



## Material Safety Data Sheet Acid Digestion Reagent

### Section 1 - Chemical Product and Company Identification

**MSDS Name:**

Acid Digestion Reagent

**Catalog Numbers:**

LC10550

**Synonyms:**

None

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
7664-93-9	Sulfuric acid	22
7778-80-5	Potassium sulfate	13.4
7783-35-9	Mercuric sulfate	0.2

### Section 3 - Hazards Identification

#### Emergency Overview

**Appearance:** clear, colorless solution

**Danger!** Corrosive. Causes severe burns by all exposure routes. Harmful if inhaled or swallowed. May cause kidney and central nervous system damage. May cause harm to the unborn child. May cause allergic skin reaction. Inhalation of mists may cause cancer.

**Target Organs:** *Eyes, skin, kidneys, respiratory, reproductive and central nervous systems, teeth*

#### Potential Health Effects

**Eye:**

Causes severe eye burns. May cause permanent eye injury.

**Skin:**

Causes severe skin burns. May cause allergic skin reaction in certain individuals.



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**Ingestion:**

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

**Inhalation:**

Causes severe irritation or burns to the respiratory tract.

**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. May cause adverse liver and kidney effects. May cause anemia and other blood cell abnormalities. May cause central nervous system damage.

### Section 4 - First Aid Measures

**Eyes:**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

**Skin:**

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

**Ingestion:**

Do NOT induce vomiting. Give conscious victim 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid at once.

**Inhalation:**

Move victim to fresh air immediately. If breathing is difficult, administer oxygen. Give artificial respiration if necessary, using a mechanical device such as a bag and mask or one-way valve. Get medical aid at once.

**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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Contact with metals may evolve flammable hydrogen gas.

**Extinguishing Media:**

Use dry chemical, carbon dioxide, or alcohol-resistant foam.

**Autoignition Temperature:**

No information found.

**Flash Point:**

No information found.

**NFPA Rating:**

Health- 3, Flammability- 0, Instability- 1

**Explosion Limits:**

Lower: n/a Upper: n/a



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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 such as sand, vermiculite, or diatomaceous earth, and transfer to a suitable container labeled for later disposal.

### Section 7 - Handling and Storage

**Handling:**

Wash thoroughly after handling. Wash contaminated clothing before reuse. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use with adequate ventilation.

**Storage:**

Do not store near alkaline substances. Store tightly capped in a cool, dry, well-ventilated area away from incompatible materials.

### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:**

Facilities using or storing this material should be equipped with an eyewash and safety shower. Provide local exhaust or general dilution ventilation to keep airborne levels below the permissible exposure limits.

**Exposure Limits:**

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Sulfuric acid	0.2 mg/m <sup>3</sup> TWA	1 mg/m <sup>3</sup> TWA 15 mg/m <sup>3</sup> IDLH	1 mg/m <sup>3</sup> TWA
Potassium sulfate	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Mercuric sulfate	0.025 mg/m <sup>3</sup> TWA (as Hg) (listed under Mercury, inorganic compounds)	0.05 mg/m <sup>3</sup> TWA (as Hg) (listed under Mercury, inorganic compounds) 10 mg/m <sup>3</sup> IDLH (as Hg) (listed under Mercury, inorganic compounds)	None of the components are on this list.

**OSHA Vacated PELs:**

Sulfuric acid: 1 mg/m<sup>3</sup> TWA

**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. Do not wear contact lenses when working with chemicals.

**Skin:**

Wear appropriate protective gloves to prevent skin exposure.



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**Clothing:**

Wear appropriate protective clothing to prevent skin exposure.

**Respirators:**

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

### Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Clear liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Odorless
<b>pH:</b>	Acidic
<b>Vapor Pressure:</b>	No information found.
<b>Vapor Density:</b>	No information found.
<b>Evaporation Rate:</b>	<ether
<b>Viscosity:</b>	No information found.
<b>Boiling Point:</b>	No information found.
<b>Freezing/Melting Point:</b>	No information found.
<b>Decomposition Temperature:</b>	No information found.
<b>Solubility in water:</b>	Soluble.
<b>Specific Gravity/Density:</b>	1.3
<b>Molecular Formula:</b>	No information found.
<b>Molecular Weight:</b>	No information found.

