

SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200, WHMIS 2015 and Safe Work Australia

Revision date: 9 April 2023 **Date of previous issue:** 7 March 2018 **SDS No.** 410A-8

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

ARC S1HB (Part A) (LTGY)

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

Relevant identified uses: For use as a high build coating on properly prepared surfaces where mild chemical and abrasion exposures are anticipated.

Uses advised against: No information available

Reason why uses advised against: Not applicable

1.3. Details of the supplier of the safety data sheet

Company:

A.W. CHESTERTON COMPANY
 860 Salem Street
 Groveland, MA 01834-1507, USA
 Tel. +1 978-469-6446 Fax: +1 978-469-6785
 (Mon. - Fri. 8:30 - 5:00 PM EST)
 SDS requests: www.chesterton.com
 E-mail (SDS questions): ProductSDSs@chesterton.com
 E-mail: customer.service@chesterton.com

Supplier:

Canada: A.W. Chesterton Company Ltd., 889 Fraser Drive,
 Unit 105, Burlington, Ontario L7L 4X8 – Tel. 905-335-5055

1.4. Emergency telephone number

24 hours per day, 7 days per week
 Call Infotrac: 1-800-535-5053
 Outside N. America: +1 352-323-3500 (collect)
 NSW Poisons Information Centre (Australia): 13 11 26

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

2.1.1. Classification according to 29 CFR 1910.1200 / WHMIS 2015 / Safe Work Australia / GHS

Skin irritation, Category 2, H315
 Eye irritation, Category 2A, H319
 Skin sensitization, Category 1, H317
 Hazardous to the aquatic environment, Chronic, Category 2, H411

2.1.2. Additional information

For full text of H-statements: see SECTIONS 2.2 and 16.

2.2. Label elements

Labeling according to 29 CFR 1910.1200 / WHMIS 2015 / Safe Work Australia / GHS

Hazard pictograms:



Signal word: Warning

Hazard statements:	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H317	May cause an allergic skin reaction.
	H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:	P261	Avoid breathing mist/vapours.
	P264	Wash hands thoroughly after handling.
	P272	Contaminated work clothing must not be allowed out of the workplace.
	P273	Avoid release to the environment.
	P280	Wear protective gloves and eye/face protection.
	P302/352	IF ON SKIN: Wash with plenty of soap and water.
	P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P333/313	If skin irritation or rash occurs: Get medical advice/attention.
	P337/313	If eye irritation persists: Get medical advice/attention.
	P362/364	Take off contaminated clothing and wash it before reuse.
	P391	Collect spillage.
	P501	Dispose of contents/container to an approved waste disposal plant.

Supplemental information: None

2.3. Other hazards

The safety and health hazards are detailed separately for Part A and Part B. The final cured material is considered nonhazardous. Upon machining, refer to the precautions in the safety data sheets for Part A and Part B.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Hazardous Ingredients ¹	% Wt.	CAS No.	GHS Classification
Epoxy resin (number average molecular weight <= 700)	25-35	1675-54-3 *	Eye Irrit. 2, H319
	15-25	9003-36-5 **	Skin Irrit. 2, H315 ^a Skin Sens. 1, H317 Aquatic Chronic 2, H411
Other ingredients:			
Silica (Quartz)	1-5	14808-60-7	Not classified***
Titanium dioxide	1-5	13463-67-7	Not classified** ^b

* Alternative CAS No: 25068-38-6. **Alternative CAS No: 28064-14-4. ^a Applies to CAS no. 1675-54-3 only.

^b Contains less than 1 % of particles with aerodynamic diameter ≤ 10 µm.

*** Substance with a workplace exposure limit.

For full text of H-statements: see SECTIONS 2.2 and 16.

¹ Classified according to: 29 CFR 1910.1200, 1915, 1916, 1917, Mass. Right-to-Know Law (ch. 40, M.G.L..O. 111F), WHMIS 2015, Safe Work Australia, GHS

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation:	Remove to fresh air. If not breathing, administer artificial respiration. Contact physician immediately.
Skin contact:	Remove contaminated clothing. Wash clothing before reuse. Wash skin with soap and water. Consult physician if irritation develops.
Eye contact:	Flush eyes for at least 15 minutes with large amounts of water. Consult physician if irritation develops.
Ingestion:	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Wash out mouth with water. Contact physician immediately.
Protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training. Avoid contact with the product while providing aid to the victim. Do not breathe mist/spray. See section 8.2.2 for recommendations on personal protective equipment.

