

SAFETY DATA SHEET

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

Revision date: 7 February 2023

Date of previous issue: 26 August 2022

SDS No. 476A-2

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

1.1. Product identifier

ARC SL-E (Part A) (LTGY, DKGY, YEL, RD)

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

Relevant identified uses: When mixed with Part B it can be used as a standalone coating or it may be blended with a graded silica flour and applied as a self-leveling floor coating. It may also be applied as a resin bed and aggregate can be broadcast into it for slip resistance.

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 Fax: +1 978-469-6785
(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

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

Flammable liquid, Category 4, H227
Skin irritation, Category 2, H315
Eye irritation, Category 2, H319
Skin sensitization, Category 1, H317
Reproductive toxicity, Category 1B, H360D
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 2015 / Safe Work Australia / GHS

Hazard pictograms:



Signal word:

Danger

Hazard statements:	H227	Combustible liquid.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H317	May cause an allergic skin reaction.
	H360D	May damage the unborn child.
	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements:	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P261	Avoid breathing mist.
	P264	Wash skin 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.
	P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308/313	IF exposed or concerned: Get medical advice/attention.
	P362/364	Take off contaminated clothing and wash it before reuse.
	P391	Collect spillage.
	P403/235	Store in a well-ventilated place. Keep cool.
	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 ¹	% Wt.	CAS No.	GHS Classification
Epoxy resin (number average molecular weight <= 700)	20 - 30	1675-54-3 *	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Aquatic Chronic 2, H411
Epoxy resin (number average molecular weight <= 700)	20 - 30	9003-36-5 **	Skin Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
[[[2-Ethylhexyl]oxy]methyl]oxirane (Synonym: Ethyl Hexyl Glycidyl Ether)	5 - 10	2461-15-6	Skin Irrit. 2, H315 Skin Sens. 1A, H317
N-methyl-2-pyrrolidone	0.1 - 0.3	872-50-4	Flam. Liq. 4, H227 Repr. 1B, H360D Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	0 - 0.4	68609-97-2	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Skin Sens. 1, H317

Other ingredients:

Titanium dioxide	3 - 7	13463-67-7	Not classified*** ^a
Silica (Quartz)	1 - 3	14808-60-7	Not classified***

* Alternative CAS No: 25068-38-6. ** Alternative CAS No: 28064-14-4.

*** Substance with a workplace exposure limit.

^a Contains less than 1 % of particles with aerodynamic diameter ≤ 10 µm.

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), WHMIS 2015, 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:** Remove contaminated clothing. Wash clothing before reuse. Wash skin with soap and water. Contact physician.
- Eye contact:** Flush eyes for at least 15 minutes with large amounts of water. Contact physician if irritation persists.
- Ingestion:** Wash out mouth with water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. 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 8.2.2 for recommendations on personal protective equipment.

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

Moderate eye and skin irritant. Moderate sensitizer as evidenced by rashes, hives, and other allergic reactions.

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 data available

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon monoxide, carbon dioxide.

Other hazards: Do not allow runoff from firefighting to enter drains or water courses.

5.3. Advice for firefighters

Cool exposed containers with water. Keep away from sources of ignition - No smoking. If removal of ignition sources is not possible, then flush material away with water. Recommend Firefighters wear self-contained breathing apparatus.

Australian 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**

Remove contaminated clothing immediately. Wash clothing before reuse. Contaminated leather including shoes cannot be decontaminated and should be discarded. After handling, wash before eating, drinking or smoking. Utilize exposure controls and personal protection as specified in Section 8. Avoid breathing mist. Avoid creating and breathing dust during removal, drilling, grinding, sawing or sanding.