### Section 10 - Stability and Reactivity

**Chemical Stability:**

Stable under normal temperatures and pressures.

**Conditions to Avoid:**

Incompatible materials, excess heat, light.

**Incompatibilities with Other Materials:**

Metals, combustible materials, organic materials, oxidizers, amines, bases

**Hazardous Decomposition Products:**

Oxides of sulfur, hydrogen gas.

**Hazardous Polymerization:**

Has not been reported.

### Section 11 - Toxicological Information

**RTECS:**

CAS# 7732-18-5: ZC0110000.

CAS# 7664-93-9: WS5600000.

CAS# 7778-80-5: TT5900000.

CAS# 7783-35-9: OX0500000.

**LD50/LC50:**

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.



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CAS# 7664-93-9:

Inhalation, mouse: LC50 = 320 mg/m<sup>3</sup>/2H

Inhalation, rat: LC50 = 510 mg/m<sup>3</sup>/2H

Oral, rat: LD50 = 2140 mg/kg.

CAS# 7778-80-5:

Oral, rat: LD50 = 6600 mg/kg.

CAS# 7783-35-9:

Oral, mouse: LD50 = 25 mg/kg

Oral, rat: LD50 = 57 mg/kg

Skin, rat: LD50 = 625 mg/kg.

### **Carcinogenicity:**

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7664-93-9: Listed as a carcinogen by ACGIH, IARC, NTP, and California Proposition 65 (listed as Strong inorganic acid mists containing sulfuric acid.)

CAS# 7778-80-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7783-35-9: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

### **Epidemiology:**

See actual entry in RTECS for complete information.

### **Teratogenicity:**

See actual entry in RTECS for complete information.

### **Reproductive:**

See actual entry in RTECS for complete information.

### **Mutagenicity:**

See actual entry in RTECS for complete information.

### **Neurotoxicity:**

See actual entry in RTECS for complete information.

## Section 12 - Ecological Information

No information found.

## Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

## Section 14 - Transport Information

### **US DOT**

**Shipping Name:** Sulfuric Acid

**Hazard Class:** 8

**UN Number:** UN2796

**Packing Group:** PG II



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### Section 15 - Regulatory Information

#### US Federal

##### TSCA:

- CAS# 7732-18-5 is listed on the TSCA Inventory.
- CAS# 7664-93-9 is listed on the TSCA Inventory.
- CAS# 7778-80-5 is listed on the TSCA Inventory.
- CAS# 7783-35-9 is listed on the TSCA Inventory.

##### SARA Reportable Quantities (RQ):

- CAS# 7664-93-9: final RQ = 1000 pounds (454 kg)
- CAS# 7783-35-9: final RQ = 10 pounds (4.54 kg)

##### CERCLA/SARA Section 313:

This material contains Sulfuric acid (CAS# 7664-93-9, 22%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

##### OSHA - Highly Hazardous:

None of the components are on this list.

#### US State

##### State Right to Know:

Sulfuric acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Mercuric sulfate can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Massachusetts.

##### California Regulations:

WARNING: This product contains a chemical known to the state of California to cause cancer or birth defects or other reproductive harm.

#### European/International Regulations

##### Canadian DSL/NDSL:

- CAS# 7732-18-5 is listed on Canada's DSL List.
- CAS# 7664-93-9 is listed on Canada's DSL List.
- CAS# 7778-80-5 is listed on Canada's DSL List.
- CAS# 7783-35-9 is listed on Canada's DSL List.

##### Canada Ingredient Disclosure List:

- CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
- CAS# 7664-93-9 is listed on Canada's Ingredient Disclosure List.
- CAS# 7778-80-5 is not listed on Canada's Ingredient Disclosure List.
- CAS# 7783-35-9 is listed on Canada's Ingredient Disclosure List.

### Section 16 - Other Information

MSDS Creation Date: April 19, 1998

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