

SAFETY DATA SHEET

in accordance with 1907/2006/EC (REACH, as amended by 453/2010/EC) and 29 CFR 1910.1200

Revision date: 2 April 2015

Initial date of issue: 19 August 2013

SDS No. 463B-1

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

1.1. Product identifier

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

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

ARC Polymer Composite. Repair damage caused by impact, abrasion, erosion or corrosion; rebuild worn areas; fill holes and cracks; provide abrasion resistant surfaces.

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): ProductMSDSs@chesterton.com
E-mail: customer.service@chesterton.com

Supplier:

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)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP] / 29 CFR 1910.1200 / GHS

Skin Corr. 1B, H314
Acute Tox. 4, H302/312/332
Skin Sens. 1, H317
Aquatic Chronic 3, H412

2.1.2. Classification according to Directives 1999/45/EC and 1975/324/EEC

Corrosive; C; R34
Harmful; Xn; R20/21/22
R43
R52/53

2.1.3. Canadian WHMIS classification

E: Corrosive materials; D2B: Toxic materials causing other effects

2.1.4. Australian classification

Hazardous according to criteria of Safe Work Australia.

2.1.5. Additional information

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

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP] / 29 CFR 1910.1200 / GHS

Hazard pictograms:



Signal word:

Danger

Hazard statements:	H314	Causes severe skin burns and eye damage.
	H302/312/332	Harmful if swallowed, in contact with skin or if inhaled.
	H317	May cause an allergic skin reaction.
	H412	Harmful to aquatic life with long lasting effects.
Precautionary statements:	P261	Avoid breathing vapors.
	P273	Avoid release to the environment.
	P280	Wear protective gloves, protective 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/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/physician.	

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./ EC No.	REACH Reg. No.	Classification (CLP/GHS)	Classification (67/548/EEC)
Benzyl Alcohol	35-55	100-51-6 202-859-9	NA	Acute Tox. 4, H302/332	Xn; R20/22
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	30-40	2855-13-2 220-666-8	01-211951 4687-32	Acute Tox. 4, H302/312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412	Xn; R21/22 C; R34 R43 R52/53
Modified cycloaliphatic amine	15-25	68609-08-5 Polymer	NA	Skin Corr. 1B, H314 Skin Sens. 1, H317	C; R34 R43

Indications of danger acc. to 67/548/EEC: Xn: Harmful; C: Corrosive
For full text of H-statements and R-phrases: 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), California Proposition 65
* 1272/2008/EC, 67/548/EEC, 99/45/EC, REACH
* Controlled Products Regulations
* Safe Work Australia [NOHSC: 1008 (2004)]

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:	If conscious, do not induce vomiting; drink milk, water or vinegar. Contact physician immediately.

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 fog

Unsuitable extinguishing media: Water jets

5.2. Special hazards arising from the substance or mixture

None

5.3. Advice for firefighters

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

Flammability Classification: not determined

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. 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.

7.2. Conditions for safe storage, including any incompatibilities

Store in 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		UK WEL ³		AUSTRALIA ES ⁴	
	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Benzyl Alcohol	–	–	–	–	–	–	–	–
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	–	–	–	–	–	–	–	–
Modified cycloaliphatic amine	–	–	–	–	–	–	–	–

¹ United States Occupational Health & Safety Administration permissible exposure limits.

² American Conference of Governmental Industrial Hygienists threshold limit values.

³ EH40 Workplace exposure limits, Health & Safety Executive

⁴ Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003].

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

Provide adequate ventilation. If necessary, provide local exhaust.

8.2.2. Individual protection measures

Respiratory protection: Not normally needed. If necessary, utilize an approved (amine) organic vapor respirator (e.g., EN filter type A-P3).

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

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	Odour	amine
Colour	light amber	Odour threshold	not determined
Initial boiling point	195°C (383°F)	Vapour pressure @ 20°C	not determined
Melting point	not determined	% Aromatics by weight	not determined
% Volatile (by volume)	0%	pH	not applicable
Flash point	113°C (235°F)	Relative density	1.0 kg/l
Method	Setaflash Closed Cup	Weight per volume	8.32 lbs/gal.
Viscosity	< 100 cps @ 25°C	Coefficient (water/oil)	< 1
Autoignition temperature	not determined	Vapour density (air=1)	> 1
Decomposition temperature	no data available	Rate of evaporation (ether=1)	< 1
Upper/lower flammability or explosive limits	not determined	Solubility in water	slightly soluble
Flammability (solid, gas)	not applicable	Oxidising properties	not applicable
Explosive properties	not applicable		

9.2. Other information

EPA 24: 6.88 lbs/gal, 82.69%

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.

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide 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: Harmful if swallowed. ATE-mix = 1222 mg/kg.

Substance	Test	Result
Benzyl Alcohol	LD50, rat	1230 mg/kg
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	LD50, rat	1030 mg/kg
Modified cycloaliphatic amine	LD50, rat	3100 mg/kg

Dermal: ATE-mix > 2000 mg/kg

Substance	Test	Result
Benzyl Alcohol	LD50, rabbit	2000 mg/kg
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	LD50, rat	> 2000 mg/kg

Inhalation: May be harmful by inhalation. High vapor concentrations may cause respiratory tract irritation. ATE-mix = 20.47 mg/l (vapor). ATE-mix > 4.76 mg/l (mist).