7.2. Conditions for safe storage, including any incompatibilities

Store between 10°C (50°F) and 32°C (90°F) in a 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		AUSTRALIA ES ³	
	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Epoxy resin (number average molecular weight <= 700)	N/A	N/A	N/A	N/A	N/A	N/A
Epoxy resin (number average molecular weight <= 700)	N/A	N/A	N/A	N/A	N/A	N/A
[[[(2-Ethylhexyl)oxy)methyl]oxirane	N/A	N/A	N/A	N/A	N/A	N/A
N-methyl-2-pyrrolidone*	N/A	N/A	N/A	N/A	25 (skin) STEL: 75	103 STEL: 309
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	N/A	N/A	N/A	N/A	N/A	N/A
Titanium dioxide	(total)	15	N/A	10	N/A	10
Silica (Quartz)	(resp.) (total)	0.05 0.3	(resp.)	0.025	(resp.)	0.05

* American Industrial Hygiene Association (AIHA) recommended limit: 10 ppm (skin, 8-hr TWA)

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

N-methyl-2-pyrrolidone:

Control parameter	Biological specimen	Sampling Time	Limit value	Basis	Notes
5-Hydroxy-N-methyl-2-pyrrolidone	Urine	End of shift	100 mg/l	ACGIH	–

8.2. Exposure controls**8.2.1. Engineering measures**

Good general mechanical ventilation and local exhaust. 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: If exposure limits are exceeded or product is sprayed, utilize suitable respiratory equipment.

Protective gloves: Chemical resistant gloves (e.g., butyl rubber, neoprene 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	liquid	pH	not applicable
Colour	light gray, dark gray, yellow, red	Kinematic viscosity	3,206 cSt @ 25°C
Odour	sweet	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 determined	Density and/or relative density	1.31 kg/l
% Volatile (by volume)	0%	Weight per volume	10.93 lbs/gal.
Flammability	no data available	Vapour density (air=1)	> 1
Lower/upper flammability or explosion limits	not determined	Rate of evaporation (ether=1)	< 1
Flash point	91°C (196°F)	% Aromatics by weight	0%
Method	component data	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

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

Excessive heat

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide and other toxic fumes.

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

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	LD50, rat	> 5,000 mg/kg
[[[2-Ethylhexyl]oxy]methyl]oxirane	LD50, rat	7,800 mg/kg
N-methyl-2-pyrrolidone	LD50, rat	3,598 mg/kg
Titanium dioxide	LD50, rat	> 10,000 mg/kg

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

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	LD50, rabbit	> 2,000 mg/kg
[[[2-Ethylhexyl]oxy]methyl]oxirane	LD50, rabbit	> 2,000 mg/kg
N-methyl-2-pyrrolidone	LD50, rabbit	8,000 mg/kg
Titanium dioxide	LD50, rabbit	> 10,000 mg/kg

Inhalation:

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

Substance	Test	Result
Epoxy resin (CAS no. 1675-54-3)	LC0, rat, 5-8 hours	No mortality at vapor saturation level
N-methyl-2-pyrrolidone	LC50, rat, 4 h	> 5.1 mg/l (mist)
Titanium dioxide	LC50, rat, 4 hours	> 6.82 mg/l

Skin corrosion/irritation:

Causes skin irritation.

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	Skin irritation, rabbit	Moderate irritation
Titanium dioxide	Skin irritation, rabbit	Not irritating

Serious eye damage/irritation:

Causes serious eye irritation.

Substance	Test	Result
Epoxy resin (CAS no. 1675-54-3)	Eye irritation, rabbit	Moderate irritation
Epoxy resin (CAS no. 28064-14-4)	Eye irritation, rabbit	Not irritating
Titanium dioxide	Eye irritation, rabbit	Not irritating

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
N-methyl-2-pyrrolidone	Skin sensitization, mouse (OECD 429)	Not sensitizing
Titanium dioxide	Skin sensitization, guinea pig	Not sensitizing

Germ cell mutagenicity:

Epoxy resin (number average molecular weight <= 700), [(2-Ethylhexyl)oxy]methyl]oxirane, N-methyl-2-pyrrolidone, Titanium dioxide: based on available data, the classification criteria are not met. Oxirane, mono[(C12-14-alkyloxy)methyl] derivs: data lacking.

