



# AR-500 SiC Resin

## SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	AR-500 SiC Resin
<b>Other Means of Identification</b>	Mortar Resin
<b>Product Family</b>	Vinyl Ester Resin
<b>Recommended Use</b>	Mixed with another component to form a corrosion-resistant mortar.
<b>Restrictions on Use</b>	None known.
<b>Manufacturer/Supplier Identifier</b>	The Stebbins Engineering and Manufacturing Company, 363 Eastern Boulevard, Watertown, NY, 13601, (315) 782-3000, www.stebbinseng.com
<b>Emergency Phone No.</b>	Chemtrec - Within North America, 1-800-424-9300, 24 hours Stebbins 24 Hour Contact-, 1-315-788-6624
<b>SDS No.</b>	098

## SECTION 2. HAZARD IDENTIFICATION

### Classification

Flammable liquid - Category 3; Acute toxicity (Oral) - Category 5; Acute toxicity (Dermal) - Category 5; Acute toxicity (Inhalation) - Category 5; Skin irritation - Category 2; Eye irritation - Category 2A; Carcinogenicity - Category 2; Specific target organ toxicity (single exposure) - Category 3; Specific target organ toxicity (repeated exposure) - Category 1; Aquatic hazard (Acute) - Category 3

### Label Elements



Signal Word:  
Danger

### Hazard Statement(s):

- H226 Flammable liquid and vapour.  
May form combustible dust concentrations in air.
- H333 May be harmful if inhaled.
- H315 Causes skin irritation.
- H316 Causes mild skin irritation.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H351 Suspected of causing cancer.

### Precautionary Statement(s):

#### Prevention:

- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.

- P240 Ground/bond container and receiving equipment.  
 P233 Keep container tightly closed.  
 P241 Use explosion-proof electrical, ventilating, lighting, and other equipment.  
 P242 Use only non-sparking tools.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P261 Avoid breathing vapours.

Response:

- P302 + P352 IF ON SKIN: Wash with plenty of water.  
 P332 + P313 If skin irritation occurs: Get medical advice/attention.  
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337 + P313 If eye irritation persists: Get medical advice or attention.

Storage:

- P403 + P235 Store in a well-ventilated place. Keep cool.  
 P402 + P404 Store in a dry place. Store in a closed container.

Disposal:

- P501 Dispose of contents and container in accordance with local, regional, national and international regulations.

**Other Hazards**

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Contains no hazardous ingredients. Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Styrene	100-42-5	40-50	None	
Vinyl Ester Resin	68610-47-9	50-60	None	
Additive, Trade Secret	-	<3	None	

### SECTION 4. FIRST-AID MEASURES

**First-aid Measures**

**Inhalation**

Move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

**Skin Contact**

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Get medical advice or attention if you feel unwell or are concerned. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

**Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

**Ingestion**

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Get medical advice or attention if you feel unwell or are concerned.

**First-aid Comments**

Get medical advice or attention if you feel unwell or are concerned.

**Most Important Symptoms and Effects, Acute and Delayed**

If swallowed: aspiration hazard.

If inhaled: at high concentrations can irritate the nose and throat. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

If on skin: may cause mild irritation.

## Immediate Medical Attention and Special Treatment

### Target Organs

Respiratory system, skin.

### Special Instructions

Not applicable.

### Medical Conditions Aggravated by Exposure

None known.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

#### Unsuitable Extinguishing Media

None known.

### Specific Hazards Arising from the Product

Can ignite if strongly heated. Can be ignited by static discharge. May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, resulting in a fire hazard. Closed containers may rupture violently when heated releasing contents. Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide; irritating chemicals; toxic chemicals.

### Special Protective Equipment and Precautions for Fire-fighters

Approach fire from upwind to avoid hazardous vapours or gases.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

### Environmental Precautions

It is good practice to prevent releases into the environment. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

### Methods and Materials for Containment and Cleaning Up

Contain and soak up spill with absorbent that does not react with spilled product. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Place used absorbent into suitable, covered, labelled containers for disposal.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Keep containers tightly closed when not in use or empty. Do NOT eat, drink or store food in work areas. Do NOT smoke in work areas. Only use where there is adequate ventilation. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area. Do not get in eyes, on skin or on clothing.

Electrically bond and ground equipment. Ground clips must contact bare metal.

### Conditions for Safe Storage

Protect from sunlight. Store in an area that is: well-ventilated. Store at temperatures not exceeding: 120°F (49°C).

