

SAFETY DATA SHEET

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

Revision date: 10 April 2023

Date of previous issue: 8 March 2023

SDS No. 392B-10

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

1.1. Product identifier

ARC SD4i (Part B) (BLU, GY)

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

Relevant identified uses: ARC Polymer Composite. This is the curative component of a two part system using ARC SD4i (Part A) and mixed to provide chemical protection for storage tanks.

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 corrosion, Category 1B, H314
 Serious eye damage, Category 1, H318
 Skin sensitization, Category 1, H317
 Aquatic Acute 3, H402

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:

Danger

Hazard statements:

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H402	Harmful to aquatic life.

Precautionary statements:	P260	Do not breathe mist/vapours/spray.
	P264	Wash skin 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, protective clothing and eye/face protection.
	P303/361/353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
	P304/340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P301/330/331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P310	Immediately call a POISON CENTER or doctor.
	P333/313	If skin irritation or rash occurs: Get medical advice/attention.
	P363	Wash contaminated clothing before reuse.
	P405	Store locked up.
	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. 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
3-Aminomethyl-3,5,5-trimethylcyclohexylamine (Synonym: Isophoronediamine)	14-29	2855-13-2	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 3, H402
Benzyl alcohol	14-29	100-51-6	Acute Tox. 4, H332 Acute Tox. 4, H302 Eye Irrit. 2, H319
3-Aminomethyl-3,5,5-trimethylcyclohexylamine, reaction products with bisphenol A diglycidyl ether homopolymer	7-19	68609-08-5	Acute Tox. 5, H303 Skin Irrit. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412

Other ingredients:

Silicon carbide	30-40	409-21-2	Not classified*
Silica (Quartz)	1-2	14808-60-7	Not classified*

*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.
Skin contact:	Flood area with water while removing contaminated clothing. Wash clothing before reuse. Consult physician.
Eye contact:	Flush eyes for at least 30 minutes with large amounts of water. Consult physician.
Ingestion:	If conscious, do not induce vomiting; drink milk, water or vinegar. Contact physician immediately.

Protection of first-aiders:

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

Direct contact will cause burns to skin, eyes and mucous membranes. High vapor concentrations may cause respiratory tract irritation. May cause allergic skin sensitization.

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 spray

Unsuitable extinguishing media: not determined

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: Incomplete combustion may form carbon monoxide. May generate: ammonia gas, toxic nitrogen oxide gases.

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. Flush floor with dilute (5%) Acetic Acid. Collect rinsate for proper 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**

Avoid all direct contact. Avoid breathing mist or vapor. Utilize exposure controls and personal protection as specified in Section 8. Remove contaminated clothing immediately. Wash clothing before reuse. Contaminated leather including shoes cannot be decontaminated and should be discarded. Contaminated work clothing must not be allowed out of the workplace. Keep container closed when not in use. 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.

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
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	N/A	N/A	N/A	N/A	N/A	N/A
Benzyl alcohol	N/A	N/A	N/A	N/A	N/A	N/A
3-Aminomethyl-3,5,5-trimethylcyclohexylamine, reaction products with bisphenol A diglycidyl ether homopolymer	N/A	N/A	N/A	N/A	N/A	N/A
Silicon carbide	N/A	15	(inhal.) (resp.)	10 3	(inhal.)	10
Silica (Quartz)	(resp.)	0.05	(resp.)	0.025	N/A	0.05

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**

Good general mechanical ventilation and/or local exhaust. 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., nitrile rubber, butyl rubber, neoprene, PVC)

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	viscous liquid	pH	not applicable
Colour	red or blue	Kinematic viscosity	943 - 1867 cSt @ 25°C
Odour	amine	Solubility in water	insoluble
Odour threshold	not determined	Partition coefficient	not applicable
Boiling point or range	225°C (437°F)	n-octanol/water (log value)	not determined
Melting point/freezing point	not determined	Vapour pressure @ 20°C	1.50 - 1.59 kg/l
% Volatile (by volume)	0%	Density and/or relative density	12.5 - 13.2 lbs/gal.
Flammability	not determined	Weight per volume	> 1
Lower/upper flammability or explosion limits	not applicable	Vapour density (air=1)	< 1
Flash point	> 100°C (> 212°F)	Rate of evaporation (ether=1)	< 1
Method	PM Closed Cup	% Aromatics by weight	0%
Autoignition temperature	not determined	Particle characteristics	not applicable
Decomposition temperature	not determined	Explosive properties	not applicable
		Oxidising properties	not determined

9.2. Other information

Dynamic viscosity: 1500 - 2800 cPs @ 25°C

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

Open flames and high temperatures.

10.5. Incompatible materials

Strong acids and strong oxidizers like liquid Chlorine and concentrated Oxygen.

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide, NOx, aldehydes and other toxic fumes.

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

Primary route of exposure under normal use: Inhalation, skin and eye contact. Personnel with pre-existing allergies, eczema or skin conditions may be aggravated by exposure.

Acute toxicity -

Oral: May be harmful if swallowed. ATE-mix oral: = 3158.9 mg/kg.

