

SAFETY DATA SHEET

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

Revision date: 28 June 2023 **Date of previous issue:** 9 April 2021 **SDS No.** 234B-21

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

1.1. Product identifier

ARC 855 (Part B), ARC 855N (Part B)

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

Relevant identified uses: ARC Polymer Composite to be used with ARC 855 (Part A) and ARC 855N (Part A). Repair damage caused by impact, abrasion, erosion or corrosion; rebuild worn areas; fill holes and cracks; provide abrasion resistant surfaces.

Uses advised against: No data 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

Acute toxicity, Category 4, H302
Skin corrosion, Category 1B, H314
Serious eye damage, Category 1, H318
Skin sensitization, Category 1, H317
Hazardous to the aquatic environment, Chronic, Category 3, H412

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:	H302	Harmful if swallowed.
	H314	Causes severe skin burns and eye damage.
	H317	May cause an allergic skin reaction.
	H412	Harmful to aquatic life with long lasting effects.
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.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/clothing and eye/face protection.
	P301/330/331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	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.
	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
3-Aminomethyl-3,5,5-trimethylcyclohexylamine (Synonym: Isophoronediamine)	30 - 60	2855-13-2	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 (C ≥ 0.001 %)
Benzyl alcohol	30 - 60	100-51-6	Acute Tox. 4, H302/332 Eye Irrit. 2, H319
3-Aminomethyl-3,5,5-trimethylcyclohexylamine, reaction products with bisphenol A diglycidyl ether homopolymer	10 - 30	68609-08-5	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412

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. Contact physician.
Ingestion:	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side. 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

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. Application of corticosteroid cream has been effective in treating skin irritation.

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

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, dry chemical, dry sand, limestone powder or water fog

Unsuitable extinguishing media: High volume water jet

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. Burning produces noxious and toxic fumes.

Other hazards: Do not allow runoff from firefighting to enter drains or water courses.

5.3. Advice for firefighters

A face shield should be worn. Use personal protective equipment. 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**

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

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. Wash thoroughly after handling. Avoid breathing 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.

7.2. Conditions for safe storage, including any incompatibilities

Keep container closed when not in use. Store in cool, dry area. Do not store near acids.

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

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 adequate ventilation. If necessary, provide local exhaust. Provide readily accessible eye wash stations and safety showers.

8.2.2. Individual protection measures

Respiratory protection: Not normally needed. In case of insufficient ventilation, utilize an approved (amine) organic vapor respirator.

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

3-Aminomethyl-3,5,5-trimethylcyclohexylamine:

Contact type	Glove material	Layer thickness	Breakthrough time
Full	nitrile rubber	0.40 mm	> 480 min.
Splash	neoprene	0.65 mm	> 30 min.

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	colorless	Kinematic viscosity	100 cps @ 25°C
Odour	Irritating	Solubility in water	not determined
Odour threshold	not determined	Partition coefficient n-octanol/water (log value)	no data available
Boiling point or range	225°C (437°F)	Vapour pressure @ 20°C	0.70 mmHg @ 21°C (70°F)
Melting point/freezing point	not applicable	Density and/or relative density	1.0 kg/l
% Volatile (by volume)	0%	Weight per volume	8.35 lbs/gal.
Flammability	no data available	Vapour density (air=1)	> 1
Lower/upper flammability or explosion limits	not applicable	Rate of evaporation (ether=1)	< 1
Flash point	110°C (230°F)	% Aromatics by weight	0%
Method	PM 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

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

Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

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. Reactive metals. Materials reactive with hydroxyl compounds.

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide, NOx, Ammonia and other toxic fumes (by combustion). Nitrogen oxide can react with water vapors to form corrosive nitric acid.

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:**

Harmful if swallowed. ATE-mix = 1,480.6 mg/kg

Substance	Test	Result
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	LD50, rat	1,030 mg/kg
Benzyl alcohol	LD50, rat	1,230 mg/kg
3-Aminomethyl-3,5,5-trimethylcyclohexylamine, reaction products with bisphenol A diglycidyl ether homopolymer	LD50, rat	3,100 mg/kg

Dermal:

May be harmful in contact with skin. ATE-mix = 2,366.9 mg/kg

Substance	Test	Result
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	LD50, rat	> 2,000 mg/kg
Benzyl alcohol	LD50, rabbit	> 2,000 mg/kg
3-Aminomethyl-3,5,5-trimethylcyclohexylamine, reaction products with bisphenol A diglycidyl ether homopolymer	LD50, rat	> 2,000 mg/kg

Inhalation:

High vapor concentrations may cause respiratory tract irritation. ATE-mix > 20 mg/l (vapour). ATE-mix > 6.59 mg/l (mist).

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

Skin corrosion/irritation:

Causes burns.

Substance	Test	Result
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	Skin irritation, rabbit	Corrosive
3-Aminomethyl-3,5,5-trimethylcyclohexylamine, reaction products with bisphenol A diglycidyl ether homopolymer	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
Benzyl alcohol	Eye irritation, rabbit, OECD 405	Irritating

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:

This product contains no carcinogens as listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the Occupational Safety and Health Administration (OSHA) or the European Chemicals Agency (ECHA).

Reproductive toxicity:

3-Aminomethyl-3,5,5-trimethylcyclohexylamine: developmental NOAEL > 250 mg/kg/day; maternal NOEL 50 mg/kg/day; not expected to be a reproductive toxicant. Benzyl alcohol: not expected to be a reproductive toxicant.

STOT – single exposure:

3-Aminomethyl-3,5,5-trimethylcyclohexylamine, Benzyl alcohol: based on available data, the classification criteria are not met.

STOT – repeated exposure:

Substance	Test	Result
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	90-day oral subchronic study, 3756 OECD 408	NOAEL: 59 mg/kg/day (male), 62 mg/kg/day (female)
Benzyl alcohol	90-day oral subchronic study	NOAEL: 400 mg/kg/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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. 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

3-Aminomethyl-3,5,5-trimethylcyclohexylamine: may biodegrade, not readily biodegradable. Benzyl alcohol: readily biodegradable.

12.3. Bioaccumulative potential

3-Aminomethyl-3,5,5-trimethylcyclohexylamine: low potential for bioaccumulation (BCF [QSAR]: 3.16). Benzyl alcohol: low potential for bioaccumulation (log Kow: 1.1).

12.4. Mobility in soil

Liquid. 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:
Acute toxicity	None
Skin corrosion	
Serious eye damage	
Skin sensitization	
TSCA: All chemical components are listed in the TSCA inventory.	

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
Acute Tox. 4, H302	Calculation method
Skin Corr. 1B, H314	Calculation method
Skin Sens. 1, H317	Bridging principle "Dilution"
Aquatic Chronic 3, H412	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.
 H412: Harmful to aquatic life with long lasting effects.

Hazard pictogram names: Corrosion, exclamation mark

Further information: None

Date of last revision: 28 June 2023

Changes to the SDS in this revision: Sections 1.2, 2.2, 3, 5.2, 8.1, 8.2.2, 9.1, 11, 14.1, 14.2, 14.4, 14.8, 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.