SAFETY DATA SHEET

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

Revision date: 16 December 2024 **Date of previous issue:** 11 May 2023 **SDS No.** 240A-18

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

1.1. Product identifier

ARC 988 (Part A) (GY, RD)

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

Relevant identified uses: When mixed with other 988 constituents, the resulting blend can be used to resurface and protect concrete against attack by chemical exposure and mechanical abuse.

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

Skin irritation, Category 2, H315
Skin sensitization, Category 1, H317
Germ cell mutagenicity, Category 2, H341
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: Warning

Hazard statements:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
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.
	P261	Avoid breathing vapours.
	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/clothing and eye/face protection.
	P302/352	IF ON SKIN: Wash with plenty of soap and water.
	P308/313	IF exposed or concerned: Get medical advice/attention.
	P362/364	Take off contaminated clothing and wash it before reuse.
	P391	Collect spillage.
	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)	80-90	28064-14-4 *	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411
2,3-Epoxypropyl o-tolyl ether	5-10	2210-79-9	Muta. 2, H341 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Alkyl (C12, C14) Glycidyl Ether	0-<0.25	68609-97-2	Skin Irrit. 2, H315 Skin Sens. 1, H317
Other ingredients:			
Diiron trioxide	0-6	1309-37-1	Not classified **
Titanium dioxide	0-5	13463-67-7	Not classified **
Carbon black	0-<0.2	1333-86-4	Not classified **

* Alternative CAS No: 9003-36-5. **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: 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 8.2.2 for recommendations on personal protective equipment.

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

Moderate skin irritant. May cause skin sensitization as evidenced by rashes or hives. High vapor concentrations resulting from heating can cause eye and respiratory tract irritation.

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: High volume water jet

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon Monoxide, Carbon Dioxide, aldehydes and other toxic fumes. Dense smoke is emitted when burned without sufficient oxygen.

Other hazards: None noted

5.3. Advice for firefighters

Cool exposed containers 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

Contain spill to a small area. 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

Do not handle until all safety precautions have been read and understood. Avoid skin contact. Avoid breathing vapours. 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. Contaminated work clothing must not be allowed out of the workplace. 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/m³	ppm	mg/m³	ppm	mg/m³
Epoxy resin (number average molecular weight <= 700)	N/A	N/A	N/A	N/A	N/A	N/A
2,3-Epoxypropyl o-tolyl ether	N/A	N/A	N/A	N/A	N/A	N/A
Alkyl (C12, C14) Glycidyl Ether	N/A	N/A	N/A	N/A	N/A	N/A
Diiron trioxide	(total) (resp.) (fume)	15 5 10	(resp.)	5	N/A	5 (fume, as Fe) 10
Titanium dioxide	(total)	15	N/A	10	N/A	10
Carbon black	N/A	3.5	N/A	3	N/A	3

[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 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.
Protective gloves:	Chemical resistant gloves (e.g., nitrile rubber, butyl rubber, neoprene, 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	viscous paste	**pH**	not applicable
Colour	gray or red	**Kinematic viscosity**	6,333 mm^2/s @ 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 applicable	**Vapour pressure @ 20°C**	not determined
Melting point/freezing point	not applicable	**Density and/or relative density**	1.2 kg/l
% Volatile (by volume)	0%	**Weight per volume**	9.98 lbs/gal.
Flammability	not determined	**Vapour density (air=1)**	> 1
Lower/upper flammability or explosion limits	not determined	**Rate of evaporation (ether=1)**	< 1
Flash point	159.4 °C (319 °F)	**% Aromatics by weight**	0%
Method	PM Closed Cup	**Particle characteristics**	not applicable
Autoignition temperature	not applicable	**Explosive properties**	not determined
Decomposition temperature	not determined	**Oxidising properties**	not determined

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

Open flames and high temperatures.

10.5. Incompatible materials

Strong acids or bases in bulk, strong oxidizers like liquid Chlorine and concentrated Oxygen.

10.6. Hazardous decomposition products

Thermal decomposition may produce Carbon Monoxide, Carbon Dioxide, aldehydes 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. Ingestion may result in mouth, throat and gastrointestinal irritation.

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	LD50 oral, rat	> 5,000 mg/kg
2,3-Epoxypropyl o-tolyl ether	LD50, oral, rat	5,800 mg/kg

Dermal:

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	LD50 dermal, rabbit	> 2,000 mg/kg
2,3-Epoxypropyl o-tolyl ether	LD50 dermal, rabbit	> 2,000 mg/kg

Inhalation: High vapor concentrations resulting from heating can cause eye and respiratory tract irritation.

Substance	Test	Result
2,3-Epoxypropyl o-tolyl ether	LC50 inhalation, rat, 4 h	6.09 mg/l

Skin corrosion/irritation: Causes skin irritation.

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	Skin irritation, rabbit	Moderate irritation
2,3-Epoxypropyl o-tolyl ether	Skin irritation, human experience	Severe irritation

Serious eye damage/ irritation: May cause eye irritation.

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	Eye irritation, rabbit	Slightly irritating

Respiratory or skin sensitisation:

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	Skin sensitization, guinea pig	Sensitizing
2,3-Epoxypropyl o-tolyl ether	Skin sensitization, human experience	Sensitizing

Germ cell mutagenicity: 2,3-Epoxypropyl o-tolyl ether is mutagenic (changes in genetic systems) in some laboratory tests. 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) 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): 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. Prolonged and repeated exposure to 2,3-Epoxypropyl O-tolyl Ether may cause reproductive disorders (birth defects/sterility).

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

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

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	Sub-chronic NOAEL, oral, 90 days, rat, male / female (OECD 408)	250 mg/kg

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

2,3-Epoxypropyl o-tolyl ether and Epoxy resin (number average molecular weight <= 700) are toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment (LC50/EC50 between 1 and 10 mg/l in the most sensitive species).

12.2. Persistence and degradability

Unreacted components (Parts A and B), improperly released to the environment, can cause ground and water pollution. Epoxy resin (number average molecular weight <= 700), 2,3-Epoxypropyl o-tolyl ether: not readily biodegradable. Diiron trioxide, Titanium dioxide, Carbon black: inorganic substances.

12.3. Bioaccumulative potential

Epoxy resin (number average molecular weight <= 700): moderate potential for bioaccumulation. Octanol/water partition coefficient (log Kow): 3.6, estimated.

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.

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. (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, 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:**
Skin irritation Skin sensitization Germ cell mutagenicity	None

TSCA: All chemical 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
Skin Irrit. 2, H315	Calculation method
Skin Sens. 1, H317	Bridging principle "Dilution"
Muta. 2, H341	Bridging principle "Dilution"
Aquatic Chronic 2, H411	Calculation method

Relevant H-statements: H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H341: Suspected of causing genetic defects.
H411: Toxic to aquatic life with long lasting effects.

Hazard pictogram names: Health hazard, exclamation mark, environment.

Further information: None

Date of last revision: 16 December 2024

Changes to the SDS in this revision: Sections 1.3, 3, 8.1, 12.2, 12.5.

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.