

**SAFETY DATA SHEET**

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

**Revision date:** 24 September 2020      **Initial date of issue:** 12 July 2007      **SDS No.** 277-12b

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

**1.1. Product identifier**

ARC 5ES

**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. The product is used as a fast cure patching material that applies like putty.

**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): [ProductMSDSs@chesterton.com](mailto:ProductMSDSs@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  
EU: Chesterton International GmbH, Am Lenzenfleck 23,  
D85737 Ismaning, Germany – Tel. +49-89-996-5460

**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] / 29 CFR 1910.1200 / WHMIS 2015 / GHS**

Skin Irrit. 2, H315  
Skin Sens. 1, H317  
Eye Irrit. 2, H319  
Aquatic Chronic 3, H412

**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. The final cured material is considered nonhazardous.

**2.2. Label elements**

**Labelling according to Regulation (EC) No 1272/2008 [CLP] / 29 CFR 1910.1200 / WHMIS 2015 / GHS**

**Hazard pictograms:**



**Signal word:**

Warning

|                                  |              |  |
|----------------------------------|--------------|--|
| <b>Hazard statements:</b>        | 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.   |
| <b>Precautionary statements:</b> | 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.  |
|                                  | P362/364     | Take off contaminated clothing and wash it before reuse.   |
|                                  | 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.  |
|                                  | P501         | Dispose of contents/container to an approved waste disposal plant.   |

**Supplemental information:** None

### 2.3. Other hazards

None known

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

| Hazardous Ingredients <sup>1</sup>                   | % Wt.   | CAS No./<br>EC No.      | REACH<br>Reg. No. | CLP/GHS Classification   |
|--|---------|-------------------------|-------------------|--|
| Epoxy resin (number average molecular weight <= 700) | 10-< 25 | 25068-38-6<br>500-033-5 | NA                | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Eye Irrit. 2, H319<br>Aquatic Chronic 2, H411 |

Other ingredients:

|                        |       |                         |    |                 |
|------------------------|-------|-------------------------|----|-----------------|
| Talc (non-asbestiform) | 30-60 | 14807-96-6<br>238-877-9 | NA | Not classified* |
| Silica (Quartz)        | 0.1-1 | 14808-60-7<br>238-878-4 | NA | Not classified* |
| Carbon black           | < 1   | 1333-86-4<br>215-609-9  | NA | 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), California Proposition 65  
\* 1272/2008/EC, GHS, REACH  
\* WHMIS 2015  
\* Safe Work Australia

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|                      |  |
|----------------------|--|
| <b>Inhalation:</b>   | Not applicable   |
| <b>Skin contact:</b> | Remove contaminated clothing. Wash clothing before reuse. Wash skin with soap and water. Consult physician.  |
| <b>Eye contact:</b>  | Flush eyes for at least 15 minutes with large amounts of water. Contact physician if irritation persists.  |
| <b>Ingestion:</b>    | Do not induce vomiting. If person is conscious, rinse mouth with water and give small quantities of water to drink. Contact physician immediately. |

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

Irritating to eyes and skin. May cause skin sensitization as evidenced by rashes or hives.

### 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**

Thermal decomposition may produce Carbon Monoxide, Carbon Dioxide, oxides of Sulfur and other toxic fumes.

**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 eye contact and excessive skin contact. Wash with soap and water immediately after use. Remove contaminated clothing immediately. Wash clothing before reuse. Contaminated leather including shoes cannot be decontaminated and should be discarded. Utilize exposure controls and personal protection as specified in Section 8. 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 <sup>1</sup> |                   | ACGIH TLV <sup>2</sup> |                   | UK WEL <sup>3</sup> |                   | AUSTRALIA ES <sup>4</sup> |                   |
|--|-----------------------|-------------------|------------------------|-------------------|---------------------|-------------------|---------------------------|-------------------|
|  | ppm                   | mg/m <sup>3</sup> | ppm                    | mg/m <sup>3</sup> | ppm                 | mg/m <sup>3</sup> | ppm                       | mg/m <sup>3</sup> |
| Epoxy resin (number average molecular weight <= 700) | –                     | –                 | –                      | –                 | –                   | –                 | –                         | –                 |
| Talc   | 20<br>mppcf           | –                 | (resp)                 | 2                 | (resp)              | 1                 | (resp)                    | 2.5               |
| Silica (Quartz) non-respirable                       | (resp)                | 0.05              | (resp)                 | 0.025             | (resp)              | 0.1               | (resp)                    | 0.1               |
| Carbon black   | –                     | 3.5               | –                      | 3                 | –                   | 3.5               | –                         | 3                 |

