

**SAFETY DATA SHEET**

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

**Revision date:** 20 August 2024      **Date of previous issue:** 24 September 2020      **SDS No.** 464B-3

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

**1.1. Product identifier**

ARC I BX1 RC (Part B)

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

**Relevant identified uses:** Mixed with ARC I BX1 RC Part A, for a fast cure coating to protect metal surfaces from damage caused by abrasion, erosion and impact forces.

**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](http://www.chesterton.com)  
E-mail (SDS questions): [ProductSDSs@chesterton.com](mailto:ProductSDSs@chesterton.com)  
E-mail: [customer.service@chesterton.com](mailto: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**

Flammable liquid, Category 4, H227  
Skin corrosion, Category 1A, H314  
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 2022 / Safe Work Australia / GHS**

**Hazard pictograms:**



**Signal word:**

Danger

**Hazard statements:**

H227	Combustible liquid.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

<b>Precautionary statements:</b>	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P261	Avoid breathing vapours.
	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.
	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.
	P391	Collect spillage.
	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 <sup>1</sup>	% Wt.	CAS No.	GHS Classification
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	10-20	57214-10-5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 (M-factor = 1)
m-Phenylenebis(methylamine) (Synonym: m-Xylene-alpha, alpha'-Diamine)	7-13	1477-55-0	Acute Tox. 4, H332 Acute Tox. 4, H302 Skin Corr. 1A, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412
N-(3-(trimethoxysilyl)propyl)ethylenediamine	0.1-0.7	1760-24-3	Acute Tox. 4, H332 Eye Dam. 1, H318 Skin Sens. 1, H317
Ethanol	0.1-0.6	64-17-5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 (C ≥ 50 %)

Other ingredients:

Aluminum oxide	50-60	1344-28-1	Not classified*
Silicon carbide	7-13	409-21-2	Not classified*

\*Substance with a workplace exposure limit.  
For full text of H-statements: see SECTION 16.

<sup>1</sup> 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

<b>Inhalation:</b>	Remove to fresh air. If not breathing, administer artificial respiration. Contact physician.
<b>Skin contact:</b>	Flood area with water while removing contaminated clothing. Wash clothing before reuse. Wash skin with soap and water. Contact physician.
<b>Eye contact:</b>	Flush eyes for at least 15 minutes with large amounts of water. Contact physician.
<b>Ingestion:</b>	Do not induce vomiting. If conscious, dilute stomach contents with large quantities of milk or water. Contact physician immediately.
<b>Protection of first-aiders:</b>	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. May cause an allergic skin reaction. Excessive inhalation of vapors or mists can cause coughing, chest tightness and difficulty breathing.

**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, water spray.**Unsuitable extinguishing media:** No data available**5.2. Special hazards arising from the substance or mixture****Hazardous combustion products:** Carbon Monoxide, Carbon Dioxide, NOx, Ammonia and other toxic fumes.**Other hazards:** None**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**

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 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 <sup>1</sup>		ACGIH TLV <sup>2</sup>		AUSTRALIA ES <sup>3</sup>	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	N/A	N/A	N/A	N/A	N/A	N/A
m-Phenylenebis(methylamine)	N/A	N/A	(skin)	STEL: 0.1 (Ceiling)	N/A	N/A
N-(3-(trimethoxysilyl)propyl)ethylenediamine	N/A	N/A	N/A	N/A	N/A	N/A
Ethanol	1,000	1,900	STEL: 1,000	N/A	1,000	1,880
Aluminum oxide	(total) (resp.)	15 5	(resp.)	1	N/A	10 (insp.)
Silicon carbide	(total) (resp.)	15 5	(total) (resp.)	10 3	N/A	10

<sup>1</sup> United States Occupational Health & Safety Administration permissible exposure limits<sup>2</sup> American Conference of Governmental Industrial Hygienists threshold limit values<sup>3</sup> 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.

**8.2.2. Individual protection measures**

**Respiratory protection:** Not normally needed. If exposure limits are exceeded, use an approved organic vapor respirator (e.g., EN filter type A-P2).

**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**

<b>Physical state</b>	gritty paste	<b>pH</b>	not applicable
<b>Colour</b>	reddish brown	<b>Kinematic viscosity</b>	21,700 cSt @ 25°C (calculated)
<b>Odour</b>	amine	<b>Solubility in water</b>	slightly soluble
<b>Odour threshold</b>	not determined	<b>Partition coefficient n-octanol/water (log value)</b>	not applicable
<b>Boiling point or range</b>	not determined	<b>Vapour pressure @ 20°C</b>	not determined
<b>Melting point/freezing point</b>	not determined	<b>Density and/or relative density</b>	2.305 kg/l
<b>% Volatile (by volume)</b>	0%	<b>Weight per volume</b>	19.18 lbs/gal.
<b>Flammability</b>	not applicable	<b>Vapour density (air=1)</b>	> 1
<b>Lower/upper flammability or explosion limits</b>	not applicable	<b>Rate of evaporation (ether=1)</b>	< 1
<b>Flash point</b>	77°C (170°F)	<b>% Aromatics by weight</b>	0%
<b>Method</b>	PM Closed Cup	<b>Particle characteristics</b>	not applicable
<b>Autoignition temperature</b>	not determined	<b>Explosive properties</b>	not applicable
<b>Decomposition temperature</b>	not determined	<b>Oxidising properties</b>	not applicable