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

Moderate eye and skin irritant. May cause skin sensitization as evidenced by rashes or hives.

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

Treat symptoms.

SECTION 5: FIRE-FIGHTING MEASURES**5.1. Extinguishing media**

Suitable extinguishing media: Carbon dioxide, dry chemical, foam or water fog

Unsuitable extinguishing media: High volume water jet

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon Monoxide, aldehydes and other toxic fumes.

Other hazards: None noted

5.3. Advice for firefighters

Cool exposed containers with water. Recommend Firefighters wear self-contained breathing apparatus.

Australian HAZCHEM Emergency Action Code: 2 Z

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid skin contact. Utilize exposure controls and personal protection as specified in Section 8.

6.2. Environmental Precautions

Keep out of sewers, streams and waterways.

6.3. Methods and material for containment and cleaning up

Contain spill to a small area. Pick up with absorbent material (sand, sawdust, clay, etc.) and place in a suitable container for disposal.

6.4. Reference to other sections

Refer to section 13 for disposal advice.

SECTION 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Utilize exposure controls and personal protection as specified in Section 8. Avoid breathing mist/spray. Wash thoroughly after handling. Remove contaminated clothing immediately. Wash clothing before reuse. Contaminated leather including shoes cannot be decontaminated and should be discarded. Avoid creating and breathing dust during removal, drilling, grinding, sawing or sanding.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry area. Keep from freezing.

7.3. Specific end use(s)

No special precautions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters****Occupational exposure limit values**

Ingredients	OSHA PEL ¹		ACGIH TLV ²		AUSTRALIA ES ³	
	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Epoxy resin (number average molecular weight <= 700)	N/A	–	N/A	N/A	N/A	N/A
Silica (Quartz)	(resp.)	0.05	(resp.)	0.025	(resp.)	0.05
	(total)	0.3				
Titanium dioxide	(total)	15	N/A	10	N/A	10

¹ United States Occupational Health & Safety Administration permissible exposure limits

² American Conference of Governmental Industrial Hygienists threshold limit values

³ Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants

Biological limit values

No biological exposure limits noted for the ingredient(s).

8.2. Exposure controls**8.2.1. Engineering measures**

Provide sufficient ventilation to keep the vapor concentrations below the exposure limits. If it is necessary to alter the final cured product such that dust may be generated, use adequate dust extraction or damp down.

8.2.2. Individual protection measures

Respiratory protection: Not normally needed. During spraying, wear suitable respiratory equipment.

Protective gloves: Chemical resistant gloves (e.g., butyl rubber, nitrile)

Eye and face protection: Safety goggles.

Other: Impervious clothing as necessary to prevent skin contact.

8.2.3. Environmental exposure controls

Refer to sections 6 and 12.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Physical state	liquid	pH	not applicable
Colour	light gray	Kinematic viscosity	100K cps @ 25°C
Odour	sweet odor	Solubility in water	insoluble
Odour threshold	not determined	Partition coefficient	not applicable
		n-octanol/water (log value)	
Boiling point or range	not determined	Vapour pressure @ 20°C	not determined
Melting point/freezing point	not determined	Density and/or relative density	1.57 kg/l
% Volatile (by volume)	0%	Weight per volume	13.1 lbs/gal.
Flammability	not determined	Vapour density (air=1)	> 1
Lower/upper flammability or explosion limits	not determined	Rate of evaporation (ether=1)	< 1
Flash point	103°C (218°F)	% Aromatics by weight	None
Method	PM Closed Cup	Particle characteristics	not applicable
Autoignition temperature	not determined	Explosive properties	not determined
Decomposition temperature	not determined	Oxidising properties	not determined

9.2. Other information

None

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity**

Refer to sections 10.3 and 10.5.

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

No dangerous reactions known under conditions of normal use.

10.4. Conditions to avoid

Heat above 149°C (300°F).

10.5. Incompatible materials

Strong mineral acids and bases, strong organic bases and strong oxidizers like liquid Chlorine and concentrated Oxygen.

10.6. Hazardous decomposition products

Carbon Monoxide, aldehydes and other toxic fumes.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects**

Primary route of exposure under normal use: Skin and eye contact. Personnel with pre-existing skin and eye disorders and skin allergies may be aggravated by exposure.

