SAFETY DATA SHEET

in accordance with REACH (1907/2006/EC, as amended by 2015/830/EU) 29 CFR 1910.1200 and WHMIS 2015

Revision date: 26 June 2018 **Initial date of issue:** 13 January 2017 **SDS No.** 468A-1

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

1.1. Product identifier

ARC BX2 (Part A) (GY, RD), ARC BX5 (MX5) (Part A) (GY, RD)

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

ARC Polymer Composite. Abrasion resistant two component coating, mixed and applied with a trowel.

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

Canada: A.W. Chesterton Company Ltd., 889 Fraser Drive,
Unit 105, Burlington, Ontario L7L 4X8 – Tel. 905-335-5055
EU: Chesterton International GmbH, Am Lenzenfleck 23,
D85737 Ismaning, Germany – Tel. +49-89-996-5460

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 Regulation (EC) No 1272/2008 [CLP]

Skin irritation, Category 2, H315
Skin sensitization, Category 1, H317
Serious eye irritation, Category 2, H319
Hazardous to the aquatic environment, Chronic, Category 3, H412

2.1.2. Classification according to 29 CFR 1910.1200 / WHMIS 2015

Same as section 2.1.1.

2.1.3. Australian statement of hazardous nature

Hazardous according to criteria of Safe Work Australia.

2.1.4. Additional information

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

2.2. Label elements

2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms:

Signal word: Warning

Hazard statements:	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H412	Harmful to aquatic life with long lasting effects.
Precautionary statements:	P264	Wash hands thoroughly after handling.
	P273	Avoid release to the environment.
	P280	Wear protective gloves and eye/face protection.
	P302/352	IF ON SKIN: Wash with plenty of soap and water.
	P333/313	If skin irritation or rash occurs: Get medical advice/attention.
	P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337/313	If eye irritation persists: Get medical advice/attention.
	P362/364	Take off contaminated clothing and wash it before reuse.
Supplemental information:	None	

2.2.2. Labelling according to 29 CFR 1910.1200 / WHMIS 2015

Hazard pictograms:	Same as section 2.2.1.	
Signal word:	Same as section 2.2.1.	
Hazard statements:	Same as section 2.2.1.	
Precautionary statements:	P264	Wash hands thoroughly after handling.
	P272	Contaminated work clothing must not be allowed out of the workplace.
	P273	Avoid release to the environment.
	P280	Wear protective gloves and eye/face protection.
	P302/352	IF ON SKIN: Wash with plenty of soap and water.
	P333/313	If skin irritation or rash occurs: Get medical advice/attention.
	P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337/313	If eye irritation persists: Get medical advice/attention.
	P362/364	Take off contaminated clothing and wash it before reuse.
	P501	Dispose of contents/container to an approved waste disposal plant.

Supplemental information:

2.3. Other hazards

If vapors are produced, they will irritate the respiratory tract and cause coughing and labored breathing. The safety and health hazards are detailed separately for Part A and Part B. The final cured material is considered nonhazardous.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Hazardous Ingredients[1]	**% Wt.**	**CAS No./ EC No.**	**REACH Reg. No.**	**CLP/GHS Classification**
Epoxy resin (number average molecular weight <= 700)	10-17	25068-38-6 500-033-5	NA	Eye Irrit. 2, H319** Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411
		and		
	3-7	9003-36-5* 500-006-8		
Benzyl alcohol	1-5	100-51-6 202-859-9	NA	Acute Tox. 4, H302/332 Eye Irrit. 2, H319
Other ingredients:				
Aluminum oxide	15-40	1302-74-5 215-691-6	NA	Not classified***
Silicon carbide	3-7	409-21-2 206-991-8	NA	Not classified***
Iron oxide	0-5	1309-37-1 215-168-2	NA	Not classified***
Titanium dioxide	0.1-0.9	13463-67-7 236-675-5	01-211948 9379-17	Not classified***

*Alternative CAS No: 28064-14-4. **Applies to CAS no. 25068-38-6 only.
***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)
- 1272/2008/EC, GHS, REACH
- WHMIS 2015
- Safe Work Australia

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: Remove contaminated clothing. Wash clothing before reuse. Wash skin with soap and water. Consult physician.

Eye contact: Flush eyes for at least 15 minutes with large amounts of water. Contact physician if irritation persists.

Ingestion: Do not induce vomiting. 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 for recommendations on personal protective equipment.