**9.2. Other information**

Dynamic viscosity: 50,000 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**

None

**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, Ammonia and other toxic fumes (by combustion).

**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 and skin and eye disorders may be aggravated by exposure.

**Acute toxicity -**

**Oral:** ATE-mix > 9055 mg/kg

Substance	Test	Result
m-Phenylenebis(methylamine)	LD50, rat	930 mg/kg
	LD50, rat	> 5,000 mg/kg, read-across
Silicon carbide	NOAEL, rat	2,000 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LD50, rat	2,413 mg/kg
Aluminum oxide	LD50, rat	> 5,000 mg/kg

**Dermal:**

Substance	Test	Result
m-Phenylenebis(methylamine)	LD50, rabbit	≈ 2,000 mg/kg
Silicon carbide	NOAEL, rat	2,000 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LD50, rabbit	2,009 mg/kg

**Inhalation:**

Excessive inhalation of vapors or mists can cause coughing, chest tightness and difficulty breathing. ATE-mix = 13.05 mg/l (mist).

Substance	Test	Result
m-Phenylenebis(methylamine)	LC50, rat, 4 h	1.3 mg/l (mist)

**Skin corrosion/irritation:**

May cause burns.

Substance	Test	Result
ARC I BX1 RC (Part B)	Corrositex®	Corrosive
m-Phenylenebis(methylamine)	Skin irritation, guinea pig	Corrosive

**Serious eye damage/irritation:**

Risk of serious damage to eyes.

**Respiratory or skin sensitisation:**

May cause an allergic skin reaction.

**Germ cell mutagenicity:**

m-Phenylenebis(methylamine), Aluminum oxide, Silicon carbide, N-(3-(trimethoxysilyl)propyl)ethylenediamine: 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:**

Ethanol, Aluminum oxide, Silicon carbide: not expected to cause toxicity. Other ingredients: data lacking.

**STOT – single exposure:**

Not expected to cause toxicity. Aluminum oxide, Silicon carbide: based on available data, the classification criteria are not met.

**STOT – repeated exposure:**

Aluminum oxide, Silicon carbide: based on available data, the classification criteria are not met. Other ingredients: data lacking.

**Aspiration hazard:**

Not expected to be an aspiration toxicant based on viscosity.

**Other information:**

None

**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 life with long lasting effects. Formaldehyde polymer with 1,3-benzenedimethanamine and phenol: 96 hr EC50, Rainbow trout = 0.76 mg/l (read-across). m-Phenylenebis(methylamine) is harmful to aquatic organisms [72 h EC50 (for algae): 12 mg/l].

**12.2. Persistence and degradability**

Unreacted components (Parts A and B), improperly released to the environment, can cause ground and water pollution. m-Phenylenebis(methylamine): biodegradation, OECD 301B (28 days) = 49%, not readily biodegradable. N-(3-(trimethoxysilyl)propyl)ethylenediamine: hydrolyzes in water or moist air, releasing methanol and organosilicons; biodegradation = 50% (OECD 301A, 28 days). Ethanol: readily biodegradable; oxidizes rapidly by photochemical reactions in air. Aluminum oxide, Silicon carbide: inorganic substances.

**12.3. Bioaccumulative potential**

m-Phenylenebis(methylamine): low potential for bioaccumulation (BCF < 100). N-(3-(trimethoxysilyl)propyl)ethylenediamine, Ethanol: bioconcentration in aquatic organisms is not expected to be significant.

**12.4. Mobility in soil**

Paste. Slightly soluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9).

**12.5. Endocrine disrupting properties**

None known

**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.

**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. (BENZENE-1,3-DIMETHANEAMINE (MXDA))  
**TDG:** AMINES, LIQUID, CORROSIVE, N.O.S. (BENZENE-1,3-DIMETHANEAMINE (MXDA))  
**US DOT:** AMINES, LIQUID, CORROSIVE, N.O.S. (BENZENE-1,3-DIMETHANEAMINE (MXDA))

**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:** 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:** 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 5 LITERS (49 CFR 173.154 (B,2) ERG NO. 153

**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:**

Flammable liquid  
 Skin corrosion  
 Skin sensitization

None

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](http://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
Flam. Liq. 4, H227	On basis of test data
Skin Corr. 1A, H314	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 2, H411	Calculation method

**Relevant H-statements:**

- H225: Highly flammable liquid and vapour.
- H227: Combustible liquid.
- H302: Harmful if swallowed.
- H314: Causes severe skin burns and eye damage.
- H317: May cause an allergic skin reaction.
- H318: Causes serious eye damage.
- H319: Causes serious eye irritation.
- H332: Harmful if inhaled.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.
- H411: Toxic to aquatic life with long lasting effects.
- H412: Harmful to aquatic life with long lasting effects.

**Hazard pictogram names:** Corrosion, exclamation mark, environment

**Further information:** None

**Date of last revision:** 20 August 2024

**Changes to the SDS in this revision:** Complete change to represent new formulation.

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.