.g. potassium cyanide, sodium cyanide), azides, fulminates, picrates, nitrates, alkali halides, zinc, iodides, permanganates, hydrogen peroxide, perchlorates, nitromethane, phosphorus, nitrites, cyclopentadiene, cyclopentanone oxime, nitroaryl amines, lithium silicides, iron, mercuric nitride, benzene, potassium chlorates, steel, cesium acetylene carbide, trihydroxydiamino phosphate, phosphorus trioxide.

Hazardous Decomposition Products:

Carbon monoxide, oxides of sulfur, carbon dioxide.

Hazardous Polymerization: Has not been reported

11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 7664-93-9: WS5600000 CAS# 7732-18-5: ZC0110000 LD50/LC50:

CAS# 7664-93-9: Draize test, rabbit, eye: 250 ug Severe; Inhalation, mouse: LC50 = 320 mg/m3/2H; Inhalation, mouse: LC50 =

320 mg/m3; Inhalation, rat: LC50 = 510 mg/m3/2H; Inhalation, rat: LC50 = 510 mg/m3; Oral, rat: LD50 = 2140 mg/kg.

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/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 Water - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Bluegill/Sunfish: 49 mg/L; 48Hr; CAS# 7664-93-9: TLm (tap water @ 20C)Fish: Bluegill/Sunfish: 24.5 ppm; 48Hr; CAS# 7664-93-9: TLm (fresh water) Other For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

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

14 - TRANSPORT INFORMATION

IATA

Shipping Name: SULFURIC ACID

Hazard Class: 8 UN Number: 2796 Packing Group: II

IMO

Shipping Name: SULFURIC ACID

Hazard Class: 8 UN Number: 2796 Packing Group: II



RID/ADR

Shipping Name: SULFURIC ACID

Hazard Class: 8 UN Number: 2796 Packing group: II

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

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

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

Canada

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

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

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

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

16 Other information

Rev. No./Repl. SDS Generated

version 1

DISCLAIMER

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.