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

Moderate eye and skin irritant. May cause skin sensitization as evidenced by rashes or hives. If vapors are produced, they will irritate the respiratory tract and cause coughing and labored breathing.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptoms.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Carbon dioxide, dry chemical, foam or water fog

Unsuitable extinguishing media: None known

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: –

HAZCHEM Emergency Action Code: 2 Z

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid skin contact. 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 skin contact. 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. 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]		UK WEL[3]		AUSTRALIA ES[4]	
	ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
Epoxy resin (number average molecular weight <= 700)	–	–	–	–	–	–	–	–
Benzyl alcohol	–	–	–	–	–	–	–	–
Aluminum oxide	(total) (resp.)	15 5	(resp.)	1	(inhal.) (resp.)	10 4	–	10
Silicon carbide	(total) (resp.)	15 5	(inhal.) (resp.)	10 3	(inhal.) (resp.)	10 4	–	10
Iron oxide	(fume)	10	(resp.)	5	(fume, as Fe)	5	(fume, as Fe)	5
Titanium dioxide	(total)	15	–	10	(inhal.) (resp.)	10 4	–	10

[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]

Derived No Effect Level (DNEL) according to Regulation (EC) No 1907/2006:

Workers

Substance	Route of exposure	Potential health effects	DNEL
Epoxy resin (CAS no. 9003-36-5)	Inhalation	Acute effects, local / Acute effects, systemic	no data available
		Chronic effects, local	no data available
		Chronic effects, systemic	29.39 mg/m^3
	Dermal	Acute effects, local	0.0083 mg/cm^2
		Acute effects, systemic / Chronic effects, local	no data available
		Chronic effects, systemic	104.15 mg/kg/day
Benzyl alcohol	Inhalation	Acute effects, local / Chronic effects, local	no data available
		Acute effects, systemic	110 mg/m^3
		Chronic effects, systemic	22 mg/m^3
	Dermal	Acute effects, local / Chronic effects, local	no data available
		Acute effects, systemic	40 mg/kg/day
		Chronic effects, systemic	8 mg/kg/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No 1907/2006:

Substance	Environmental protection target	PNEC
Epoxy resin (CAS no. 9003-36-5)	Fresh water	0.003 mg/l
	Marine water	0.0003 mg/l
	Water, intermittent release	0.0254 mg/l
	Microorganisms in sewage treatment	10 mg/l
	Freshwater sediments	0.294 mg/kg
	Marine sediments	0.0294 mg/kg
	Soil (agricultural)	0.237 mg/kg
Benzyl alcohol	Fresh water	1 mg/l
	Marine water	0.1 mg/l
	Water, intermittent release	2.3 mg/l
	Freshwater sediments	5.27 mg/kg
	Marine sediments	0.527 mg/kg
	Microorganisms in sewage treatment	39 mg/l
	Soil (agricultural)	0.456 mg/kg/day
	Food chain	No hazard identified

8.2. Exposure controls

8.2.1. Engineering measures

No special requirements. 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. If exposure limits are exceeded, use a half or full-face respirator with combined dust/organic vapour filter (e.g., EN filter type A-P2).

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

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	**Odour**	sweet
Colour	blue or red	**Odour threshold**	not determined
Initial boiling point	not determined	**Vapour pressure @ 20°C**	< 0.1 mm Hg
Melting point	not determined	**% Aromatics by weight**	none
% Volatile (by volume)	none	**pH**	not applicable
Flash point	> 102°C (> 216°F)	**Relative density**	2.2 kg/l
Method	PM Closed Cup	**Weight per volume**	18.3 lbs/gal.
Viscosity	450K cps @ 25°C	**Coefficient (water/oil)**	< 1
Autoignition temperature	not applicable	**Vapour density (air=1)**	> 1
Decomposition temperature	not determined	**Rate of evaporation (ether=1)**	< 1
Upper/lower flammability or explosive limits	not applicable	**Solubility in water**	insoluble
Flammability (solid, gas)	not applicable	**Oxidising properties**	not applicable
Explosive 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

No dangerous reactions known under conditions of normal use.

10.4. Conditions to avoid

None

10.5. Incompatible materials

Strong mineral acids and bases and strong oxidizers like liquid Chlorine and concentrated Oxygen.

10.6. Hazardous decomposition products

Carbon Monoxide, aldehydes, acids 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 skin and eye disorders and skin allergies may be aggravated by exposure.

Acute toxicity -

Oral: Based on available data on components, the classification criteria are not met. ATE-mix: 70,690 mg/kg.

Substance	Test	Result
Epoxy resin	LD50, oral, rat	> 5,000 mg/kg
Benzyl alcohol	LD50, oral, rat	1,230 mg/kg

Dermal: Based on available data on components, the classification criteria are not met.