Acute toxicity -

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

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	LD50, rat	> 5,000 mg/kg
Titanium dioxide	LD50, rat	> 10,000 mg/kg

Dermal:

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	LD50, rabbit	> 2,000 mg/kg
Titanium dioxide	LD50, rabbit	> 10,000 mg/kg

Inhalation:

Substance	Test	Result
Epoxy resin (CAS no. 1675-54-3)	LC0, rat, 5-8 hours	No mortality at vapor saturation level
Titanium dioxide	LC50, rat, 4 hours	> 6.82 mg/l

Skin corrosion/irritation:

Causes skin irritation.

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	Skin irritation, rabbit	Moderate irritation
Titanium dioxide	Skin irritation, rabbit	Not irritating

Serious eye damage/irritation:

Causes serious eye irritation.

Substance	Test	Result
Epoxy resin (CAS no. 1675-54-3)	Eye irritation, rabbit	Moderate irritation
Titanium dioxide	Eye irritation, rabbit	Not irritating

Respiratory or skin sensitisation:

May cause skin sensitization as evidenced by rashes or hives.

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	Skin sensitization, guinea pig	Sensitizing
Titanium dioxide	Skin sensitization, guinea pig	Not sensitizing

Germ cell mutagenicity:

Epoxy resin (number average molecular weight <= 700), Titanium dioxide: based on available data, the classification criteria are not met.

Carcinogenicity:

The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have classified inhaled silica as a human carcinogen. IARC has designated inhaled titanium dioxide as possibly carcinogenic to humans (group 2B). The silica and titanium dioxide in this product do not separate from the mixture or in of themselves become airborne, therefore, do not present a hazard in normal use. Epoxy resin (number average molecular weight <= 700): based on available data, the classification criteria are not met.

Reproductive toxicity:

Epoxy resin (number average molecular weight <= 700), Titanium dioxide: based on available data, the classification criteria are not met.

STOT – single exposure:

Epoxy resin (number average molecular weight <= 700), Titanium dioxide: based on available data, the classification criteria are not met.

STOT – repeated exposure: Epoxy resin (number average molecular weight \leq 700), Titanium dioxide: based on available data, the classification criteria are not met. Repeated inhalation of respirable free silica may cause scarring of the lungs with cough and shortness of breath. Silicosis, a delayed lung injury that is a disabling, progressive and sometimes fatal pulmonary fibrosis, may result. The silica in this product does not separate from the mixture or in of itself become air-borne, therefore it does not present a hazard in normal use.

Substance	Test	Result
Epoxy resin (CAS no. 1675-54-3)	Sub-chronic NOAEL, oral, 90 days, rat, male / female (OECD 408)	50 mg/kg bw/day
Epoxy resin (CAS no. 1675-54-3)	Sub-chronic NOAEL, dermal, 90 days, rat, male / female (OECD 411)	10 mg/kg bw/day
Epoxy resin (CAS no. 1675-54-3)	Sub-chronic NOAEL, dermal, 90 days, mouse, male (OECD 411)	100 mg/kg bw/day
Epoxy resin (CAS no. 9003-36-5)	Sub-chronic NOAEL, oral, 90 days, rat, male / female (OECD 408)	250 mg/kg bw/day

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

Other information: None known

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. The information given below is based on a knowledge of the components and the ecotoxicology of similar substances.

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Epoxy resin (number average molecular weight \leq 700): moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/l in the most sensitive species.); chronic NOEC, 21 days, Daphnia magna (OECD 211): 0.3 mg/l.

12.2. Persistence and degradability

Unreacted components (Parts A and B), improperly released to the environment, can cause ground and water pollution. Epoxy resin: not readily biodegradable (biodegradation, OECD 301F, 28 days: 5%). Silica, Titanium dioxide: inorganic substances.

12.3. Bioaccumulative potential

Epoxy resin: bioconcentration factor \leq 31 (QSAR), Octanol/water partition coefficient (log Kow) = 2.64-3.78, low potential for bioaccumulation.

12.4. Mobility in soil

Liquid. Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Epoxy resin: if product enters soil, it will be mobile and may contaminate groundwater (Log Koc \leq 3.65).

