

SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200, WHMIS 2022 and Safe Work Australia

Revision date: 17 April 2025

Date of previous issue: 27 April 2021

SDS No. 235B-20

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

1.1. Product identifier

ARC 858 (Part B)

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

Relevant identified uses: ARC Polymer Composite. Repair damage caused by impact, abrasion or erosion and chemical attack.

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
 (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 2022 / Safe Work Australia / GHS

Skin corrosion, Category 1B, H314
 Serious eye damage, Category 1, H318
 Acute toxicity, Category 4, H302
 Skin sensitization, Category 1, H317

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 2022 / Safe Work Australia / GHS

Hazard pictograms:



Signal word:

Danger

Hazard statements:

H314	Causes severe skin burns and eye damage.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.

Precautionary statements:	P261	Avoid breathing vapours.
	P264	Wash skin thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P272	Contaminated work clothing must not be allowed out of the workplace.
	P280	Wear protective gloves/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.
	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. 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
1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with bisphenol A diglycidyl ether homopolymer	30-40	68411-71-2	Acute Tox. 4, H302
Diethylenetriamine*	10-15	111-40-0	Acute Tox. 2, H330 Acute Tox. 4, H302/312 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Skin Sens. 1, H317
Iron oxide	1-5	1317-61-9	Self-Heat. 2, H252
Other ingredients ¹ :			
Silicon carbide	30-40	409-21-2	Not classified**
Silica (Quartz)	< 0.2	14808-60-7	Not classified**

*This component is toxic by inhalation if sprayed or if aerosol/mist is created. The mixture is neither present in aerosol form nor may aerosols occur.

**Substance with a workplace exposure limit.

For full text of H-statements: see SECTION 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 2022, 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:	Flood area with water while removing contaminated clothing. Contact physician.
Eye contact:	Flush eyes for at least 30 minutes with large amounts of water. Contact physician.
Ingestion:	Do not induce vomiting. If conscious, dilute stomach contents with large quantities of milk or 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. See section 8.2.2 for recommendations on personal protective equipment.

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

Corrosive to eyes, skin and mucous membranes, which can result in strong irritation, burning and tissue damage. Harmful if swallowed. Vapors can be severely irritating to the eyes and respiratory tract. Prolonged or repeated contact may cause asthma, skin sensitization and other allergic responses.

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 or alcohol-resistant foam**Unsuitable extinguishing media:** No data available**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:** Use of water may result in the formation of very toxic aqueous solutions. Do not allow runoff from firefighting to enter drains or water courses.**5.3. Advice for firefighters**

Recommend Firefighters wear self-contained breathing apparatus.

Australian HAZCHEM Emergency Action Code: 3 Z**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Provide adequate ventilation. 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

Scoop up and transfer to 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**

Avoid all direct contact. Wash thoroughly after handling. Utilize exposure controls and personal protection as specified in Section 8. Remove contaminated clothing immediately. Wash clothing before reuse. Contaminated work clothing must not be allowed out of the workplace. Contaminated leather including shoes cannot be decontaminated and should be discarded. Do not contaminate with sodium nitrite or other nitrosating agents, which could cause the formation of cancer-causing nitrosamine. Do not eat, drink or smoke when using this product. 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
1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with bisphenol A diglycidyl ether homopolymer	N/A	N/A	N/A	N/A	N/A	N/A
Diethylenetriamine	1	4	1 (skin)	4.2	1 (skin)	4.2
Iron oxide	(total)	15	(total)	10	N/A	N/A
	(resp.)	5	(resp.)	3		
Silicon carbide	(total)	15	(total)	10	N/A	10
	(resp.)	5	(resp.)	3		
Silica (Quartz)	(resp.)	0.05	(resp.)	0.025	(resp.)	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

Provide sufficient ventilation to keep the vapor concentrations below the exposure limit. Provide readily accessible eye wash stations and safety showers. 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. In case of insufficient ventilation, wear suitable respiratory equipment (e.g., EN filter type A-P2).

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

Diethylenetriamine:

Contact type	Glove material	Layer thickness	Breakthrough time*
Full	neoprene	0.65 mm	> 480 min.
Splash	natural rubber	0.6 mm	> 60 min.

*Determined according to EN374 standard.

Eye and face protection: Full face shield with goggles underneath.

