

**SAFETY DATA SHEET**

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

**Revision date:** 23 April 2021      **Date of previous issue:** 15 February 2019      **SDS No.** 240B-15

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

**1.1. Product identifier**

ARC 988 (Part B)

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

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.

**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**

Acute toxicity, Category 4, H302  
Skin corrosion, Category 1C, H314  
Serious eye damage, Category 1, H318  
Skin sensitization, Category 1, H317  
Hazardous to the aquatic environment, Acute, Category 1, H400  
Hazardous to the aquatic environment, Chronic, Category 1, H410

Additional GHS classifications:

Acute toxicity, Category 5, H313

**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:**



<b>Signal word:</b>	Danger	
<b>Hazard statements:</b>	H302	Harmful if swallowed.
	H313	May be harmful in contact with skin.
	H314	Causes severe skin burns and eye damage.
	H317	May cause an allergic skin reaction.
	H410	Very toxic to aquatic life with long lasting effects.
<b>Precautionary statements:</b>	P261	Avoid breathing vapours.
	P264	Wash skin thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	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.
	P301/330/331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P303/361/353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
	P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310	Immediately call a POISON CENTER or doctor.
	P312	Call a POISON CENTER or doctor if you feel unwell.
	P333/313	If skin irritation or rash occurs: Get medical advice/attention.
	P363	Wash contaminated clothing 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 <sup>1</sup>	% Wt.	CAS No.
Benzyl alcohol	25 - <50	100-51-6
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	25 - <50	57214-10-5
m-Phenylenebis(methylamine) (Synonym: m-Xylene-alpha, alpha'-Diamine)	10 - <20	1477-55-0
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylenediamine	5 - <10	72480-18-3

<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

<b>Inhalation:</b>	Remove to fresh air. If not breathing, administer artificial respiration. Contact physician.
<b>Skin contact:</b>	Flood area with water while removing contaminated clothing. Wash clothing before reuse. Wash skin with soap and water. Contact physician.
<b>Eye contact:</b>	Flush eyes for at least 15 minutes with large amounts of water. Contact physician.
<b>Ingestion:</b>	Do not induce vomiting without medical advice. If conscious, give 1-2 glasses of water to drink. Prevent aspiration of vomit. Turn victim's head to the side. Contact physician immediately.
<b>Protection of first-aiders:</b>	No action shall be taken involving any personal risk or without suitable training. Avoid contact with the product while providing aid to the victim. Avoid breathing vapours. Provide adequate ventilation. See section 8.2.2 for recommendations on personal protective equipment.

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

Direct contact will cause burns to skin, eyes and mucous membranes. May cause an allergic skin reaction. Excessive inhalation of vapors or mists can cause coughing, chest tightness and difficulty breathing.

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

Treat symptoms. Application of corticosteroid cream has been effective in treating skin irritation.

**SECTION 5: FIRE-FIGHTING MEASURES****5.1. Extinguishing media**

**Suitable extinguishing media:** Carbon dioxide, dry chemical, dry sand, limestone powder, alcohol-resistant foam.

**Unsuitable extinguishing media:** No data available

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

May generate: ammonia gas, toxic nitrogen oxide gases. Incomplete combustion may form carbon monoxide. Use of water may result in the formation of very toxic aqueous solutions. Do not allow runoff from firefighting to enter drains or water courses.

**5.3. Advice for firefighters**

A face shield should be worn. Use personal protective equipment. 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**

Evacuate area. Provide adequate ventilation. 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**

Utilize exposure controls and personal protection as specified in Section 8. Avoid breathing vapours. Wash hands thoroughly after handling. Remove contaminated clothing immediately. Wash clothing before reuse. Contaminated leather including shoes cannot be decontaminated and should be discarded.

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

Store between 10°C (50°F) and 32°C (90°F) in a dry area. Do not store near acids.

**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>
Benzyl alcohol	N/A	N/A	N/A	N/A	N/A	N/A
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	N/A	N/A	N/A	N/A	N/A	N/A
m-Phenylenebis(methylamine)	N/A	N/A	0.018 (Ceiling)	(skin)	(Peak)	0.1
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylenediamine	N/A	N/A	N/A	N/A	N/A	N/A

<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**

Provide readily accessible eye wash stations and safety showers. Provide sufficient ventilation to keep the vapor concentrations below the exposure limits.

