

**SAFETY DATA SHEET**

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

**Revision date:** 30 April 2021      **Date of previous issue:** 5 March 2019      **SDS No.** 471C-1

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

**1.1. Product identifier**

ARC EG-1 (Part C) (GY, RD)

**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.

**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](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 2015 / Safe Work Australia / GHS**

Carcinogenicity, Category 1A, H350i  
Specific target organ toxicity – repeated exposure, Category 1, H372 (lungs, kidneys, inhalation)

**2.1.2. Australian statement of hazardous nature**

Hazardous according to criteria of Safe Work Australia.

**2.1.3. 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:**

H350i  
H372

May cause cancer by inhalation.  
Causes damage to the lungs and kidneys through prolonged or repeated exposure by inhalation.

<b>Precautionary statements:</b>	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P260	Do not breathe dust.
	P264	Wash hands thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P280	Wear eye protection.
	P308/313	IF exposed or concerned: Get medical advice/attention.
	P405	Store locked up.
	P501	Dispose of contents in accordance with local, regional and national regulations.

**Supplemental information:** None

### 2.3. Other hazards

The safety and health hazards are detailed separately by part. The final cured material is considered nonhazardous. Upon machining, refer to the precautions in the safety data sheets for Part A, Part B and Part C.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

Hazardous Ingredients <sup>1</sup>	% Wt.	CAS No.
Silica (Quartz)	98 - <100	14808-60-7
Other ingredients:		
Aluminum oxide	<1.1	1344-28-1

\*Substance with a workplace exposure limit.

<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 2015, Safe Work Australia, GHS

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

**Inhalation:** If exposed or concerned: Get medical advice/attention.

**Skin contact:** Not applicable

**Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Contact physician if irritation persists.

**Ingestion:** Not applicable

**Protection of first-aiders:** No action shall be taken involving any personal risk or without suitable training. Do not breathe dust. See section 8.2.2 for recommendations on personal protective equipment.

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

Dry chronic cough, sputum production, shortness of breath, wheezing and reduced pulmonary function.

### 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:** Not combustible. Use extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media:** None known

### 5.2. Special hazards arising from the substance or mixture

None

### 5.3. Advice for firefighters

Wear respiratory protection where airborne dust occurs.

**Australian HAZCHEM Emergency Action Code:** 2 Z

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Avoid creating dust. Utilize exposure controls and personal protection as specified in Section 8.

**6.2. Environmental Precautions**

No special requirements.

**6.3. Methods and material for containment and cleaning up**

Dust shall be HEPA vacuumed or wet swept.

**6.4. Reference to other sections**

Refer to section 13 for disposal advice.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Do not breathe dust. Avoid airborne dust generation. Utilize exposure controls and personal protection as specified in Section 8. Respirable crystalline silica dust may be invisible in the air. Use normal precautions against bag breakage or spills of bulk material. Remove contaminated clothing and wash before reuse. Wash hands thoroughly after handling.

**7.2. Conditions for safe storage, including any incompatibilities**

Keep containers closed. Store in a cool, dry area. Use good housekeeping in storage and use areas to prevent accumulation of dust in work areas. Quartz is incompatible with strong oxidizers such as hydrofluoric acid, fluorine, chlorine trifluoride or oxygen difluoride.

**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>
Silica (Quartz)	(resp.)	0.05	(resp.)	0.025	(resp.)	0.05
	(total)	30/(%SiO <sub>2</sub> +2)				
Aluminum oxide	N/A	15	(resp.)	1	(inhal.)	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**

Avoid airborne dust generation. Use process enclosures and appropriate exhaust ventilation at places where airborne dust is generated, including during loading and unloading. Apply organizational measures, e.g. by isolating personnel from dusty areas.