Substance	Test	Result
Benzyl Alcohol	LC50, rat, 4 h	ca. 8.8 mg/l (vapor)
Benzyl Alcohol	LC50, rat, 4 h	> 4.178 mg/l (mist)
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	LC50, rat, 4 h	> 5.01 mg/l (mist, 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: Benzyl Alcohol, 3-Aminomethyl-3,5,5-trimethylcyclohexylamine: based on available data, the classification criteria are not met.

Carcinogenicity: As per 29 CFR 1910.1200 (Hazard Communication), 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 Regulation (EC) No 1272/2008.

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:

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

Aspiration hazard: Not expected to be an aspiration toxicant based on viscosity.

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.

12.2. Persistence and degradability

3-Aminomethyl-3,5,5-trimethylcyclohexylamine: biodegradable. Benzyl Alcohol: readily biodegradable.

12.3. Bioaccumulative potential

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

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). Benzyl Alcohol: expected to have very high mobility in soils. 3-Aminomethyl-3,5,5-trimethylcyclohexylamine: log Koc (QSAR) = 2.97.

12.5. Results of PBT and vPvB assessment

Not available

12.6. 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. This product is classified as a hazardous waste according to 2008/98/EC.

European List of Wastes code: 08 04 09

SECTION 14: TRANSPORT INFORMATION**14.1. UN number**

ADR/RID/ADN/IMDG/ICAO:	UN2289
TDG:	UN2289
US DOT:	UN2289

14.2. UN proper shipping name

ADR/RID/ADN/IMDG/ICAO:	ISOPHORONEDIAMINE SOLUTION
TDG:	ISOPHORONEDIAMINE SOLUTION
US DOT:	ISOPHORONEDIAMINE SOLUTION

14.3. Transport hazard class(es)

ADR/RID/ADN/IMDG/ICAO:	8
TDG:	8
US DOT:	8

14.4. Packing group

ADR/RID/ADN/IMDG/ICAO:	III
TDG:	III
US DOT:	III

14.5. Environmental hazards

NO ENVIRONMENTAL HAZARDS

14.6. Special precautions for user

NO SPECIAL PRECAUTIONS FOR USER

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

NOT APPLICABLE

14.8. Other information

US DOT: Shipped as Consumer Commodity ORM-D in packaging having a rated capacity gross weight of 66 lb. or less (49 CFR 173.154(c)). ERG NO. 153

IMDG: EmS F-A, S-B

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

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU regulations**

Authorisations under Title VII: Not applicable

Restrictions under Title VIII: None

Other EU regulations: Directive 94/33/EC on the protection of young people at work.

15.1.2. National regulations**US EPA SARA TITLE III**

312 Hazards: Immediate
Delayed

313 Chemicals: None

Hazardous Materials Identification System (HMIS)

4 = Severe Hazard
3 = Serious Hazard
2 = Moderate Hazard
1 = Slight Hazard
0 = Minimal Hazard
* = See Section 8

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	1
Personal Protection	*

Other national regulations: National implementation of the EC Directive referred to in section 15.1.1.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms: 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
CLP: Classification Labelling Packaging Regulation (1272/2008/EC)
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
NOAEL: No Observed Adverse Effect Level
NOEL: No Observed Effect Level
OECD: Organization for Economic Co-operation and Development
PBT: Persistent, Bioaccumulative and Toxic substance
(Q)SAR: Quantitative Structure-Activity Relationship
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (1907/2006/EC)
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
STOT: Specific Target Organ Toxicity
TDG: Transportation of Dangerous Goods (Canada)
US DOT: United States Department of Transportation
vPvB: very Persistent and very Bioaccumulative substance
WEL: Workplace Exposure Limit
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 de la santé et de la sécurité du travail (CSST)
Chemical Classification and Information Database (CCID)
European Chemicals Agency (ECHA) - Information on Chemicals
Hazardous Substances Information System (HSIS)
National Institute of Technology and Evaluation (NITE)
Swedish Chemicals Agency (KEMI)
U.S. National Library of Medicine Toxicology Data Network (TOXNET)

Procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008:

Classification	Classification procedure
Skin Corr. 1B, H314	Calculation method
Acute Tox. 4, H302	Calculation method
Acute Tox. 4, H312, H332	Bridging principle "Dilution"
Skin Sens. 1, H317	Bridging principle "Dilution"
Aquatic Chronic 3, H412	Calculation method

Relevant H-statements: H302/312: Harmful if swallowed or in contact with skin.
H302/332: Harmful if swallowed or if inhaled.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H412: Harmful to aquatic life with long lasting effects.

Relevant R-phrases: R20/22: Harmful by inhalation and if swallowed.
R21/22: Harmful in contact with skin and if swallowed.
R34: Causes burns.
R43: May cause sensitisation by skin contact.
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard pictogram names: Corrosion, exclamation mark

Changes to the SDS in this revision: Sections 2.1.1, 2.2, 11, 16.

Further information: None

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.