

## SAFETY DATA SHEET

# AMI Silitrace Reagent 4b

### SECTION 1: Identification

#### 1.1. Product identifier

##### ▼ Trade name

AMI Silitrace Reagent 4b

##### Product no.

110667.10 (A-85.420.860)

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### ▼ Relevant identified uses of the substance or mixture

Reagent for water analysis

Restricted to professional users.

##### Uses advised against

None known.

#### 1.3. Details of the supplier of the safety data sheet

##### ▼ Company and address

**Swan Analytical USA Inc.**

390 Holbrook Dr.

IL 60090 Wheeling

United States of America

Phone (847) 229 1290

Fax (847) 229 1320

[www.swan-analytical-usa.com](http://www.swan-analytical-usa.com)

##### ▼ Contact person

Swan Technical Support

##### E-mail

[support@swan-analytical-usa.com](mailto:support@swan-analytical-usa.com)

##### SDS date

4/4/2024

##### SDS Version

8.0

##### Date of previous version

2/14/2023 (7.0)

#### 1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® ([triage.webpoisoncontrol.org](http://triage.webpoisoncontrol.org)) to get specific guidance for your case  
See also section 4 "First aid measures".

### SECTION 2: Hazard(s) identification

#### OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

#### 2.1. Classification of the substance or mixture

Skin Corr. 1A; H314, Causes severe skin burns and eye damage.

Eye Dam. 1; H318, Causes serious eye damage.

#### 2.2. Label elements

##### Hazard pictogram(s)



### Signal word

Danger

### Hazard statement(s)

Causes severe skin burns and eye damage. (H314)

### Precautionary statement(s)

#### General

-

#### Prevention

Do not breathe vapour/mist. (P260)

Wear eye protection/protective gloves/protective clothing. (P280)

#### Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. (P301+P330+P331)

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. (P305+P351+P338)

Immediately call a POISON CENTER/doctor. (P310)

#### Storage

-

#### ▼ Disposal

Dispose of contents/container in accordance with local regulation (P501)

### Additional labelling

Not applicable.

## 2.3. Other hazards

### ▼ Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

## SECTION 3: Composition/Information on Ingredients

### 3.1. Substances

Not applicable. This product is a mixture.

### 3.2. ▼ Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Sulphuric acid	CAS No.: 7664-93-9	15-25%	Skin Corr. 1A, H314 (SCL: 15.00 %) Skin Irrit. 2, H315 (SCL: 5.00 %) Eye Irrit. 2, H319 (SCL: 5.00 %)	
Isotridecanol, ethoxylated	CAS No.: 9043-30-5	3-5%	Acute Tox. 4, H302 Eye Dam. 1, H318	

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

### ▼ Other information

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## SECTION 4: First-aid measures

### 4.1. ▼ Description of first aid measures

#### General information

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

▼ **Skin contact**

Flush exposed area with water for a long time - at least 30 minutes. It may be necessary to flush for several hours. Use a comfortable water temperature (20-30 °C). Contact Poison Information/doctor/hospital for further advice on follow-up and treatment.

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

▼ **Eye contact**

If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

▼ **Ingestion**

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit from returning to the mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

**Burns**

Not applicable.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms of inadvertent contact with products containing sulfuric acid are: extreme destruction of tissues of the mucous membranes and upper respiratory tract, eyes, and skin. Spasm, inflammation and edema of the larynx, Spasm, inflammation and edema of the bronchi.

Pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, Shortness of breath. Headache, Nausea, Vomiting. Effects may be delayed.

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

**4.3. Indication of any immediate medical attention and special treatment needed**

IF exposed or concerned:

Get immediate medical advice/attention.

**Information to medics**

Bring this safety data sheet or the label from this product.

## SECTION 5: Fire-fighting measures

**5.1. Extinguishing media**

Not applicable.

**5.2. Special hazards arising from the substance or mixture**

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Sulphur oxides

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

**6.2. Environmental precautions**

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

**6.3. Methods and material for containment and cleaning up**

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous

earth and place in container for disposal according to local regulations.  
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

#### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.  
See section 8 "Exposure controls/personal protection" for protective measures.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Avoid direct contact with the product.  
Smoking, drinking and consumption of food is not allowed in the work area.  
See section 8 "Exposure controls/personal protection" for information on personal protection.

#### 7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

##### Recommended storage material

Always store in containers of the same material as the original container.

##### Storage temperature

Room temperature 15 to 25°C

##### Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

#### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

### SECTION 8: Exposure controls/personal protection

#### 8.1. ▼ Control parameters

Sulphuric acid  
Long term exposure limit (OSHA Table Z-1) (mg/m<sup>3</sup>): 1  
Long term exposure limit (ACGIH TLV) (mg/m<sup>3</sup>): 0.2 / (Thor.)  
Long term exposure limit (NIOSH REL) (mg/m<sup>3</sup>): 1

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

#### 8.2. ▼ Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

##### General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

##### Exposure scenarios

There are no exposure scenarios implemented for this product.

##### Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

##### ▼ Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Ensure that eyewash stations and safety showers are located within easy reach.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

##### ▼ Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

##### Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

#### Individual protection measures, such as personal protective equipment

##### Generally

Use only protective equipment with a recognized certification mark, e.g. the UL mark.

##### ▼ Respiratory Equipment

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

Type	Class	Colour	Standards
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No special when used as intended.

#### ▼ Skin protection

Recommended	Type/Category	Standards
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No special when used as intended.

#### Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Butyl	0,7	> 240	EN374-2, EN374-3, EN388, EN421



#### Eye protection

Type	Standards
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Wear safety glasses with side shields.

EN166



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Physical state

Liquid

#### Colour

Colourless

#### Odour

None

#### Odour threshold (ppm)

Testing not relevant or not possible due to the nature of the product.

#### pH

1.3

#### Density (g/cm<sup>3</sup>)

1.18 (20 °C)

#### Kinematic viscosity

Testing not relevant or not possible due to the nature of the product.

#### Particle characteristics

Does not apply to liquids.

#### Phase changes

##### Melting point (°F)

Testing not relevant or not possible due to the nature of the product.

##### ▼ Softening point/range (waxes and pastes) (°F)

Does not apply to liquids.

##### Boiling point (°F)

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##### Boiling point (°C)

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#### Vapour pressure

Testing not relevant or not possible due to the nature of the product.

#### Relative vapour density

Testing not relevant or not possible due to the nature of the product.

#### Decomposition temperature (°F)

Testing not relevant or not possible due to the nature of the product.

#### Data on fire and explosion hazards

#### Flash point (°F)

Testing not relevant or not possible due to the nature of the product.

#### Flammability (°F)

Testing not relevant or not possible due to the nature of the product.

#### Auto-ignition temperature (°F)

Testing not relevant or not possible due to the nature of the product.

#### Explosion limits (% v/v)

Testing not relevant or not possible due to the nature of the product.

#### Solubility

##### ▼ Solubility in water

Testing not relevant or not possible due to the nature of the product.

##### n-octanol/water coefficient (LogKow)

Testing not relevant or not possible due to the nature of the product.

##### ▼ Solubility in fat (g/L)

Testing not relevant or not possible due to the nature of the product.

#### 9.2. Other information

##### ▼ Other physical and chemical parameters

No data available.

##### ▼ Oxidizing properties

Testing not relevant or not possible due to the nature of the product.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No data available.

#### 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

#### 10.3. Possibility of hazardous reactions

None known.

#### 10.4. Conditions to avoid

None known.

#### 10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

#### 10.6. ▼ Hazardous decomposition products

Thermal decomposition may produce corrosive vapours.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### ▼ Acute toxicity

Product/substance	Sulphuric acid
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	2140 mg/kg

Product/substance	Sulphuric acid
Species:	Mouse
Route of exposure:	Inhalation
Test:	LC50
Result:	4 h - 0.85 mg/L

Product/substance	Isotridecanol, ethoxylated
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	2000 mg/kg ·

##### ▼ Skin corrosion/irritation

Product/substance	Sulphuric acid
Species:	Rabbit
Duration:	No data available.
Result:	Adverse effect observed (Highly corrosive)

Causes severe skin burns and eye damage.

#### ▼ Serious eye damage/irritation

Product/substance	Sulphuric acid
Duration:	No data available.
Result:	Adverse effect observed (Causes serious eye damage)

Causes serious eye damage.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

#### Long term effects

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

#### ▼ Other information

Sulphuric acid has been classified by IARC as a group 1 carcinogen.

## SECTION 12: Ecological information

### 12.1. ▼ Toxicity

Product/substance	Sulphuric acid
Species:	Daphnia
Duration:	48 hours
Test:	EC50
Result:	> 100 mg/L

Product/substance	Sulphuric acid
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	> 16 - < 28 mg/L

Product/substance	Sulphuric acid
Species:	Algae
Duration:	72 hours
Test:	ErC50
Result:	> 100 mg/L

Product/substance	Isotridecanol, ethoxylated
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	>1-10mg/l

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

#### 12.2. ▼ Persistence and degradability

Based on available data, the classification criteria are not met.

#### 12.3. ▼ Bioaccumulative potential

Based on available data, the classification criteria are not met.

#### 12.4. Mobility in soil

No data available.

#### 12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

#### 12.6. Other adverse effects

None known.

