

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Dissolved oxygen Reagent D1

Supplier: Shenzhen Sinsche Technology Co.,Ltd.

ADD: 4/F , T3 Building, Silicon Valley Compound, Qingquan Road, Longhua Street, Longhua District, Shenzhen

City, P.RC 518109.

Tel: +86 (755) 82127315 Fax: +86 (755) 82127860

Email:Sinsche@sinsche.com

Emergency telephone+86 (755) 82127315 (Mon-Fri 08:30- 18:00)

Chemical Name: Not applicable

CAS No.: Not applicable

Chemical Formula: Not applicable **Chemical Family:** Not applicable

PIN: NA

Intended Use: Laboratory Use Determination of Total Chlorine, Chlorite

Date of MSDS Preparation:

Day: 08
Month: June
Year: 2020

2. HAZARDS IDENTIFICATION

CHS Classification

Regulatory Status This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Chronic aquatic toxicity	Category 2

Label elements

Signal word - Danger



Corrosion



Hazard statements

H318 - Causes serious eye damage

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

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements

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

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/physician

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

P273 - Avoid release to the environment

P391 - Collect spillage

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

Other Hazards Known

Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical Family

Mixture.

Name	EC No.	CAS-No.	Content
Manganese Sulfate	unlist	10034-96-5	20-50%
Demineralized Water	231-791-2	7732-18-5	>50%

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: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Remove 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. $\label{eq:constraint}$

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: Antidote: The use of Calcium disodium EDTA as a chelating agent should be determined by qualified medical personnel.



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. Material will not burn. 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. Use water spray, dry chemical, carbon dioxide, or appropriate foam

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 generating dusty conditions. Provide ventilation.

7. HANDLING AND STORAGE

Handling

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

Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage:

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

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 or European Standard EN166.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid **Appearance:** light pink

Odor: Odorless. **pH:** Not available.

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: 850 deg C @ 760.00mmHg



Freezing/Melting Point: 700 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: Not available.

Molecular Formula: Not available.

Molecular Weight: Not available.

10. STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Can react with strong acid, strong oxidizing agents, powdered metals; may react violently with hydrogen peroxide.

Hazardous Decomposition Products:

Carbon dioxide, sulfur oxides (SOx), including sulfur oxide and sulfur dioxide, oxides of manganese.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

RTECS#

CAS# 10034-96-5: OP0893500 LD50/LC50:

Not available.

Carcinogenicity:

Manganese Sulfate, Monohydrate - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

12. ECOLOGICAL INFORMATION

For further information, contact Fisher Scientific.

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

T.D.G.:

Proper Shipping Name: Not Currently Regulated

Hazard Class: NA

PIN: NA Group: NA

Subsidiary Risk: NA



Additional Information: There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

National Inventories:

Canadian Inventory Status: All ingredients of this product are DSL/NDSL Listed.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19,1989. pp. 2332-2983. In-house information. Technical Judgment. Outside Testing. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989.

Legend:

NA - Not Applicable w/w - weight/weight

ND - Not Determined w/v - weight/volume

NV - Not Available v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

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MATERIAL SAFETY DATA SHEET

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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

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Chemical Name: Not applicable

CAS No.: Not applicable

Chemical Formula: Not applicable **Chemical Family:** Not applicable

PIN: NA

Intended Use: Laboratory Use Determination of Total Chlorine, Chlorite

Date of MSDS Preparation:

Day: 08 **Month:** June **Year:** 2020

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CHS Classification

Most Important Hazards

According to ABNT NBR 14725-2

Acute toxicity - Oral	Category 5
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A



Hazard statements

H303-May be harmful if swallowed

H315-Causes skin irrtation

H319-Causes serious eye irrtation



Precautionary statements

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

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

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

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

P362 + P364 - Take off contaminated clothing and wash it before reuse

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing

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

Other Hazards Known

Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance

Not applicable.

<u>Mixture</u>

Chemical Family

Mixture.

Name	EC No.	CAS-No.	Content
Sodium hydroxide	215-185-5	1310-73-2	20-50%
Potassium iodide	231-659-4	7681-11-0	10-20%
Demineralized Water 纯 水	231-791-2	7732-18-5	>50%

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

Notes to Physician: Treat symptomatically and supportively.

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5. FIRE FIGHTING MEASURES

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. Use water with caution and in flooding amounts. 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. Containers may explode when heated. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.

Extinguishing Media:

Do NOT get water inside containers. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray.

Cool containers with flooding quantities of water until well after fire is out.

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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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7. HANDLING AND STORAGE

Handling: Avoid contact with eyes Do not breathe dust. Wash thoroughly after handling. Maintain general industrial

hygiene practices when using this product.

Storage: Keep away from: oxidizers

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Have an eyewash station nearby. Maintain general industrial hygiene practices when using this

product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves **Inhalation Protection:** adequate ventilation

Precautionary Measures: Avoid contact with: eyes Do not breathe: dust Wash thoroughly after handling. Keep

away

from: oxidizers **TLV:** Not Established **PEL:** Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES



Physical State: Liquid

Color: Clear

Odor: none reported

pH: Alkaline

Vapor Pressure: 14 mm Hg Viscosity: >1 (ether=1) Boiling Point: 212 deg F

Freezing/Melting Point: 32 deg F

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: Completely soluble in water.

Specific Gravity/Density: Not available.

Molecular Formula: Not available.

Molecular Weight: Not available.

10. STABILITY AND REACTIVITY

Chemical Stability:

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

Conditions to Avoid:

Extreme temperatures.

