



Material safety data sheet

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Catalog Numbers: 95739
Catalog Name: 0.05mol/L Sulfuric acid (0.1N)

Company Identification:

Junsei Chemical Co., Ltd.
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CREATION DATE: May 18, 2009
REVISION DATE:

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient 1

Chemical name: Sulfuric acid
CAS NUMBER: 7664-93-9
EC NUMBER (EINECS):231-639-5
JAPAN NUMBER (ENCS):1-430
Content: ca.0.49%

Ingredient 2

Chemical name: Water
CAS NUMBER: 7732-18-5
EC NUMBER (EINECS): 231-791-2
Content: ca.99.51%

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Irritating to eyes and skin.

Potential Health Effects

- Eye:
Causes eye irritation.
- Skin:
Causes skin irritation. May be harmful if absorbed through the skin.
- Ingestion:
May cause irritation of the digestive tract. May be harmful if swallowed.
- Inhalation:
May cause respiratory tract irritation. May be harmful if inhaled.
- Chronic:
Not available.

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 soap and water for at least 15 minutes while removing contaminated clothing and shoes.
- Ingestion:
Get medical aid. Wash mouth out with water.
- 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. Substance is noncombustible.
- Extinguishing Media:
Use water spray to cool fire-exposed containers. Use extinguishing media most appropriate for the surrounding fire. Use water spray, dry chemical, carbon dioxide, or chemical foam.

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, dry sand or earth), then place into a chemical waste container.

SECTION 7 HANDLING AND STORAGE

Handling:

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.

Storage:

Store in a cool, dry place. Store in a tightly closed container.

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.

Personal Protective Equipment

Eyes:

Wear chemical goggles.

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 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Clear liquid
Appearance:	colourless
Odor:	odorless
pH:	1 (20-C)
Vapor Pressure:	1 mm Hg @ 20 deg C
Viscosity:	Not available.

Boiling Point: 100 deg C @ 760.00mm Hg
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: Miscible.
Specific Gravity/Density: 1.0300g/cm3
Molecular Formula: H2SO4
Molecular Weight: 98.07

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:

Not available.

Conditions to Avoid:

Incompatible materials, exposure to moist air or water.

Incompatibilities with Other Materials:

Bases, metals, water, reducing agents, organic materials, finely powdered metals, halides, combustible and flammable materials (e.g. alkyl resins, asphalt, gasoline, grease, methyl acetone, polystyrene, polyurethane), iron, zinc, arsenic, antimony, lead, copper, strong oxidizing agents, carbides, chlorates, fulminates, picrates, nitrates, cyanides (e.g. potassium cyanide, sodium cyanide), permanganates, hydrogen peroxides, azides, perchlorates, nitromethane, phosphorus, nitrites, phosphorous oxide, cellulose.

Hazardous Decomposition Products:

Oxides of sulfur, hydrogen sulfide.

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

Carcinogenicity:

Sulfuric acid -

ACGIH: A2 - Suspected Human Carcinogen (contained in strong inorg

OSHA: Select carcinogen

IARC: Group 1 carcinogen

See actual entry in RTECS for complete information.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Bluegill/Sunfish: 49 mg/l; 48 H; TLm (tap water @ 20-C)Fish:
Bluegill/Sunfish: 24.5 ppm; 48 H; 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: 2796
Packing Group: II

IMO

Shipping Name: SULPHURIC ACID
Hazard Class: 8
UN Number: 2796
Packing Group: II

RID/ADR

Shipping Name: SULPHURIC ACID
Dangerous Goods Code: 8(1B)
UN Number: 2796

SECTION 15 REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/38 Irritating to eyes and skin.

Safety Phrases:

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

S 37/39 Wear suitable gloves and eye/face
protection.

WGK (Water Danger/Protection)

CAS# 7664-93-9: 2

United Kingdom Occupational Exposure Limits

CAS# 7664-93-9: OES-United Kingdom, TWA 1 mg/m3 TWA

Canada

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

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

Exposure Limits

CAS# 7664-93-9: OEL-ARAB Republic of Egypt:TWA 1 mg/m3

OEL-AUSTRALIA:TWA 1 mg/m3

OEL-BELGIUM:TWA 1 mg/m3;STEL 3 mg/m3

OEL-CZECHOSLOVAKIA:TWA 1 mg/m3;STEL 2 mg/m3

OEL-DENMARK:TWA 1 mg/m3

OEL-FINLAND:TWA 1 mg/m3;STEL 3 mg/m3;Skin

OEL-FRANCE:TWA 1 mg/m3;STEL 3 mg/m3

OEL-GERMANY:TWA 1 mg/m3

OEL-HUNGARY:STEL 1 mg/m3

OEL-JAPAN:TWA 1 mg/m3

OEL-THE NETHERLANDS:TWA 1 mg/m3

OEL-THE PHILIPPINES:TWA 1 mg/m3

OEL-POLAND:TWA 1 mg/m3

OEL-RUSSIA:STEL 1 mg/m3;Skin

OEL-SWEDEN:TWA 1 mg/m3;STEL 3 mg/m3

OEL-SWITZERLAND:TWA 1 mg/m3;STEL 2 mg/m3

OEL-THAILAND:TWA 1 mg/m3

OEL-TURKEY:TWA 1 mg/m3

OEL-UNITED KINGDOM:TWA 1 mg/m3

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

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA

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

SECTION 16 OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.