<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> EH40 Workplace exposure limits, Health & Safety Executive

<sup>4</sup> 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:**

Not available

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

Not available

**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.

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

**Eye and face protection:** Safety glasses

**Other:** None

**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>                               | putty                  | <b>Odour</b>                         | sweet and amine odor |
| <b>Colour</b>                                       | gray and black         | <b>Odour threshold</b>               | not determined       |
| <b>Initial boiling point</b>                        | not applicable         | <b>Vapour pressure @ 20°C</b>        | 0                    |
| <b>Melting point</b>                                | not determined         | <b>% Aromatics by weight</b>         | 0                    |
| <b>% Volatile (by volume)</b>                       | < 1                    | <b>pH</b>                            | not applicable       |
| <b>Flash point</b>                                  | None                   | <b>Relative density</b>              | 2.247 kg/l           |
| <b>Method</b>                                       | PM Closed Cup          | <b>Weight per volume</b>             | 18.75 lbs/gal.       |
| <b>Viscosity</b>                                    | > 10 million cps @25°C | <b>Coefficient (water/oil)</b>       | < 1                  |
| <b>Autoignition temperature</b>                     | not determined         | <b>Vapour density (air=1)</b>        | > 1                  |
| <b>Decomposition temperature</b>                    | > 200°C (> 392°F)      | <b>Rate of evaporation (ether=1)</b> | < 1                  |
| <b>Upper/lower flammability or explosive limits</b> | not determined         | <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**

No specific data.

**10.5. Incompatible materials**

No specific data.

**10.6. Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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

**Primary route of exposure under normal use:** Skin and eye contact. Personnel with pre-existing skin and eye disorders and skin allergies may be aggravated by exposure.

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

| Substance  | Test      | Result       |
|--|-----------|--------------|
| Epoxy resin (number average molecular weight <= 700) | LD50, rat | > 5000 mg/kg |

**Dermal:**

| Substance  | Test         | Result       |
|--|--------------|--------------|
| Epoxy resin (number average molecular weight <= 700) | LD50, rabbit | > 6000 mg/kg |

**Inhalation:**

| Substance  | Test           | Result                                 |
|--|----------------|--|
| Epoxy resin (number average molecular weight <= 700) | LC50, rat, 5 h | No mortality at vapor saturation level |

**Skin corrosion/irritation:** Irritating to skin.

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

**Serious eye damage/irritation:**

Irritating to eyes.

| Substance  | Test                   | Result                                |
|--|------------------------|---------------------------------------|
| Epoxy resin (number average molecular weight <= 700) | Eye irritation, rabbit | Mild irritation / Moderate irritation |

**Respiratory or skin sensitisation:**

May cause skin sensitization as evidenced by rashes or hives.

| 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): based on available data, the classification criteria are not met.

**Carcinogenicity:**

The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have classified inhaled silica as a human carcinogen. IARC has designated carbon black as possibly carcinogenic to humans (group 2B). The silica and carbon black in this product do not separate from the mixture or in of themselves become airborne, therefore, do not present a hazard in normal use. Epoxy resin (number average molecular weight <= 700): based on available data, the classification criteria are not met.

**Reproductive toxicity:**

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

**STOT-single exposure:**

Not expected to cause toxicity.

**STOT-repeated exposure:**

Repeated or prolonged inhalation of Talc dust may cause chronic cough, shortness of breath, scarring of the lungs (pulmonary fibrosis) and mild symptomatic pneumoconiosis. 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. The silica and talc in this product do not separate from the mixture or in of themselves become airborne, therefore, do not present a hazard in normal use. Epoxy resin (number average molecular weight <= 700): not expected to cause toxicity.

**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.

**12.2. Persistence and degradability**

Epoxy resin: not readily biodegradable (OECD 301F, 28 days = 5%).

**12.3. Bioaccumulative potential**

Epoxy resin: low potential for bioaccumulation. (log Kow = 2.64 – 3.78, BCF = 31).

**12.4. Mobility in soil**

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

**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 (classified as hazardous according to 2008/98/EC). 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**

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:**

Immediate

**313 Chemicals:**

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](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)  
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] / GHS:**

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

**Relevant H-statements:** H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H319: Causes serious eye irritation.  
H411: Toxic to aquatic life with long lasting effects.

**Hazard pictogram names:** Exclamation mark

**Changes to the SDS in this revision:** Section 2.1.

**Date of last revision:** 24 September 2020

**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.