Carcinogenicity:

The International Agency for Research on Cancer (IARC) has designated inhaled titanium dioxide as possibly carcinogenic to humans (group 2B). The titanium dioxide in this product does not separate from the mixture or in of itself become air-borne, therefore it does not present a hazard in normal use. Epoxy resin (number average molecular weight <= 700), N-methyl-2-pyrrolidone: based on available data, the classification criteria are not met.

Reproductive toxicity:

N-methyl-2-pyrrolidone has produced reproductive/teratogenic effects in animal studies. Epoxy resin (number average molecular weight <= 700), Titanium dioxide: based on available data, the classification criteria are not met.

STOT – single exposure:

Epoxy resin (number average molecular weight <= 700), Titanium dioxide: based on available data, the classification criteria are not met. [(2-Ethylhexyl)oxy]methyl]oxirane: data lacking. N-methyl-2-pyrrolidone: may cause respiratory irritation.

STOT – repeated exposure:

Epoxy resin (number average molecular weight <= 700), N-methyl-2-pyrrolidone, Titanium dioxide: based on available data, the classification criteria are not met.

Substance	Test	Result
Epoxy resin (CAS no. 9003-36-5)	Sub-chronic NOAEL, oral, 90 days, rat, male / female (OECD 408)	250 mg/kg bw/day
Epoxy resin (CAS no. 1675-54-3)	Sub-chronic NOAEL, oral, 90 days, rat, male / female (OECD 408)	50 mg/kg bw/day
Epoxy resin (CAS no. 1675-54-3)	Sub-chronic NOAEL, dermal, 90 days, rat, male / female (OECD 411)	10 mg/kg bw/day
Epoxy resin (CAS no. 1675-54-3)	Sub-chronic NOAEL, dermal, 90 days, mouse, male (OECD 411)	100 mg/kg bw/day

Aspiration hazard: Based on available data, the classification criteria are not met.

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

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. N-methyl-2-pyrrolidone: readily biodegradable. Titanium dioxide: inorganic substances. Oxirane, mono[(C12-14-alkyloxy)methyl] derivs: not readily biodegradable (34.7% biodegradation, OECD 301D, 28 days).

12.3. Bioaccumulative potential

Epoxy resin: Octanol/water partition coefficient (log Kow) = 2.64 – 3.78; bioconcentration factor (QSAR) ≤ 31 , low potential for bioaccumulation. N-methyl-2-pyrrolidone: not expected to bioaccumulate (log Kow < 1). Oxirane, mono[(C12-14-alkyloxy)methyl] derivs: log Kow: 7.25.

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). Epoxy resin: if product enters soil, it will be mobile and may contaminate groundwater (Log Koc ≤ 3.65). N-methyl-2-pyrrolidone: expected to have very high mobility in soils. Oxirane, mono[(C12-14-alkyloxy)methyl] derivs, log Koc: 7.29e+06, calculated.

12.5. 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 stabilized and solidified liquids 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. (EPOXY RESIN)

TDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)

US DOT: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)

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 Tunnel restriction code (E)

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	N-methyl-2-pyrrolidone	872-50-4	0.1 – 0.3%
Skin irritation			
Eye irritation			
Skin sensitization			

TSCA: All 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.

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 Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Repr. 1B, H360D	Calculation method
Aquatic Chronic 2, H411	Calculation method

Relevant H-statements: H227: Combustible liquid.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H320: Causes eye irritation.
H335: May cause respiratory irritation.
H360D: May damage the unborn child.
H411: Toxic to aquatic life with long lasting effects.

Hazard pictogram names: Health hazard, exclamation mark, environment

Further information: None

Date of last revision: 7 February 2023

Changes to the SDS in this revision: Sections 2.1, 3, 5.2, 9.1, 11, 12.2, 12.3, 12.4, 15.1, 16.

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.