**8.2.2. Individual protection measures**

**Respiratory protection:** If exposure limits are exceeded, use an approved organic vapor respirator.

**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**

<b>Physical state</b>	liquid	<b>Odour</b>	amine
<b>Colour</b>	colorless	<b>Odour threshold</b>	not determined
<b>Initial boiling point</b>	> 107 °C (> 226 °F)	<b>Vapour pressure @ 20°C</b>	not determined
<b>Melting point</b>	not applicable	<b>% Aromatics by weight</b>	0%
<b>% Volatile (by volume)</b>	0%	<b>pH</b>	not applicable
<b>Flash point</b>	> 112 °C (> 236 °F)	<b>Relative density</b>	1.1 kg/l
<b>Method</b>	PM Closed Cup	<b>Weight per volume</b>	9.15 lbs/gal.
<b>Viscosity</b>	200-350 cps @ 25°C	<b>Coefficient (water/oil)</b>	< 1
<b>Autoignition temperature</b>	not applicable	<b>Vapour density (air=1)</b>	> 1
<b>Decomposition temperature</b>	not determined	<b>Rate of evaporation (ether=1)</b>	< 1
<b>Upper/lower flammability or explosive limits</b>	not determined	<b>Solubility in water</b>	slightly soluble
<b>Flammability (solid, gas)</b>	not applicable	<b>Oxidising properties</b>	not determined
<b>Explosive properties</b>	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**

Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

**10.4. Conditions to avoid**

None

**10.5. Incompatible materials**

Strong acids and strong oxidizers like liquid Chlorine and concentrated Oxygen. Reactive metals. Materials reactive with hydroxyl compounds.

**10.6. Hazardous decomposition products**

Carbon Monoxide, Carbon Dioxide, NOx, Ammonia and other toxic fumes (by combustion). Nitrogen oxide can react with water vapors to form corrosive nitric acid.

**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 allergies and skin and eye disorders may be aggravated by exposure.

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

Harmful if swallowed. ATE-mix = 1,350 mg/kg.

Substance	Test	Result
Benzyl alcohol	LD50, rat	1,230 mg/kg
m-Phenylenebis(methylamine)	LD50, rat	930 mg/kg
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylenediamine	LD50, rabbit	> 300 - < 2,000 mg/kg

**Dermal:**

May be harmful in contact with skin. ATE-mix = 3,390 mg/kg.

Substance	Test	Result
Benzyl alcohol	LD50, rabbit	> 2,000 mg/kg
m-Phenylenebis(methylamine)	LD50, rabbit	> 2,000 mg/kg

**Inhalation:**

Excessive inhalation of vapors or mists can cause coughing, chest tightness and difficulty breathing. ATE-mix = 7.36 mg/l (mist). ATE-mix > 20 mg/l (vapor).

Substance	Test	Result
Benzyl alcohol	cATpE	11 mg/l (vapor)
m-Phenylenebis(methylamine)	LC50, rat, 4 h	1.34 mg/l (mist)

**Skin corrosion/irritation:**

Causes burns. In vitro test: Corrosive.

Substance	Test	Result
Benzyl alcohol	Skin irritation, rabbit (OECD 404)	Not irritating
m-Phenylenebis(methylamine)	Skin irritation, rabbit (OECD 404)	Corrosive
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylenediamine	Skin irritation, rabbit (OECD 404)	Not irritating

**Serious eye damage/irritation:**

Risk of serious damage to eyes.

<b>Respiratory or skin sensitisation:</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity:</b>	Benzyl alcohol, m-Phenylenebis(methylamine): based on available data, the classification criteria are not met.
<b>Carcinogenicity:</b>	This product contains no carcinogens as listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the Occupational Safety and Health Administration (OSHA) or the European Chemicals Agency (ECHA).
<b>Reproductive toxicity:</b>	Benzyl alcohol, m-Phenylenebis(methylamine): based on available data, the classification criteria are not met. Effects on or via lactation: data lacking.
<b>STOT – single exposure:</b>	Benzyl alcohol: based on available data, the classification criteria are not met. Other ingredients: data lacking.
<b>STOT – repeated exposure:</b>	Benzyl alcohol, m-Phenylenebis(methylamine): based on available data, the classification criteria are not met.