Substance	Test	Result
Epoxy resin	LD50, dermal, rabbit	> 2,000 mg/kg
Benzyl alcohol	LD50, dermal, rabbit	2,000 mg/kg

Inhalation: Based on available data on components, the classification criteria are not met. ATE-mix > 240.1 mg/l (mist). ATE-mix, 632.2 mg/l (vapor).

Substance	Test	Result
Benzyl alcohol	LC50, rat, 4 hours	8.8 mg/l (vapor)
Benzyl alcohol	LC50, rat, 4 hours	> 4.178 mg/l (mist)

Skin corrosion/irritation: Causes skin irritation.

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	Skin irritation, rabbit	Moderate irritation

Serious eye damage/ irritation: Causes serious eye irritation.

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	Eye irritation	Moderate irritation

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

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	Skin sensitization, guinea pig	Sensitizing

Germ cell mutagenicity: Epoxy resin (number average molecular weight <= 700), Aluminum oxide, Silicon carbide: based on available data, the classification criteria are not met.

Carcinogenicity: Based on recent 2-year mice skin painting studies and other available information, the International Agency for Research on Cancer (IARC) concluded that they did not have enough information to classify Epoxy resin (number average molecular weight <= 700, CAS no. 25068-38-6). IARC has designated inhaled titanium dioxide as possibly carcinogenic to humans (group 2B).

Reproductive toxicity: Epoxy resin (number average molecular weight <= 700), Aluminum oxide, Silicon carbide: based on available data, the classification criteria are not met.

STOT – single exposure: Epoxy resin (number average molecular weight <= 700), Aluminum oxide, Silicon carbide: based on available data, the classification criteria are not met.

STOT – repeated exposure: Epoxy resin (number average molecular weight <= 700), Aluminum oxide, 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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Epoxy resin (number average molecular weight <= 700): moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/l in the most sensitive species.); chronic NOEC, 21 days, Daphnia magna (OECD 211) = 0.3 mg/l.

12.2. Persistence and degradability

Epoxy resin: not readily biodegradable. Benzyl alcohol: expected to biodegrade relatively quickly.

12.3. Bioaccumulative potential

Epoxy resin: Octanol/water partition coefficient (log Kow) = 2.64 – 3.78, low potential for bioaccumulation. Benzyl alcohol: low potential for bioaccumulation (BCF < 100).

12.4. Mobility in soil

Paste. Insoluble in water. Epoxy resin: if product enters soil, it will be mobile and may contaminate groundwater (log Koc ≤ 3.65). In determining environmental mobility, consider the product's physical and chemical properties (see Section 9).

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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. May be incinerated at an appropriate facility. Unreacted components are a special waste (classified as hazardous according to 2008/98/EC). Check local, state and national/federal regulations and comply with the most stringent requirement.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

ADR/RID/ADN/IMDG/ICAO:	NOT APPLICABLE
TDG:	NOT APPLICABLE
US DOT:	NOT APPLICABLE

14.2. UN proper shipping name

ADR/RID/ADN/IMDG/ICAO:	NON-HAZARDOUS, NON REGULATED
TDG:	NON-HAZARDOUS, NON REGULATED
US DOT:	NON-HAZARDOUS, NON REGULATED

14.3. Transport hazard class(es)

ADR/RID/ADN/IMDG/ICAO:	NOT APPLICABLE
TDG:	NOT APPLICABLE
US DOT:	NOT APPLICABLE

14.4. Packing group

ADR/RID/ADN/IMDG/ICAO:	NOT APPLICABLE
TDG:	NOT APPLICABLE
US DOT:	NOT APPLICABLE

14.5. Environmental hazards

NOT APPLICABLE

14.6. Special precautions for user

NOT APPLICABLE

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

NOT APPLICABLE

14.8. Other information

NOT APPLICABLE

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:	**313 Chemicals:**
See section 2.1	None

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
cATpE: Converted Acute Toxicity point Estimate
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
NOEC: No Observed Effect Concentration
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)
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
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 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)
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 [CLP]:

Classification	Classification procedure
Skin Irrit. 2, H315	Calculation method
Skin Sens. 1, H317	Bridging principle "Dilution"
Eye Irrit. 2, H319	Calculation method
Aquatic Chronic 3, H412	Calculation method

Relevant H-statements:

H302: Harmful if swallowed.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H411: Toxic to aquatic life with long lasting effects.
H412: Harmful to aquatic life with long lasting effects.

Hazard pictogram names: Exclamation mark

Changes to the SDS in this revision: Sections 1.1, 2.1, 2.2, 3, 4.1, 8.1, 8.2.2, 9.1, 11, 13, 15.1.2.

Date of last revision: 26 June 2018

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.