SAFETY DATA SHEET

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

Revision date: 4 March 2025 **Date of previous issue:** 13 September 2021 **SDS No.** 348B-13

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

1.1. Product identifier

ARC BX5 (Part B)

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

Relevant identified uses: ARC Polymer Composite. When mixed with ARC BX5 (Part A), forms a hard abrasion resistant surface. Cures in 15 minutes for fast repairs.

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

Canada: A.W. Chesterton Company Ltd., 889 Fraser Drive,
Unit 105, Burlington, Ontario L7L 4X8 – Tel. 905-335-5055

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)
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 1B, H314
Serious eye damage, Category 1, H318
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.

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Precautionary statements:	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.
	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.
	P370/378	In case of fire: Use CO2, dry chemical, foam or water fog to extinguish.
	P391	Collect spillage.
	P403	Store in a well-ventilated place.
	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, it can only be categorized as a nuisance dust.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Hazardous Ingredients[1]	% Wt.	CAS No.	GHS Classification
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	10 - 15	57214-10-5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 (M-factor acute/chronic = 1)
m-Phenylenebis(methylamine) (Synonym: m-Xylene-alpha, alpha'-Diamine)	5 - 10	1477-55-0	Acute Tox. 4, H302, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412
Nitric acid, ammonium calcium salt	0.9 - 2	15245-12-2	Acute Tox. 4, H302 Eye Dam. 1, H318
Ethanol	0.9 - 2	64-17-5	Flam. Liq. 2, H225
N-(3-(trimethoxysilyl)propyl)ethylenediamine	0.1 - 0.9	1760-24-3	Acute Tox. 4, H332 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT RE 2, H373 (respiratory system, inhalation)
Other ingredients[1]:			
Aluminum oxide	50 - 60	1344-28-1	Not classified*
Silicon carbide	5 - 10	409-21-2	Not classified*

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

[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.

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: No action shall be taken involving any personal risk or without suitable training. Avoid contact with skin and eyes. See section 8.2.2 for recommendations on personal protective equipment.

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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 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 or water fog

Unsuitable extinguishing media: No information available

5.2. Special hazards arising from the substance or mixture

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

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

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

Australian HAZCHEM Emergency Action Code: 2 X

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. Avoid skin contact.

6.2. Environmental Precautions

No special requirements.

6.3. Methods and material for containment and cleaning up

Keep away from sources of ignition - No smoking. If removal of ignition sources is not possible, then flush material away with water. Cover minor spills with Sodium Bisulfite to neutralize and reduce vapors. 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

Remove contaminated clothing and wash before reuse. Contaminated leather including shoes cannot be decontaminated and should be discarded. Utilize exposure controls and personal protection as specified in Section 8.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry and well-ventilated area.

7.3. Specific end use(s)

No special precautions.

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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/m³	ppm	mg/m³	ppm	mg/m³
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	0.018 (Ceiling)	(skin)	N/A	0.1 (Peak)
Nitric acid, ammonium calcium salt	N/A	N/A	N/A	N/A	N/A	N/A
Ethanol	1,000	1,900	1,000	(STEL)	1,000	1,880
N-(3-(trimethoxysilyl)propyl)ethylenediamine	N/A	N/A	N/A	N/A	N/A	N/A
Aluminum oxide	(total) (resp.)	15 5	(resp.)	1	N/A	10
Silicon carbide	(total) (resp.)	15 5	(inhal.) (resp.)	10 3	N/A	10

[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 limits. If necessary, provide local exhaust.

8.2.2. Individual protection measures

Respiratory protection: Not normally needed. If exposure limits are exceeded, use a self-contained breathing apparatus (SCBA), supplied air respirator (SAR) or air-purifying respirator (APR) with a suitable filter (e.g., EN filter type A-P2).

Protective gloves: Chemical resistant gloves (e.g., butyl rubber or 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	gritty paste	**pH**	not applicable
Colour	red	**Kinematic viscosity**	22,000 cSt @ 25°C
Odour	amine	**Solubility in water**	insoluble
Odour threshold	not determined	**Partition coefficient n-octanol/water (log value)**	not applicable
Boiling point or range	not determined	**Vapour pressure @ 20°C**	not determined
Melting point/freezing point	not applicable	**Density and/or relative density**	2.25 kg/l
% Volatile (by volume)	none	**Weight per volume**	18.71 lbs/gal.
Flammability	not determined	**Vapour density (air=1)**	> 1
Lower/upper flammability or explosion limits	not applicable	**Rate of evaporation (ether=1)**	< 1
Flash point	> 77°C (> 170°F)	**% Aromatics by weight**	none
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

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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Refer to sections 10.3 and 10.5.

10.2. Chemical stability

Stable under normal conditions.

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, 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 skin or lung allergies may be aggravated by exposure.

Acute toxicity -

Oral: ATE-mix = 8,223.8 mg/kg.

