



Issuing Date 6/3/2010

Revision Number 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Alkalinity Titration Reagent
Product Code(s) 6229
Recommended Use Laboratory chemicals. Industrial (not for food or food contact use).
Company LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620
USA
Emergency Telephone Number 24 Hour Emergency Number (CHEM-TEL):
USA, Canada, Puerto Rico 1-800-255-3924
Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview

Irritating to eyes, respiratory system and skin
May cause burns of eyes, skin and mucous membranes
Harmful if swallowed

Appearance Clear, colorless solution

Physical State Liquid

Odor Odorless

Potential Health Effects

Principle Routes of Exposure Skin contact, Ingestion

Acute Toxicity

Eyes

May cause burns. May cause irreversible damage to eyes.

Skin

Contact causes severe skin irritation and possible burns. Harmful if absorbed through skin.

Inhalation

Irritating to mucous membranes. Inhalation of corrosive mist may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.

Ingestion

Harmful if swallowed. Can burn mouth, throat, and stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects

Aggravated Medical Conditions Skin disorders. Respiratory disorders. Preexisting eye disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula H2SO4 in water

| Chemical Name | CAS-No | Weight % |
|---------------|-----------|----------|
| Sulfuric acid | 7664-93-9 | 0.24 |
| Water | 7732-18-5 | to 100% |

4. FIRST AID MEASURES

| | |
|-----------------------------------|---|
| General Advice | Do not get in eyes, on skin, or on clothing. |
| Eye Contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin Contact | Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Consult a physician. |
| Inhalation | Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician immediately. |
| Ingestion | Do NOT induce vomiting. Drink plenty of water. Clean mouth with water. Consult a physician. Never give anything by mouth to an unconscious person. |
| Protection of First-aiders | Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Water spray, dry chemical, carbon dioxide (CO₂), or foam.

Explosion Data

| | | | | |
|-------------|------------------------|-----------------------|--------------------|--|
| NFPA | Health Hazard 2 | Flammability 0 | Stability 0 | Physical and Chemical Hazards - |
|-------------|------------------------|-----------------------|--------------------|--|

6. ACCIDENTAL RELEASE MEASURES

| | |
|--------------------------------|---|
| Personal Precautions | Refer to Section 8. Use personal protective equipment. Avoid contact with skin, eyes and inhalation of vapors. |
| Methods for Cleaning Up | Cover spill with alkaline material (sodium bicarbonate) to neutralize, then containerize slurry, and hold for later disposal. If local regulations permit, dilute slurry with water and rinse to drain with excess water.. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water. |

7. HANDLING AND STORAGE

| | |
|-----------------|--|
| Handling | Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes and clothing. Do not ingest. Do not eat, drink or smoke when using this product. |
| Storage | Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from strong bases or metals.. Keep away from direct sunlight. Keep from freezing. Keep out of the reach of children. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|----------------------------|----------------------------|--------------------------|--|
| Sulfuric acid 7664-93-9 | TWA: 0.2 mg/m ³ | TWA: 1 mg/m ³ | IDLH: 15 mg/m ³ TWA: 1 mg/m ³ |
| Water 7732-18-5 | None Established | None Established | None Established |

Personal Protective Equipment

| | |
|---------------------------------|-----------------------------------|
| Eye/Face Protection | Safety glasses with side-shields. |
| Skin and Body Protection | Wear protective gloves/clothing. |

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance
Physical State**

Clear, colorless solution
Liquid

**Odor
pH**

Odorless
1-2

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Incompatible Products

Strong bases. Metals.

Conditions to Avoid

Excessive heat. Incompatible products.

Hazardous Decomposition Products Sulfur oxides.**Hazardous Polymerization**

Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------|--------------------|------------------|-----------------------------------|
| Sulfuric acid | 2140 mg/kg (Rat) | None Established | 510 mg/m ³ (Rat) 2 h |
| Water | 90 mL/kg (Rat) | None Established | None Established |

Chronic Toxicity

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|---------------|------------------|------------------|------------------|------------------|
| Sulfuric acid | A2 | Group 1 | Known | X |
| Water | None Established | None Established | None Established | None Established |

IARC: (International Agency for Research on Cancer)

Cancer Status: The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists containing sulfuric acid" as a known human carcinogen, (IARC category 1). This classification applies only to mists containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions.