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Product Identifier: AR-500 SiC Resin - Ver. 4

SDS No.: 098

Date of Preparation: June 01, 2015

Date of Last Revision: May 19, 2020

Page 03 of 08

## Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Styrene	20 ppm	40 ppm	100 ppm	200 ppm		

ACGIH TLV: 20 ppm, 8 hour TWA  
ACGIH STEL: 40 ppm, 15 minutes

OSHA PEL: 100 ppm, 8 hour TWA  
OSHA Ceiling: 200 ppm

Canada:

British Columbia: 50 ppm, 8 hour TWA

Alberta: 50 ppm, 8 hour TWA

Quebec: 50 ppm, 8 hour TWA

Ontario: 50 mg/m<sup>3</sup>, 8 hour TWA;

213 ppm, 15 minutes

Saskatchewan: 215 ppm, 15 minutes

Consult local authorities for provincial or state exposure limits.

TLV® = Threshold Limit Value. TWA = Time-Weighted Average. STEL = Short-term Exposure Limit. PEL = Permissible Exposure Limits.

OSHA = US Occupational Safety and Health Administration. ACGIH® = American Conference of Governmental Industrial Hygienists.

### Appropriate Engineering Controls

Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Control static electricity discharges which includes bonding of equipment to ground. Use local exhaust ventilation and enclosure, if necessary, to control amount in the air.

### Individual Protection Measures

#### Eye/Face Protection

Wear chemical safety goggles.

#### Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

Appearance	Yellow - amber liquid. Particle Size: Not applicable
Odour	Sweet
Odour Threshold	Not available
pH	~ 4.8
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Boiling point/Initial boiling point	294 °F (146 °C)
Boiling Range	Not available
Flash Point	80 - 90 °F (27 - 32 °C) (closed cup)
Evaporation Rate	> 1 (diethyl ether = 1)
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	6.1% (upper); 1.1% (lower)
Vapour Pressure	6.398 mm Hg (0.853 kPa) at 25 °C
Vapour Density (air = 1)	> 1

Product Identifier: AR-500 SiC Resin - Ver. 4

SDS No.: 098

Date of Preparation: June 01, 2015

Date of Last Revision: May 19, 2020

Page 04 of 08

<b>Relative Density (water = 1)</b>	1.07 at 68 °F
<b>Solubility</b>	Insoluble in water; Not available (in other liquids)
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	Not available
<b>Auto-ignition Temperature</b>	914 °F (490 °C) (Styrene)
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	> 20.5 mm <sup>2</sup> /s (kinematic); Not available (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Liquid
<b>Molecular Formula</b>	Not applicable
<b>Molecular Weight</b>	Not applicable
<b>Bulk Density</b>	~ 66.77 lb/ft <sup>3</sup> (1070.00 kg/m <sup>3</sup> )
<b>Surface Tension</b>	Not available
<b>Critical Temperature</b>	Not available
<b>Electrical Conductivity</b>	Not available
<b>Vapour Pressure at 50 deg C</b>	Not available
<b>Saturated Vapour Concentration</b>	Not available

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not sensitive to mechanical impact. Not reactive under normal conditions of use.

### Chemical Stability

Normally stable.

### Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

### Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources. Prolonged storage. Prolonged exposure to high temperatures. >100°F (38°C).

### Incompatible Materials

Avoid: strong acids (e.g. hydrochloric acid), organic acids (e.g. acetic acid), inorganic acids (e.g. hydrofluoric acid), strong bases (e.g. sodium hydroxide), halogens (e.g. chlorine), oxidizing agents (e.g. peroxides).

### Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide; toxic chemicals; irritating chemicals.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; skin contact; skin absorption; eye contact.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Styrene		5,000 (rat)	

### LC50 (Inhalation)

No information was located.

### LD50 (Oral)

> 4000 mg/kg (rat)

### LD50 (Dermal)

Product Identifier: AR-500 SiC Resin - Ver. 4

SDS No.: 098

Date of Preparation: June 01, 2015

Date of Last Revision: May 19, 2020

Page 05 of 08

> 2000 mg/kg (rabbit)

#### **Skin Corrosion/Irritation**

Human experience shows mild irritation.

#### **Serious Eye Damage/Irritation**

May cause serious eye irritation based on information for closely related materials. The vapour also irritates the eyes.

#### **STOT (Specific Target Organ Toxicity) - Single Exposure**

##### **Inhalation**

A high concentration can displace oxygen in the air. If less oxygen is available to breathe, symptoms such as rapid breathing, rapid heart rate, clumsiness, emotional upsets and fatigue can result. As less oxygen becomes available, nausea and vomiting, collapse, convulsions, coma and death can occur. Symptoms occur more quickly with physical effort. Lack of oxygen can cause permanent damage to organs including the brain and heart. At high concentrations harmful effects on the liver, nose and throat irritation.

#### **Aspiration Hazard**

May be drawn into the lungs (aspirated) if swallowed or vomited.