Substance	Test	Result
Benzyl alcohol	90-day oral subchronic study	NOAEL: 400 mg/kg/day

**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

Very toxic to aquatic life with long lasting effects. Formaldehyde polymer with 1,3-benzenedimethanamine and phenol: 96 hr EC50, Rainbow trout = 0.76 mg/l (similar material). m-Phenylenebis(methylamine) is harmful to aquatic organisms [48 h EC50 (for daphnia): 15.2 mg/l; 72 h EC50 (for algae): 33.3 mg/l].

### 12.2. Persistence and degradability

Unreacted components (Parts A and B), improperly released to the environment, can cause ground and water pollution. m-Phenylenebis(methylamine): biodegradation, OECD 301B (28 days) = 49%, not readily biodegradable. Benzyl alcohol: readily biodegradable.

### 12.3. Bioaccumulative potential

m-Phenylenebis(methylamine): low potential for bioaccumulation (BCF < 100). Benzyl alcohol: low potential for bioaccumulation (log Kow = 1.1).

### 12.4. Mobility in soil

Liquid. Slightly soluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). m-Phenylenebis(methylamine): log Koc = 3.11 (QSAR). Benzyl alcohol: expected to have very high mobility in soils.

### 12.5. Other adverse effects

None known

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Unreacted components are a special waste. 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 or ID number

<b>ADG/ADR/RID/ADN/IMDG/ICAO:</b>	UN2735
<b>TDG:</b>	UN2735
<b>US DOT:</b>	UN2735

### 14.2. UN proper shipping name

<b>ADG/ADR/RID/ADN/IMDG/ICAO:</b>	AMINES, LIQUID, CORROSIVE, N.O.S. (ALIPHATIC AMINE)
<b>TDG:</b>	AMINES, LIQUID, CORROSIVE, N.O.S. (ALIPHATIC AMINE)
<b>US DOT:</b>	AMINES, LIQUID, CORROSIVE, N.O.S. (ALIPHATIC AMINE)

**14.3. Transport hazard class(es)**

ADG/ADR/RID/ADN/IMDG/ICAO: 8  
 TDG: 8  
 US DOT: 8

**14.4. Packing group**

ADG/ADR/RID/ADN/IMDG/ICAO: III  
 TDG: III  
 US DOT: III

**14.5. Environmental hazards**

NO ENVIRONMENTAL HAZARDS

**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. 153

May be shipped as Limited Quantities in packaging having a rated capacity gross weight of 66 lb. or less and in inner packages not over 5 Liters (49 CFR 173.154 (b),(2))

IMDG: EmS F-A, S-B, IMDG segregation group 18-Alkalis

ADR: Classification code C7, Tunnel restriction code (E)

ADG HAZCHEM CODE : 2X HIN: 88/80

**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:**

Acute toxicity  
 Skin corrosion  
 Serious eye damage  
 Skin sensitization

**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
Acute Tox. 4, H302	Calculation method
Acute Tox. 5, H313	Calculation method
Skin Corr. 1C, H314	On basis of test data
Eye Dam. 1, H318	On basis of test data
Skin Sens. 1, H317	On basis of test data
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

**Relevant H-statements:** H302: Harmful if swallowed.  
 H313: May be harmful in contact with skin.  
 H314: Causes severe skin burns and eye damage.  
 H317: May cause an allergic skin reaction.  
 H318: Causes serious eye damage.  
 H400: Very toxic to aquatic life.  
 H410: Very toxic to aquatic life with long lasting effects.

**Hazard pictogram names:** Corrosion, exclamation mark, environment

**Further information:** None

**Date of last revision:** 23 April 2021

**Changes to the SDS in this revision:** Complete change to represent new formulation.

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.