| Chemical Name | EU - Endocrine Disruptors Candidate List | EU - Endocrine Disruptors - Evaluated Substances | Japan - Endocrine Disruptor Information |
|---------------|--|--|---|
| Sulfuric acid | None Established | None Established | None Established |
| Water | None Established | None Established | None Established |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Chemical Name | Toxicity to Algae | Toxicity to Fish | Microtox | Daphnia Magna (Water Flea) |
|---------------|-------------------|--|------------------|----------------------------|
| Sulfuric acid | None Established | LC50> 500 mg/L Brachydanio rerio 96 h | None Established | EC50 = 29 mg/L 24 h |
| Water | None Established | None Established | None Established | None Established |

| Chemical Name | Log Pow |
|---------------|------------------|
| Sulfuric acid | None Established |
| Water | None Established |

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Dispose according to federal, state, and local regulations. If permitted, neutralize reagent with sodium bicarbonate/sodium carbonate, add slurry to large volume of water to dilute, rinse to drain with excess water. .

| Chemical Name |
|---------------------------|
| Sulfuric acid - 7664-93-9 |
| Water - 7732-18-5 |

| Chemical Name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|---------------------------|--------------------------------------|------------------------|------------------------|------------------------|
| Sulfuric acid - 7664-93-9 | None Established | None Established | None Established | None Established |
| Water - 7732-18-5 | None Established | None Established | None Established | None Established |

| Chemical Name | California Hazardous Waste Status |
|---------------|-----------------------------------|
| Sulfuric acid | Toxic; Corrosive |

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

| Component | TSCA | DSL | EINECS/ELINCS | ENCS | IECSC | KECL | PICCS | AICS |
|-------------------------------------|---------|-----|---------------|--------------|-------|----------|-------|------|
| Sulfuric acid 7664-93-9 (0.24) | Present | X | X | 1-430; 1-724 | X | KE-32570 | X | X |
| Water 7732-18-5 (to 100%) | Present | X | X | ENCS | X | KE-35400 | X | X |

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical Name | CAS-No | Weight % | SARA 313 - Threshold Values % |
|---------------|-----------|----------|-------------------------------|
| Sulfuric acid | 7664-93-9 | 0.24 | 1.0 |
| Water | 7732-18-5 | to 100% | None Established |

SARA 311/312 Hazard Categories

| | |
|--|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

Clean Water Act

| Component | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-------------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Sulfuric acid 7664-93-9 (0.24) | 1000 lb | None Established | None Established | X |
| Water 7732-18-5 (to 100%) | None Established | None Established | None Established | None Established |

| Chemical Name | CAS-No | Weight % | HAPS data | VOC Chemicals | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|---------------|-----------|----------|------------------|------------------|-------------------------|-------------------------|
| Sulfuric acid | 7664-93-9 | 0.24 | None Established | None Established | None Established | None Established |
| Water | 7732-18-5 | to 100% | None Established | None Established | None Established | None Established |

CERCLA

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs |
|---------------|--------------------------|------------------------------------|
| Sulfuric acid | 1000 lb | 1000 lb |
| Water | None Established | None Established |

U.S. State Regulations**California Proposition 65**

Warning! California Proposition 65 has classified "strong inorganic acid mists containing sulfuric acid" as a chemical known to the State of California to cause cancer. This classification applies only to "mists" containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions, as is this solution.

| Chemical Name | CAS-No | California Prop. 65 |
|---------------|-----------|---------------------|
| Sulfuric acid | 7664-93-9 | Carcinogen |
| Water | 7732-18-5 | None Established |

| Chemical Name | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---------------|------------------|------------------|------------------|------------------|------------------|
| Sulfuric acid | X | X | X | X | X |
| Water | None Established | None Established | None Established | None Established | None Established |

International Regulations**Mexico - Grade**

Mexico - Grade

| Chemical Name | Carcinogen Status | Exposure Limits |
|---------------|-------------------|----------------------------------|
| Sulfuric acid | A2 | Mexico: TWA= 1 mg/m ³ |
| Water | None Established | None Established |

Canada

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

WHMIS Hazard Class

E Corrosive material
D1A Very toxic materials



| | |
|----------------------|-------------|
| Chemical Name | NPRI |
| Sulfuric acid | X |

16. OTHER INFORMATION

| NFPA | HMIS | PPE | Transport Symbol | | | | | | |
|---------------|--|---------------|------------------|-------------|----------|------------|----------|--|---------------|
| | <table border="1"> <tr> <td>Health Hazard</td> <td>1</td> </tr> <tr> <td>Fire Hazard</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>1</td> </tr> </table> | Health Hazard | 1 | Fire Hazard | 0 | Reactivity | 1 | | Not regulated |
| Health Hazard | 1 | | | | | | | | |
| Fire Hazard | 0 | | | | | | | | |
| Reactivity | 1 | | | | | | | | |

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Revision Note Initial Release.

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS