

## Material Safety Data Sheet

### Section 1. Product and Company Identification

Product Identification: CCV-1 Solution B  
MSDS Number: CCV-1 Solution B  
Company Identification: High-Purity Standards  
P.O. Box 41727  
Charleston, SC 29423  
Telephone: (843) 767-7900  
FAX: (843) 767-7906

In case of emergency call INFOTRAC: 800-535-5053

### Section 2. Chemical Composition

Component	CAS/EINECS Registry #	Percent Concentration	ACGIH TLV	OSHA PEL
Sodium Silicate (Na <sub>2</sub> SiO <sub>3</sub> )	1344-09-8/ 239-981-7	0.050 (as Si)	Not Available	Not Available
Sodium Silicate (Na <sub>2</sub> SiO <sub>3</sub> )	1344-09-8/ 239-981-7	0.081 (as Na)	Not Available	Not Available
Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	7664-93-9/ 321-639-5	0.050 (as S)	5 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
Water, deionized	7732-18-5/ 231-791-2	Balance	Not Available	Not Available

### Section 3. Hazard Identification

Emergency Overview: Non-flammable, non-toxic, non-corrosive. Does not present any significant health hazards in solution. Wash areas of contact with water.

Target Organs: Eyes, skin.

Skin/eye Contact: May cause slight irritation.

Inhalation: Not likely to be hazardous by inhalation.

Ingestion: May cause irritation to stomach if ingested in large quantities.

### Section 4. First Aid Measures

Inhalation: Remove to fresh air.

Skin/eye Contact: Remove contaminated shoes and clothing. Flush contaminated area with plenty of water for at least 15 minutes.

Ingestion: Rinse mouth with water. Dilute with water or milk. CALL A PHYSICIAN, if irritation develops.

### Section 5. Fire Fighting Measures

Fire & Explosion hazards: Although sulfuric acid is a negligible fire hazard, it is an oxidizer and may explode on contact with combustible materials. However, the risk is reduced due to the lower concentration of sulfuric acid.

Extinguishing Media: Use any extinguishing media that is suitable for the surrounding area.

Specific Methods: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

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#### Section 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Do not allow to enter drainage systems or water ways. Always dispose of in accordance with local regulations.

#### Section 7. Handling and Storage

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Keep out of direct sunlight and away from heat, water, and incompatible materials. Keep container tightly sealed. Refer to Section 8 for personal handling instructions.

#### Section 8. Exposure Controls and Personal Protection

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: Normal room ventilation is adequate.

Personal Protection: Wear proper gloves, safety glasses with side shields, lab coat/apron.

#### Section 9. Physical and Chemical Properties

Form: Liquid

Molecular Weight: N/A

Boiling Point: ~100°C

Freezing Point: N/A

Vapor Pressure (mm): N/A

Vapor Density (air+1): N/A

Specific Gravity (H<sub>2</sub>O = 1): Approximately 1.0

Solubility in H<sub>2</sub>O: Complete

Appearance: Clear, colorless liquid

Odor: Odorless

pH: 4-9

#### Section 10. Stability and Reactivity

Stability Indicator: YES

Conditions to Avoid: Incompatibles

Incompatibles: Strong acids, metals such as aluminum, lead, tin and zinc.

Hazardous Decomposition Products: None expected.

Hazardous Polymerization: Does not polymerize.

#### Section 11. Toxicological Information

RTECS#

Na<sub>2</sub>CO<sub>3</sub> - VZ4050000 Na<sub>2</sub>SiO<sub>3</sub>-1002947SS H<sub>2</sub>SO<sub>4</sub>-WS5600000

Toxicity Data:

LD<sub>50</sub>, Oral, Mouse: (Na<sub>2</sub>CO<sub>3</sub>) 6600 mg/kg; LD<sub>LO</sub> Ingestion, Dog (Na<sub>2</sub>SiO<sub>3</sub>): 250 mg/kg; LD<sub>50</sub>

Oral, Rat: (H<sub>2</sub>SO<sub>4</sub>) 2140 mg/kg; LC<sub>50</sub> Inhalation, Rat: (H<sub>2</sub>SO<sub>4</sub>) 510 mg/m<sup>3</sup>/2H, no toxic effect noted.

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#### Section 12. Ecological Information

Ecotoxicological information: Biodegradability (Na<sub>2</sub>SiO<sub>3</sub>): LC<sub>50</sub> 96 hrs fish 3185mg/L; EC<sub>50</sub> 96 hrs Daphnia 247 mg/L.

#### Section 13. Disposal Considerations

Disposed material is not a hazardous waste. Follow federal, state and local regulations.

#### Section 14. Transport Information

D.O.T. Classification: Not hazardous by DOT.

#### Section 15. Regulations (Not meant to be all inclusive-selected regulation listed)

TSCA Status: The components of this solution are listed on the TSCA Inventory.

RCRA Status: No.

SARA: No.

WHMIS Information (Canada): Not available.

#### Section 16. Other Information

HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel only. The responsibility for the safe handling and use of these products rest solely with the buyer and/or user. The MSDS was prepared carefully and represents the best data currently available to us; however, HPS does not certify the data on the MSDS. Certified values for this material are given only on the Certificate of Analysis.

Theodore C. Rains, Ph.D.