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	paste	pH	not applicable
Colour	black	Kinematic viscosity	62K - 113K cSt @ 25°C (calculated)
Odour	amine odor	Solubility in water	negligible
Odour threshold	not determined	Partition coefficient n-octanol/water (log value)	not applicable
Boiling point or range	not applicable	Vapour pressure @ 20°C	not applicable
Melting point/freezing point	not determined	Density and/or relative density	1.6 kg/l
% Volatile (by volume)	< 1%	Weight per volume	9.07 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	> 209°C (>392°F)	% Aromatics by weight	0%
Method	Closed Cup	Particle characteristics	not applicable
Autoignition temperature	not determined	Explosive properties	not applicable
Decomposition temperature	not determined	Oxidising properties	not applicable

9.2. Other information

Dynamic viscosity: 100K - 180K 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 red hot surfaces.

10.5. Incompatible materials

Strong acids and strong oxidizers like liquid Chlorine and concentrated Oxygen. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

10.6. Hazardous decomposition products

Nitric acid, NOx, Ammonia, Carbon Monoxide, Carbon Dioxide, nitrosamines 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 asthma, chronic respiratory disease and skin and eye conditions are generally aggravated by exposure.

Acute toxicity -**Oral:**

If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Harmful if swallowed. ATE-mix = 1064 mg/kg.

Substance	Test	Result
1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with bisphenol A diglycidyl ether homopolymer	LD50, rat	200-500 mg/kg
Diethylenetriamine	LD50, rat	1080 mg/kg
Silicon carbide	LD50, rat	> 3000 mg/kg

Dermal:

ATE-mix = 7730 mg/kg.

Substance	Test	Result
Diethylenetriamine	LD50, rabbit	1090 mg/kg
Silicon carbide	LD50, rabbit	> 3000 mg/kg

Inhalation:

Vapors can be severely irritating to the eyes and respiratory tract.

Substance	Test	Result
Diethylenetriamine	LC50, rat, 4 h	No mortality at vapor saturation level

Skin corrosion/irritation:

Causes burns.

Substance	Test	Result
Diethylenetriamine	Skin irritation, rabbit	Corrosive

Serious eye damage/irritation:

Causes serious eye damage.

Substance	Test	Result
Diethylenetriamine	Eye irritation	Corrosive

Respiratory or skin sensitisation:

Prolonged or repeated contact may cause asthma, skin sensitization and other allergic responses.

Substance	Test	Result
Diethylenetriamine	Skin sensitization, guinea pig	Sensitizing

Germ cell mutagenicity:

Diethylenetriamine, Silicon carbide: 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:

Diethylenetriamine, Silicon carbide: not expected to cause toxicity.

STOT – single exposure:

Diethylenetriamine: May cause respiratory irritation.

STOT – repeated exposure:

Diethylenetriamine, Silicon carbide: based on available data, the classification criteria are not met.

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

Many aquatic species are intolerant to corrosive material such as the unreacted curing agent.

12.2. Persistence and degradability

Unreacted components (Parts A and B), improperly released to the environment, can cause ground and water pollution.

Diethylenetriamine: expected to be resistant to biodegradation. Silicon carbide, Iron oxide, Silica (Quartz): inorganic substances.

12.3. Bioaccumulative potential

Diethylenetriamine: bioconcentration in aquatic organisms is not expected to be significant (log Kow: -2.13).

12.4. Mobility in soil

Liquid. Slightly soluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Diethylenetriamine: expected to be highly mobile in soil.

12.5. Endocrine disrupting properties

None known

12.6. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

2649waste. Combine resin and curative. The final cured material is considered nonhazardous. Landfill sealed containers with stabilized and solidified liquids 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. (CONTAINS 2,2'-IMINODIETHYLAMINE)

TDG: AMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS 2,2'-IMINODIETHYLAMINE)

US DOT: AMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS 2,2'-IMINODIETHYLAMINE)

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, TRANSPORT CATEGORY 2, 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:**

None

Skin corrosion
 Serious eye damage
 Acute toxicity
 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 Corr. 1B, H314	Calculation method
Eye Dam. 1, H318	Calculation method
Acute Tox. 4, H302	Calculation method
Skin Sens. 1, H317	Bridging principle "Dilution"

Relevant H-statements: H252: Self-heating in large quantities; may catch fire.
H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H330: Fatal if inhaled.
H335: May cause respiratory irritation.

Hazard pictogram names: Corrosion, exclamation mark

Further information: None

Date of last revision: 17 April 2025

Changes to the SDS in this revision: Sections 1.2, 1.3, 2.1, 2.2, 3, 5.2, 8.1, 9.1, 9.2, 10.5, 10.6, 12.2, 12.5, 13, 15, 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.