Substance	Test	Result
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	LD50, rat	1030 mg/kg
Benzyl alcohol	LD50, rat	1230 mg/kg
3-Aminomethyl-3,5,5-trimethylcyclohexylamine, reaction products with bisphenol A diglycidyl ether homopolymer	LD50, rat	3100 mg/kg
Silicon carbide	NOEL, rat	2000 mg/kg

Dermal: Based on available data on components, the classification criteria are not met. ATE-mix: 5049.8 mg/kg.

Substance	Test	Result
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	LD50, rat	> 1840 mg/kg
Benzyl alcohol	LD50, rat	2000 mg/kg
Silicon carbide	NOEL, rat	2000 mg/kg

Inhalation: Based on available data on components, the classification criteria are not met. ATE-mix: 14.86 mg/l (aerosol/mist); 39.12 mg/l (vapour). High vapor concentrations may cause respiratory tract irritation.

Substance	Test	Result
Benzyl alcohol	LC50, rat, 4 h	> 4.178 mg/l (aerosol/mist) 11 mg/l (vapour)
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	LC50, rat, 4 h	> 5.01 mg/l (213B, analytical)

Skin corrosion/irritation: Causes burns.

Substance	Test	Result
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	Skin irritation, rabbit	Corrosive

Serious eye damage/irritation: Causes serious eye damage.

Substance	Test	Result
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	Eye irritation, rabbit (OECD 405)	Corrosive

Respiratory or skin sensitisation: May cause allergic skin sensitization.

Substance	Test	Result
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	Skin sensitization, guinea pig (OECD 406)	Sensitizing

Germ cell mutagenicity: 3-Aminomethyl-3,5,5-trimethylcyclohexylamine, Benzyl alcohol: 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. 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.

Reproductive toxicity: 3-Aminomethyl-3,5,5-trimethylcyclohexylamine: developmental NOAEL > 250 mg/kg/day; maternal NOEL = 50 mg/kg/day.

STOT – single exposure: 3-Aminomethyl-3,5,5-trimethylcyclohexylamine: Based on available data, the classification criteria are not met.

STOT – repeated exposure: 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. 3-Aminomethyl-3,5,5-trimethylcyclohexylamine, 90-day oral subchronic study, OECD 408: NOEL = 59 mg/kg/day (male), 62 mg/kg/day (female).

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

Harmful to aquatic life. 3-Aminomethyl-3,5,5-trimethylcyclohexylamine: 48 h EC50 (for daphnia) 23 mg/l (OECD 202); 72 h ErC50 (for algae) > 50 mg/l (EC 88/302); chronic NOEC (Daphnia magna, 21 days) 3 mg/l.

12.2. Persistence and degradability

Unreacted components, improperly released to the environment, can cause ground and water pollution. 3-Aminomethyl-3,5,5-trimethylcyclohexylamine: may biodegrade, not readily biodegradable. Benzyl alcohol: expected to biodegrade relatively quickly.

12.3. Bioaccumulative potential

3-Aminomethyl-3,5,5-trimethylcyclohexylamine bioconcentration in aquatic organisms is not expected to be significant (BCF, QSAR: 3.16). Benzyl alcohol: low potential for bioaccumulation (log Kow: 1.1).

12.4. Mobility in soil

Liquid. Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). 3-Aminomethyl-3,5,5-trimethylcyclohexylamine: log Koc, QSAR = 2.97. Benzyl alcohol: expected to have very high mobility in soils.

12.5. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Unreacted components are a special waste. 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. 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: UN2735

TDG: UN2735

US DOT: UN2735

14.2. UN proper shipping name

ADG/ADR/RID/ADN/IMDG/ICAO: AMINES, LIQUID, CORROSIVE, N.O.S.
(3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE/CYCLOALIPHATIC AMINE)

TDG: AMINES, LIQUID, CORROSIVE, N.O.S.
(3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE/CYCLOALIPHATIC AMINE)

US DOT: AMINES, LIQUID, CORROSIVE, N.O.S.
(3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE/CYCLOALIPHATIC AMINE)

14.3. Transport hazard class(es)

ADG/ADR/RID/ADN/IMDG/ICAO: 8

TDG: 8

US DOT: 8

14.4. Packing group

ADG/ADR/RID/ADN/IMDG/ICAO: II

TDG: II

US DOT: II

14.5. Environmental hazards

NO

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. 153

May be shipped as Limited Quantities in packaging having a rated capacity gross weight of 66 lb. or less and in inner packages not over 1 Liter (49 CFR 173.154 (b),(1))

IMDG: EmS F-A, S-B, IMDG segregation group 18-Alkalis

ADR: Classification code C7, Tunnel restriction code (E)

ADG HAZCHEM CODE : 2X **HIN:** 88/80

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 corrosion
Serious eye damage
Skin sensitization

None

TSCA: All 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 Corr. 1B, H314	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Bridging principle "Dilution"
Aquatic Acute 3, H402	Calculation method

Relevant H-statements: H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H332: Harmful if inhaled.
H402: Harmful to aquatic life.
H412: Harmful to aquatic life with long lasting effects.

Hazard pictogram names: Corrosion, exclamation mark

Further information: None

Date of last revision: 10 April 2023

Changes to the SDS in this revision: Sections 8.1, 9.1, 9.2, 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.