12.5. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Combine resin and curative. The final cured material is considered nonhazardous. Landfill sealed containers with a properly licensed facility. May be incinerated at an appropriate facility. The unhardened product is classified as a hazardous waste according to 2008/98/EC. Check local, state and national/federal regulations and comply with the most stringent requirement.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number or ID number

ADG/ADR/RID/ADN/IMDG/ICAO: UN3082
TDG: UN3082
US DOT: UN3082

14.2. UN proper shipping name

ADG/ADR/RID/ADN/IMDG/ICAO: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)
TDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)
US DOT: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)

14.3. Transport hazard class(es)

ADG/ADR/RID/ADN/IMDG/ICAO: 9
TDG: 9

US DOT:	9
14.4. Packing group	
ADG/ADR/RID/ADN/IMDG/ICAO:	III
TDG:	III
US DOT:	III
14.5. Environmental hazards	
MARINE POLLUTANT	
14.6. Special precautions for user	
NO SPECIAL PRECAUTIONS FOR USER	
14.7. Maritime transport in bulk according to IMO instruments	
NOT APPLICABLE	
14.8. Other information	
US DOT: ERG NO.171,	
May be shipped as NON-RESTRICTED in non-bulk packagings (119 gallons or less) by motor vehicle, rail car or aircraft. (49 CFR 171.4(c))	
IMDG: EmS. F-A, S-F	
May be shipped as NON-RESTRICTED in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less. (IMDG CODE Amendment 37-14, 2.10.2.7)	
ICAO/IATA: May be shipped as NON-RESTRICTED in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less. (IATA Dangerous Goods Regulation 56 th edition, 4.4 Special Provisions A197)	
ADR: Classification code M6 Tunnel restriction code (E)	
May be shipped as NON-RESTRICTED in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less. (ADR 2015 Volume 1, Chapter 3.3 Special Provisions 375)	
ADG HAZCHEM CODE: ●3Z HIN: 90	

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. National regulations****US EPA SARA TITLE III****312 Hazards:**

Chemicals subject to reporting requirements of Section 313 of EPCRA and of 40 CFR 372:

Skin irritation

None

Eye irritation

Skin sensitization

TSCA: All chemical components are listed or exempted.

Other national regulations: None

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms: ADG: Australian Dangerous Goods Code
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE: Acute Toxicity Estimate
 BCF: Bioconcentration Factor
 cATpE: Converted Acute Toxicity point Estimate
 ES: Exposure Standard
 GHS: Globally Harmonized System
 ICAO: International Civil Aviation Organization
 IMDG: International Maritime Dangerous Goods
 LC50: Lethal Concentration to 50 % of a test population
 LD50: Lethal Dose to 50% of a test population
 LOEL: Lowest Observed Effect Level
 N/A: Not Applicable
 NA: Not Available
 NOEC: No Observed Effect Concentration
 NOEL: No Observed Effect Level
 OECD: Organization for Economic Co-operation and Development
 (Q)SAR: Quantitative Structure-Activity Relationship
 REL: Recommended Exposure Limit
 RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
 SDS: Safety Data Sheet
 STEL: Short Term Exposure Limit
 STOT RE: Specific Target Organ Toxicity, Repeated Exposure
 STOT SE: Specific Target Organ Toxicity, Single Exposure
 TDG: Transportation of Dangerous Goods (Canada)
 TWA: Time Weighted Average
 US DOT: United States Department of Transportation
 WHMIS: Workplace Hazardous Materials Information System
 Other abbreviations and acronyms can be looked up at www.wikipedia.org.

Key literature references and sources for data: Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST)
 Chemical Classification and Information Database (CCID)
 European Chemicals Agency (ECHA) - Information on Chemicals
 Hazardous Chemical Information System (HCIS)
 National Institute of Technology and Evaluation (NITE)
 U.S. National Library of Medicine Toxicology Data Network (TOXNET)

Procedure used to derive the classification for mixtures according to GHS:

Classification	Classification procedure
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Bridging principle "Dilution"
Aquatic Chronic 2, H411	Calculation method

Relevant H-statements: H315: Causes skin irritation.
 H317: May cause an allergic skin reaction.
 H319: Causes serious eye irritation.
 H411: Toxic to aquatic life with long lasting effects.

Hazard pictogram names: Exclamation mark, environment.

Further information: None

Date of last revision: 9 April 2023

Changes to the SDS in this revision: Sections 1.2, 1.3, 2.1, 2.2, 3.2, 4.1, 5.2, 5.3, 7.1, 8.1, 9.1, 10.6, 11, 12.2, 15.1, 16.

This information is based solely on data provided by suppliers of the materials used, not on the mixture itself. No warranty is expressed or implied regarding the suitability of the product for the user's particular purpose. The user must make their own determination as to suitability.