Substance	Test	Result
m-Phenylenebis(methylamine)	LD50, rat	930 mg/kg
Ethanol	LD50, rat	6,200 mg/kg
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	LD50, rat	> 2,000 mg/kg
Nitric acid, ammonium calcium salt	cATpE	500 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LD50, rat	2,413 mg/kg

Dermal:

Substance	Test	Result
m-Phenylenebis(methylamine)	LD50, rabbit	> 2,000 mg/kg
Ethanol	LDLo, rabbit	20,000 mg/kg
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	LD50, rabbit	> 2,020 mg/kg
Nitric acid, ammonium calcium salt	LD50, rat	> 2,000 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LD50, rabbit	> 2,000 mg/kg

Inhalation: Excessive inhalation of vapors can cause coughing, chest tightness and difficulty breathing. ATE-mix, 15.77 mg/l (mist).

Substance	Test	Result
m-Phenylenebis(methylamine)	LC50, rat, 4 hours	1.34 mg/l (mist, analytical)
m-Phenylenebis(methylamine)	LC50, rat, 4 hours	95.6 mg/l
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LC50, rat, 4 hours	> 1.49 mg/l (mist)

Skin corrosion/irritation: Causes burns.

Substance	Test	Result
m-Phenylenebis(methylamine)	Skin irritation, guinea pig	Corrosive

Serious eye damage/ irritation: Causes serious eye damage.

Respiratory or skin sensitisation: May cause an allergic skin reaction.

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Germ cell mutagenicity:	Formaldehyde polymer with 1,3-benzenedimethanamine and phenol: no data available. m-Phenylenebis(methylamine), Nitric acid, ammonium calcium salt, Ethanol, 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:	Formaldehyde polymer with 1,3-benzenedimethanamine and phenol: no data available. m-Phenylenebis(methylamine), Nitric acid, ammonium calcium salt, effects on or via lactation: data lacking. Ethanol: based on available data, the classification criteria are not met.
STOT – single exposure:	Data lacking. Excessive inhalation of vapors or mists can cause coughing, chest tightness and difficulty breathing.
STOT – repeated exposure:	No data available
Aspiration hazard:	Not classified as an aspiration toxicant.
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. Ethanol: readily biodegradable; oxidizes rapidly by photochemical reactions in air.

12.3. Bioaccumulative potential

Ethanol: log Kow = 0.31; not expected to bioaccumulate in aquatic organisms. m-Phenylenebis(methylamine): low potential for bioaccumulation (BCF < 100). N-(3-(trimethoxysilyl)propyl)ethylenediamine: bioconcentration in aquatic organisms is not expected to be significant.

12.4. Mobility in soil

Viscous paste. Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). m-Phenylenebis(methylamine), log Kow (QSAR): 3.11.

12.5. Endocrine disrupting properties

None known

12.6. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Combine resin and curative. The final cured material is considered nonhazardous. Landfill sealed containers with a properly licensed facility. Unreacted components are a special waste. 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:	UN3082
TDG:	UN3082
US DOT:	UN3082

14.2. UN proper shipping name

ADG/ADR/RID/ADN/IMDG/ICAO:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FORMALDEHYDE POLYMER WITH 1,3-BENZENEDIMETHANAMINE AND PHENOL)
TDG:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FORMALDEHYDE POLYMER WITH 1,3-BENZENEDIMETHANAMINE AND PHENOL)
US DOT:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FORMALDEHYDE POLYMER WITH 1,3-BENZENEDIMETHANAMINE AND PHENOL)

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14.3. Transport hazard class(es)

ADG/ADR/RID/ADN/IMDG/ICAO: 9
TDG: 9
US DOT: 9

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: ERG NO.171,
MAY BE SHIPPED AS NON-RESTRICTED IN NON-BULK PACKAGINGS (119 GALLONS OR LESS) BY MOTOR VEHICLE, RAIL CAR OR AIRCRAFT.
(49 CFR 171.4(C))
IMDG: EMS. F-A, S-F
MAY BE SHIPPED AS NON-RESTRICTED IN SINGLE OR COMBINATION PACKAGINGS CONTAINING A NET QUANTITY PER SINGLE OR INNER PACKAGING OF 5 L OR LESS. (IMDG CODE AMENDMENT 37-14, 2.10.2.7)
ICAO/IATA: MAY BE SHIPPED AS NON-RESTRICTED IN SINGLE OR COMBINATION PACKAGINGS CONTAINING A NET QUANTITY PER SINGLE OR INNER PACKAGING OF 5 L OR LESS.(IATA DANGEROUS GOODS REGULATION 56TH EDITION, 4.4 SPECIAL PROVISIONS A197)
ADR: CLASSIFICATION CODE M6, TRANSPORT CATEGORY 3, TUNNEL RESTRICTION CODE (-)
MAY BE SHIPPED AS NON-RESTRICTED IN SINGLE OR COMBINATION PACKAGINGS CONTAINING A NET QUANTITY PER SINGLE OR INNER PACKAGING OF 5 L OR LESS. (ADR 2015 VOLUME 1, CHAPTER 3.3 SPECIAL PROVISIONS 375)
ADG HAZCHEM CODE: ●3Z **HIN:** 90

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 Serious eye damage Skin irritation Skin sensitization	None

TSCA: All chemical components are listed or exempted.

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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
Flam. Liq. 4, H227	On basis of test data
Skin Corr. 1B, H314	Calculation method
Eye Dam. 1, H318	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.
H332: Harmful if inhaled.
H373: May cause damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.
H410: Very 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: 4 March 2025

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

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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.

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