Incompatibilities with Other Materials:

Metals, acids, aluminum, nitro compounds, zinc, tin, halogenated organics (e.g. dibromoethane,

hexachlorobenzene, methyl chloride, trichloroethylene), nitromethane, flammable liquids.

Hazardous Decomposition Products:

Toxic fumes of sodium oxide.

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

Product Ecological Information: --

No ecological data available for this product.

Ingredient Ecological Information: --

No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

Special Instructions (Disposal): Dilute to 3 to 5 times the volume with cold water. Open cold water tap completely, slowly pour the material to the drain. Flush system with plenty of water.

Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash. **NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

T.D.G.:

Proper Shipping Name: Not Currently Regulated

Hazard Class: NA

PIN: NA Group: NA

Subsidiary Risk: NA

Additional Information: There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

IATA

Shipping Name: SODIUM HYDROXIDE SOLUTION

Hazard Class: 8 UN Number: 1824 Packing Group: II

IMO

Shipping Name: SODIUM HYDROXIDE SOLUTION

Hazard Class: 8 UN Number: 1824 Packing Group: II

RID/ADR

Shipping Name: SODIUM HYDROXIDE SOLUTION

Hazard Class: 8 UN Number: 1824 Packing group: II



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

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54,No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Technical Judgment. The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc., 1989. Vendor Information.

Legend:

NA - Not Applicable w/w - weight/weight

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MATERIAL SAFETY DATA SHEET

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Product Name: Dissolved oxygen Reagent D3

Supplier: Shenzhen Sinsche Technology Co., Ltd.

ADD: 4/F , T3 Building, Silicon Valley Compound, Qingquan Road, Longhua Street, Longhua District, Shenzhen

City, P.RC 518109.

Tel: +86 (755) 82127315 Fax: +86 (755) 82127860

Email:Sinsche@sinsche.com

Emergency telephone+86 (755) 82127315 (Mon-Fri 08:30- 18:00)

Chemical Name: Not applicable

CAS No.: Not applicable

Chemical Formula: Not applicable **Chemical Family:** Not applicable

PIN: NA

Intended Use: Laboratory Use Determination of Total Chlorine, Chlorite

Date of MSDS Preparation:

Day: 08 **Month:** June **Year:** 2020

2. HAZARDS IDENTIFICATION

CHS Classification

Most Important Hazards

According to ABNT NBR 14725-2

Corrosive to metals	Category 1- (H290)
Skin corrosion/irritation	Category 1- (H314)
Serious eye damage/eye irritation	Category 1- (H318)

Label elements

Signal word - Danger



Corrosion

Hazard statements

H290-May be corrosive to metals

H314-Causessevere 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

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical Family Mixture.

Name	EC No.	CAS-No.	Content
Sulfuric acid	231-639-5	7664-93-9	10-30%
Demineralized Water	231-791-2	7732-18-5	70-90%

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Wash skin with plenty of water.

Ingestion (First Aid): Do not induce vomiting. Call physician immediately. Give 1-2 glasses of water under medical supervision. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn. During a fire, irritating and highly toxic gases may be generated by thermal decomposition.

Flash Point: Not applicable
Method: Not applicable
Flammability Limits:

Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not applicable



Hazardous Combustion Products: This material will not burn
Fire / Explosion Hazards: This product will not burn or explode.

Static Discharge: None reported. **Mechanical Impact:** None reported

Extinguishing Media: Use media appropriate to surrounding fire conditions

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full

protective gear.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment.

Clean-up Technique: Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate local area (15 foot radius or as directed by your facility's emergency response plan)when: any quantity is spilled.

D.O.T. Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes Do not breathe mist or vapors. Use with adequate ventilation. Maintain general

industrial hygiene practices when using this product. Wash thoroughly after handling.

Storage: Store between 10° and 25°C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves lab coat **Inhalation Protection:** adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin Do not breathe: mist/vapor Use with adequate

ventilation.

Protect from: heat **TLV:** Not established **PEL:** Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless

Physical State: Liquid



Molecular Weight: Not applicable

Odor: Acidic **pH:** < 0.5

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: ~ 100 °C (212 °F) **Melting Point:** Not determined

Specific Gravity/ Relative Density (water = 1; air =1): 1.047

Evaporation Rate (water = 1): 0.53

Volatile Organic Compounds Content: Not applicable

Coefficient of Water / Oil: Not applicable

Solubility:
Water: Soluble
Acid: Soluble

Other: Not determined
Metal Corrosivity:
Steel: 0.096 in/yr

Aluminum: Not determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Extreme temperatures Exposure to air. Heating to decomposition.

Reactivity / Incompatibility: Incompatible with: alkalies oxidizers reducers

Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: sulfur oxides

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:

LD50: None reported **LC50:** None reported

Dermal Toxicity Data: None reported

Skin and Eye Irritation Data: Skin testing with 10% solution shows no irritation.

Mutation Data: None reported

Reproductive Effects Data: None reported

Ingredient Toxicological Data: Sulfuric Acid: Oral rat LD50 = 2140 mg/kg, Inhalation rat LC50 87 ppm/4Hours

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product. Mobility in soil: No data available

Ingredient Ecological Information: Sulfuric Acid: The 48-Hour TLm in flounder is 100-300 ppm.

13. DISPOSAL CONSIDERATIONS

Special Instructions (Disposal): Work in an approved fume hood. Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water



tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash. **NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

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PIN: NA Group: NA

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