### SECTION 13: Disposal considerations

#### RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)



None of the components are listed

#### ▼ Specific labelling

#### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

### SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
DOT	UN2796	SULPHURIC ACID	Transport hazard class: 8 Label: 8 Classification code: C1 	II	No	Limited quantities: 1 L Tunnel restriction code: (E) See below for additional information.
IMDG	UN2796	SULPHURIC ACID	Transport hazard class: 8 Label: 8 Classification code: C1 	II	No	Limited quantities: 1 L EmS: F-A S-B See below for additional information.
IATA	UN2796	SULPHURIC ACID	Transport hazard class: 8 Label: 8 Classification code: C1 	II	No	See below for additional information.

\* Packing group

\*\* Environmental hazards

#### ▼ Additional information

DOT / See § 172.101 Hazardous Materials Table for any information on special provisions, requirements, or warnings in connection with transport. See § 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.



This product is within scope of the regulations of transport of dangerous goods.

**14.6. Special precautions for user**

Not applicable.

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

No data available.

## SECTION 15: Regulatory information

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**15.2. ▼ U.S. Federal regulations**

**TSCA (the non-confidential portion)**

Sulphuric acid is listed

Isotridecanol, ethoxylated is listed

**Clean Air Act**

None of the components are listed

**▼ EPCRA Section 302**

Sulphuric acid is regulated with a Threshold Planning Quantity (TPQ) of: 1000 pounds

**▼ EPCRA Section 304**

Sulphuric acid is regulated with a Reportable Quantity (RQ) of: 1000 pounds

**▼ EPCRA section 313**

Sulphuric acid is listed

**▼ CERCLA**

Sulphuric acid is regulated with a Reportable Quantity (RQ) of: 1000 pounds

**▼ State regulations**

**California / Prop. 65**

None of the components are listed

**▼ Massachusetts / Right To Know Act**

Sulphuric acid is listed

**▼ New Jersey / Right To Know Act**

Sulphuric acid / Substance number: 1761

Sulphuric acid is on the Special Health Hazard Substance List

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**▼ New York / Right To Know Act**

Sulphuric acid is listed

Sulphuric acid is regulated with a Reportable Quantity (RQ) of: 1000 pounds

Sulphuric acid is regulated with a Threshold Reporting Quantity (TRQ) of: 100 pounds

Sulphuric acid is regulated with a Threshold Planning Quantity (TPQ) of: 1000 pounds

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**▼ Pennsylvania / Right To Know Act**

Sulphuric acid is listed

Sulphuric acid is hazardous to the environment (E)

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**15.4. Restrictions for application**

Restricted to professional users.

**15.5. Demands for specific education**

No specific requirements.

**15.6. Additional information**

Not applicable.

**15.7. Chemical safety assessment**

No

**15.8. Sources**

OSHA Hazard Communication Standard (29 CFR 1910.1200)

## SECTION 16: Other information

**Full text of H-phrases as mentioned in section 3**

H302, Harmful if swallowed.

H314, Causes severe skin burns and eye damage.

H315, Causes skin irritation.  
H318, Causes serious eye damage.  
H319, Causes serious eye irritation.

**The full text of identified uses as mentioned in section 1**

None known.

**Abbreviations and acronyms**

ACGIH = American Conference of Governmental Industrial Hygienists  
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
CAS = Chemical Abstracts Service  
CERCLA = Comprehensive Environmental Response Compensation and Liability Act  
DOT = Department of Transportation  
EINECS = European Inventory of Existing Commercial chemical Substances  
EPCRA = Emergency Planning and Community Right-To-Know Act  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
HCIS = Hazardous Chemical Information System  
HNOC = Hazards Not Otherwise Classified  
IARC = International Agency for Research on Cancer  
IATA = International Air Transport Association  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
NFPA = National Fire Protection Association  
NIOSH = National Institute for Occupational Safety and Health  
OECD = Organisation for Economic Co-operation and Development  
OSHA = Occupational Safety and Health Administration  
PBT = Persistent, Bioaccumulative and Toxic  
RCRA = Resource Conservation and Recovery Act  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
RRN = REACH Registration Number  
SARA = Superfund Amendments and Reauthorization Act  
SCL = A specific concentration limit.  
STEL = Short-term exposure limits  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure  
TSCA = The Toxic Substances Control Act  
TWA = Time weighted average  
UN = United Nations  
UVBC = Unknown or variable composition, complex reaction products or of biological materials  
VOC = Volatile Organic Compound  
vPvB = Very Persistent and Very Bioaccumulative

▼ **Additional information**

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

▼ **The safety data sheet is validated by**

Marco Lendi-Zbinden

▼ **Other**

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: US-en