

# Temporary Hardness Titrant

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).  
Date of issue: 10/20/2021 Version: 1.0

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Temporary Hardness Titrant

**Product Code:** SA1516SS

#### 1.2. Intended Use of the Product

**Use Of The Substance/Mixture:** Laboratory chemicals.

#### 1.3. Name, Address, and Telephone of the Responsible Party

##### Company

AquaPhoenix Scientific, Inc.

860 Gitts Run Road

Hanover, PA 17331 USA

Tel +1 (717)632-1291

Toll-Free: (866)632-1291

tech@aquaphoenixsci.com

#### 1.4. Emergency Telephone Number

**Emergency Number** : ChemTel LLC

(800)255-3924 (North America)

+1 (813)248-0585 (International)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

**GHS-US/CA Classification**

Met. Corr. 1 H290

Full text of hazard classes and H-statements : see section 16

#### 2.2. Label Elements

**GHS-US/CA Labeling**

**Hazard Pictograms (GHS-US/CA)** :



**Signal Word (GHS-US/CA)** : Warning

**Hazard Statements (GHS-US/CA)** : H290 - May be corrosive to metals.

**Precautionary Statements (GHS-US/CA)** : P234 - Keep only in original container.

P390 - Absorb spillage to prevent material-damage.

P406 - Store in corrosive resistant container with a resistant inner liner.

#### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

#### 2.4. Unknown Acute Toxicity (GHS-US/CA)

No additional information available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Water	AQUA / water	(CAS-No.) 7732-18-5	99.8605	Not classified
Sulfuric acid	Sulphuric acid / SULFURIC ACID / Hydrogen sulfate / Sulphuric acid ...% / sulfuric acid	(CAS-No.) 7664-93-9	0.1375	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335

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				Aquatic Acute 3, H402 Aquatic Chronic 2, H411
C.I. Acid Orange 52	Acid Orange 52 / Benzenesulfonic acid, 4-[[4-(dimethylamino)phenyl]azo]-, sodium salt / Benzenesulfonic acid, p-((p-(dimethylamino)phenyl)azo)-, sodium salt / p-((p-(Dimethylamino)phenyl)azo)benzenesulfonic acid sodium salt / 4-Dimethylaminoazobenzene-4'-sulphonic acid sodium salt / Orange III / Eniamethyl Orange / Gold Orange / Kca Methyl Orange / Methyl Orange B / Orange 3 / Sodium 4-(4-dimethylaminophenylazo)benzenesulphonate / Benzenesulfonic acid, 4-[2-[4-(dimethylamino)phenyl]diazenyl]-, sodium salt (1:1) / C.I. 13025 / Methyl Orange / Methyl orange / methyl orange	(CAS-No.) 547-58-0	0.002	Acute Tox. 3 (Oral), H301

Full text of H- and EUH-statements: see section 16

\*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First-aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**General:** Not expected to present a significant hazard under anticipated conditions of normal use.

**Inhalation:** Prolonged exposure may cause irritation.

**Skin Contact:** Prolonged exposure may cause skin irritation.

**Eye Contact:** May cause slight irritation to eyes.

**Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Water spray, fog, carbon dioxide (CO<sub>2</sub>), alcohol-resistant foam, or dry chemical.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Contact with metallic substances may release flammable hydrogen gas.

**Reactivity:** May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Sulfur oxides.

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### 5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray).

#### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb spillage to prevent material damage.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** May be corrosive to metals.

**Precautions for Safe Handling:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in corrosive resistant container with a resistant inner liner.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers. Metals. May be corrosive to metals.

### 7.3. Specific End Use(s)

Laboratory chemicals.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Sulfuric acid (7664-93-9)		
USA ACGIH	ACGIH OEL TWA	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
USA ACGIH	ACGIH chemical category	Suspected Human Carcinogen contained in strong inorganic acid mists
USA OSHA	OSHA PEL (TWA) [1]	1 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA)	1 mg/m <sup>3</sup>
USA IDLH	IDLH	15 mg/m <sup>3</sup>
Alberta	OEL STEL	3 mg/m <sup>3</sup>
Alberta	OEL TWA	1 mg/m <sup>3</sup>
British Columbia	OEL TWA	0.2 mg/m <sup>3</sup> (contained in strong inorganic acid mists-thoracic)
Manitoba	OEL TWA	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
New Brunswick	OEL STEL	3 mg/m <sup>3</sup>

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<b>New Brunswick</b>	OEL TWA	1 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
<b>Nova Scotia</b>	OEL TWA	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
<b>Nunavut</b>	OEL STEL	0.6 mg/m <sup>3</sup> (thoracic fraction)
<b>Nunavut</b>	OEL TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
<b>Northwest Territories</b>	OEL STEL	0.6 mg/m <sup>3</sup> (thoracic fraction, strong acid mists only)
<b>Northwest Territories</b>	OEL TWA	0.2 mg/m <sup>3</sup> (thoracic fraction, strong acid mists only)
<b>Ontario</b>	OEL TWA	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
<b>Prince Edward Island</b>	OEL TWA	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
<b>Québec</b>	VECD (OEL STEL)	3 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (OEL TWA)	1 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL STEL	0.6 mg/m <sup>3</sup> (thoracic fraction)
<b>Saskatchewan</b>	OEL TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
<b>Yukon</b>	OEL STEL	1 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA	1 mg/m <sup>3</sup>

### 8.2. Exposure Controls

**Appropriate Engineering Controls:** Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Gloves. Protective clothing. Protective goggles.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear protective gloves.