**8.2.2. Individual protection measures**

**Respiratory protection:** If exposure limits are exceeded, use an approved particulate dust respirator.

**Protective gloves:** Appropriate hand protection (e.g. gloves, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin.

**Eye and face protection:** Safety glasses

**Other:** None

**8.2.3. Environmental exposure controls**

Avoid wind dispersal.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

<b>Physical state</b>	powder	<b>Odour</b>	none
<b>Colour</b>	gray or red	<b>Odour threshold</b>	not applicable
<b>Initial boiling point</b>	2230°C (4046°F)	<b>Vapour pressure @ 20°C</b>	not determined
<b>Melting point</b>	1710°C (3110°F)	<b>% Aromatics by weight</b>	not determined
<b>% Volatile (by volume)</b>	none	<b>pH</b>	not applicable
<b>Flash point</b>	not applicable	<b>Relative density</b>	2.65 kg/l
<b>Method</b>	PM Closed Cup	<b>Weight per volume</b>	22.04 lbs/gal.
<b>Viscosity</b>	not applicable	<b>Coefficient (water/oil)</b>	< 1
<b>Autoignition temperature</b>	not applicable	<b>Vapour density (air=1)</b>	> 1
<b>Decomposition temperature</b>	not applicable	<b>Rate of evaporation (ether=1)</b>	< 1
<b>Upper/lower flammability or explosive limits</b>	not applicable	<b>Solubility in water</b>	insoluble
<b>Flammability (solid, gas)</b>	not applicable	<b>Oxidising properties</b>	not applicable
<b>Explosive properties</b>	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 oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide and oxygen difluoride, may cause fire.

**10.6. Hazardous decomposition products**

None

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

**Primary route of exposure under normal use:** Inhalation. Personnel with pre-existing chronic respiratory impairments are generally aggravated by exposure.

**Acute toxicity -****Oral:**

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

Substance	Test	Result
Silica (Quartz)	LD50, rat	> 22,500 mg/kg
Aluminum oxide	LD50, rat	> 5,000 mg/kg

**Dermal:**

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

**Inhalation:**

Not expected to be acutely toxic, based on data from similar materials.

**Skin corrosion/irritation:**

Not irritating (OECD 404).

**Serious eye damage/irritation:**

Not irritating (OECD 405).

**Respiratory or skin sensitisation:**

No known significant effects.

<b>Germ cell mutagenicity:</b>	Quartz has a genotoxic and mutagenic effect mainly through its inflammatory effects. Respirable quartz was unable to cause increased HPRT mutations in rat lung epithelial cells in vitro.
<b>Carcinogenicity:</b>	The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have classified inhaled silica as a human carcinogen.
<b>Reproductive toxicity:</b>	Not expected to be a reproductive toxicant.
<b>STOT – single exposure:</b>	Inconclusive data.
<b>STOT – repeated exposure:</b>	Repeated inhalation of respirable free silica may cause scarring of the lungs with cough and shortness of breath. Silicosis, a delayed lung injury that is a disabling, progressive and sometimes fatal pulmonary fibrosis, may result. There is substantial evidence suggesting an association between exposure to inhaled respirable crystalline silica and increased risks of renal (kidney) and systemic autoimmune disease (scleroderma, rheumatoid arthritis and systemic lupus erythematosus).
<b>Aspiration hazard:</b>	Not expected to be an aspiration toxicant.
<b>Other information:</b>	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**

This product is expected to exhibit low toxicity to aquatic and soil organisms.

**12.2. Persistence and degradability**

Inorganic substance, exists in nature.

**12.3. Bioaccumulative potential**

Does not bioaccumulate.

**12.4. Mobility in soil**

Expected to be immobile in soil.

**12.5. Other adverse effects**

None known

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods**

Unused product is not a regulated hazardous waste. 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:** NOT APPLICABLE

**TDG:** NOT APPLICABLE

**US DOT:** NOT APPLICABLE

**14.2. UN proper shipping name**

**ADG/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)**

**ADG/ADR/RID/ADN/IMDG/ICAO:** NOT APPLICABLE

**TDG:** NOT APPLICABLE

**US DOT:** NOT APPLICABLE

**14.4. Packing group**

**ADG/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. Maritime transport in bulk according to IMO instruments**

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. National regulations****US EPA SARA TITLE III****312 Hazards:**

Carcinogenicity  
Specific target organ toxicity – repeated exposure

**Chemicals subject to reporting requirements of Section 313 of EPCRA and of 40 CFR 372:**

None

**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
Carc. 1A, H350i	Calculation method
STOT RE 1, H372	Calculation method

**Relevant H-statements:** H350i: May cause cancer by inhalation.  
H372: Causes damage to organs through prolonged or repeated exposure.

**Hazard pictogram names:** Health hazard

**Further information:** None

**Date of last revision:** 30 April 2021

**Changes to the SDS in this revision:** Sections 1.1, 2.1, 2.2, 8.1, 9.1, 11.

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.