#### **STOT (Specific Target Organ Toxicity) - Repeated Exposure**

May cause harmful effects on the liver, irritation of the respiratory system. May cause respiratory tract injury. May cause effects on the central nervous system. May cause Symptoms may include dry, red, cracked skin (dermatitis). At high concentrations may cause hearing loss. (Styrene)

#### **Respiratory and/or Skin Sensitization**

Not a respiratory sensitizer. Not a skin sensitizer.

#### **Carcinogenicity**

<b>Chemical Name</b>	<b>IARC</b>	<b>ACGIH®</b>	<b>NTP</b>	<b>OSHA</b>
Styrene	Group 2B	A4	Reasonably anticipated	Not Listed

IARC: Group 2B – Possibly carcinogenic to humans. (Styrene)

NTP: Reasonably anticipated human carcinogen. (Styrene)

#### **Reproductive Toxicity**

##### **Development of Offspring**

Does not cause harm to the unborn child.

##### **Sexual Function and Fertility**

Does not cause effects on sexual function or fertility.

##### **Effects on or via Lactation**

Does not cause effects on or via lactation.

#### **Germ Cell Mutagenicity**

Not known to be a mutagen.

#### **Interactive Effects**

No information was located.

## **SECTION 12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity**

##### **Acute Aquatic Toxicity**

<b>Chemical Name</b>	<b>LC50 Fish</b>	<b>EC50 Crustacea</b>	<b>ErC50 Aquatic Plants</b>	<b>ErC50 Algae</b>
Styrene	4.02-10 mg/L (Pimephales promelas (fathead minnow); 96-hour; flow-through)	4.7 mg/L (Daphnia magna (water flea); 48-hour; flow-through)		4.9 mg/L (Selenastrum capricornutum (algae); 72-hour)

Product Identifier: AR-500 SiC Resin - Ver. 4

SDS No.: 098

Date of Preparation: June 01, 2015

Date of Last Revision: May 19, 2020

Page 06 of 08

## Chronic Aquatic Toxicity

Chemical Name	NOEC Fish	EC50 Fish	NOEC Crustacea	EC50 Crustacea
Styrene	0.1-1.01 mg/L (Pimephales promelas (fathead minnow))		1.01 mg/L (Daphnia magna (water flea); 21-day; semi-static)	

### Persistence and Degradability

(Styrene) Biodegradability: Readily Biodegradation: >60%, 10 days.

### Bioaccumulative Potential

(Styrene) bio-concentration factor (BCF): <100 n-Octanol/Water Partition Coefficient (Log Kow): 2.96 77 F (25 C).

### Mobility in Soil

(Styrene) Soil/water partition coefficient (Koc) 352.

### Other Adverse Effects

(Styrene) toxic to aquatic life.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

## SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	UN1866	resin solution, flammable	3	III
IMO (Marine)	UN1866	resin solution, flammable	3	III
IATA (Air)	UN1866	resin solution, flammable	3	III
Canadian TDG	UN1866	resin solution, flammable	3	III

**Environmental Hazards** Marine Pollutant (Styrene)

**Special Precautions** Not applicable

### Transport in Bulk according to International Maritime Organization Instruments

Not applicable

**Emergency Response Guide No.** 127

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

##### Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

#### USA

##### Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

##### Additional USA Regulatory Lists

SARA Title III - Section 313: Styrene 43.39%

SARA Title III - Section 311/312: Reactivity Hazard Fire Hazard Acute Health Hazard Chronic Health Hazard

Product Identifier: AR-500 SiC Resin - Ver. 4

SDS No.: 098

Date of Preparation: June 01, 2015

Date of Last Revision: May 19, 2020

Page 07 of 08

Massachusetts Right To Know:  
New Jersey Right To Know:  
Pennsylvania Right To Know:  
California Proposition 65: cancer (Benzene) Reproductive harm: (Benzene) (Toluene)  
CERCLA: 2304lb (Product) 1000lb. (Styrene)

## SECTION 16. OTHER INFORMATION

<b>NFPA Rating</b>	<b>Health - 2</b>	<b>Flammability - 3</b>	<b>Instability - 2</b>
	<b>Based on</b> Styrene		
<b>SDS Prepared By</b>	B.E.R		
<b>Phone No.</b>	(315) 782-3000		
<b>Date of Preparation</b>	June 01, 2015		
<b>Date of Last Revision</b>	May 19, 2020		
<b>Revision Indicators</b>	Revision 4 The following SDS content was changed on May 19, 2020: Additional Information.		
<b>Key to Abbreviations</b>	ACGIH® = American Conference of Governmental Industrial Hygienists HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances		
<b>References</b>	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).		
<b>Disclaimer</b>	NOTE: The information contained herein is, to the best of our knowledge, accurate and reliable. However, no warranty is expressed or implied regarding the accuracy of this information, or the results to be obtained from the use thereof.		