**Eye and Face Protection:** Chemical safety goggles.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Other Information:** When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

<b>Physical State</b>	: Liquid
<b>Appearance</b>	: Orange liquid
<b>Odor</b>	: No data available
<b>Odor Threshold</b>	: No data available
<b>pH</b>	: < 2
<b>Evaporation Rate</b>	: No data available
<b>Melting Point</b>	: No data available
<b>Freezing Point</b>	: No data available
<b>Boiling Point</b>	: No data available
<b>Flash Point</b>	: No data available
<b>Auto-ignition Temperature</b>	: No data available
<b>Decomposition Temperature</b>	: No data available
<b>Flammability (solid, gas)</b>	: Not applicable
<b>Lower Flammable Limit</b>	: No data available
<b>Upper Flammable Limit</b>	: No data available
<b>Vapor Pressure</b>	: No data available
<b>Relative Vapor Density at 20°C</b>	: No data available
<b>Relative Density</b>	: No data available
<b>Specific Gravity</b>	: No data available
<b>Solubility</b>	: No data available

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**Partition Coefficient: N-Octanol/Water** : No data available  
**Viscosity** : No data available

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1. Reactivity:

May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

#### 10.2. Chemical Stability:

Stable under recommended handling and storage conditions (see section 7).

#### 10.3. Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

#### 10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, and incompatible materials.

#### 10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers. Metals. May be corrosive to metals.

#### 10.6. Hazardous Decomposition Products:

Attacks many metals forming flammable/explosive gas (HYDROGEN!). Thermal decomposition may produce: Sulfur oxides.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1. Information on Toxicological Effects - Product

**Acute Toxicity (Oral):** Not classified

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

#### LD50 and LC50 Data:

No additional information available

**Skin Corrosion/Irritation:** Not classified (Specific Concentration Limits for sulfuric acid (CAS number: 7664-93-9):  $\geq 5$  -  $< 15$  % Skin Irrit. 2 Eye Irrit. 2)

**pH:**  $< 2$

**Eye Damage/Irritation:** Not classified (Specific Concentration Limits for sulfuric acid (CAS number: 7664-93-9):  $\geq 5$  -  $< 15$  % Skin Irrit. 2 Eye Irrit. 2)

**pH:**  $< 2$

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** May cause slight irritation to eyes.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

#### 11.2. Information on Toxicological Effects - Ingredient(s)

##### LD50 and LC50 Data:

<b>Sulfuric acid (7664-93-9)</b>	
LD50 Oral Rat	2140 mg/kg
<b>C.I. Acid Orange 52 (547-58-0)</b>	
LD50 Oral Rat	60 mg/kg
<b>Sulfuric acid (7664-93-9)</b>	
IARC Group	1
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1. Toxicity

**Ecology - General:** Not classified.

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Sulfuric acid (7664-93-9)	
LC50 Fish 1	500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 - Crustacea [1]	29 mg/l
LC50 Fish 2	42 mg/l (Exposure time: 96 h - Species: Gambusia affinis [static])
NOEC Chronic Fish	0.025 mg/l

## 12.2. Persistence and Degradability

Temporary Hardness Titrant	
Persistence and Degradability	Not established.

## 12.3. Bioaccumulative Potential

Temporary Hardness Titrant	
Bioaccumulative Potential	Not established.

Sulfuric acid (7664-93-9)	
BCF Fish 1	(no bioaccumulation)

## 12.4. Mobility in Soil

No additional information available

## 12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

**Ecology - Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

### 14.1. In Accordance with DOT

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Contains: Sulfuric acid)  
Hazard Class : 8  
Identification Number : UN3264  
Label Codes : 8  
Packing Group : III  
ERG Number : 154



### 14.2. In Accordance with IMDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Contains: Sulphuric acid)  
Hazard Class : 8  
Identification Number : UN3264  
Label Codes : 8  
Packing Group : III  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-B



### 14.3. In Accordance with IATA

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains: Sulphuric acid)  
Hazard Class : 8  
Identification Number : UN3264  
Label Codes : 8  
Packing Group : III  
ERG Code (IATA) : 8L



### 14.4. In Accordance with TDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Contains: Sulfuric acid)  
Hazard Class : 8  
Identification Number : UN3264



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Label Codes : 8

Packing Group : III

### SECTION 15: REGULATORY INFORMATION


#### 15.1. US Federal Regulations

<b>Temporary Hardness Titrant</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Physical hazard - Corrosive to metals
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
<b>Sulfuric acid (7664-93-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on the United States SARA Section 302 Subject to reporting requirements of United States SARA Section 313	
<b>CERCLA RQ</b>	1000 lb
<b>SARA Section 302 Threshold Planning Quantity (TPQ)</b>	1000 lb
<b>SARA Section 313 - Emission Reporting</b>	1 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)
<b>C.I. Acid Orange 52 (547-58-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	

#### 15.2. US State Regulations

<b>State or local regulations</b>
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##### California Proposition 65

 **WARNING:** This product can expose you to Sulfuric acid, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Sulfuric acid (7664-93-9)	X			

<b>Sulfuric acid (7664-93-9)</b>
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

#### 15.3. Canadian Regulations

<b>Water (7732-18-5)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Sulfuric acid (7664-93-9)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>C.I. Acid Orange 52 (547-58-0)</b>
Listed on the Canadian DSL (Domestic Substances List)

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 10/20/2021

#### Other Information

: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

#### GHS Full Text Phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1

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Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H290	May be corrosive to metals
H301	Toxic if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

NA GHS SDS 2015 (Can, US)