

Effective Date: 7/11/07

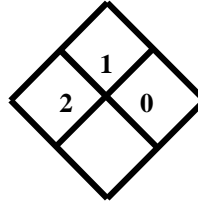
Material Safety Data Sheet

MSDS No: 5631

1. PRODUCT IDENTIFICATION

Trade Name: Araldite 2015/A

Chemical Family: Epoxy



NFPA RATING

Health:	2*
Flammability:	1
Reactivity:	0
Personal Protection:	

HMIS RATING

Intended Use or Product Type: Toughened adhesive resin

2. COMPOSITION / INFORMATION ON INGREDIENTS

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	14808-60-7	Quartz (SiO ₂) Common Name: Crystalline silica Concentration: 0.10 - 1.00 % by wt	0.05 mg/m ³	NE	0.1 mg/m ³	NE	NE	Yes	Yes	NR
*	2425-79-8	Oxirane, 2,2'-[1,4-Butanediylbis(Oxymethylene)]bis-Butanediol diglycidyl ether Common Name: Butanediol diglycidyl ether Concentration: 3.00 - 7.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane Bisphenol A diglycidyl ether polymer Concentration: 30.00 - 60.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	60506-81-2	2-Propenoic acid, 2-[[[3-hydroxy-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester Concentration: 1.00 - 5.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	67924-34-9	Phenol, 4-(1,1-dimethylethyl)-, polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol] Bisphenol A epoxy resin	NE	NE	NE	NE	NE	NR	NR	NR

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Concentration	1.00 - 5.00 % by wt								
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* = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: Can cause skin irritation, eye irritation, and allergic skin reaction. May be harmful if absorbed through skin or if swallowed.

Primary Route(s) of Entry: Dermal; heated product may produce inhalable vapors.

Chronic: This product contains Crystalline silica. Repeated inhalation of respirable free Crystalline silica dust may cause delayed lung injury (silicosis) and cancer.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes. Seek immediate medical attention.

Inhalation: Remove to fresh air. Seek immediate medical attention.

Eyes: Immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention.

Overexposure Effects: Can cause skin irritation, eye irritation, and allergic skin reaction. May be harmful if absorbed through skin or if swallowed.

Medical Conditions Aggravated by Exposure: Skin and eye conditions.

Additional Information: Referral to a physician is recommended if there is any question about the seriousness of any injury.

5. FIRE FIGHTING MEASURES

Flash Point: > 200°F (> 93 °C)

Flash Point Method Used: Estimated

Flammable Limits in Air (Lower - % by volume): Not established

Flammable Limits in Air (Upper - % by volume): Not established

Fire Fighting Extinguishing Media: Carbon dioxide, dry chemical, foam, water.

Fire Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Decomposition and combustion products may be toxic.

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6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Remove spillage by absorbing in absorbent material.

7. HANDLING AND STORAGE

Signal Word: Warning!

Precautions: Can cause skin irritation, eye irritation, and allergic skin reaction. May be harmful if absorbed through skin or if swallowed. Avoid contact with eyes, skin, and clothing. Avoid tasting or swallowing. Wash thoroughly after handling.

Other Handling Information: Crystalline silica may be generated when machining cured products. Overexposure may create possible cancer and silicosis hazard.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection: Wear impermeable gloves.

Respiratory Protection: Use NIOSH approved organic vapor cartridge respirator when vapor/mist exposure is likely.

Eye Protection: Wear splash-proof chemical goggles.

Engineering Controls: General mechanical and local exhaust in accordance with ACGIH recommendations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Light Beige
Odor:	Slight
Physical State:	Paste
Solubility in Water:	Insoluble
Vapor Pressure:	Not Determined
Specific Gravity:	1.43 g/ml
Boiling Point:	Not Determined
Melting Point:	Not Determined
Evaporation Rate:	Not Determined
Vapor Density:	Not Determined
VOC:	0 g/L
pH:	Not Determined
Coefficient of water/oil:	Not Determined

Percent Volatile: Not determined.

10. STABILITY AND REACTIVITY

Conditions to Avoid: Excessive heat for prolonged periods of time.

Stability: Stable.

Incompatibility: Strong oxidizers, acids and bases.

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Hazardous Decomposition Products: Combustion may form toxic materials, such as carbon dioxide, carbon monoxide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral Effects (LD50): Component(s) are slightly toxic, 500 - 5000 mg/kg (rat).

Butanediol diglycidyl ether= 1134 mg/kg (rat)

Acute Dermal Toxicity (LD50): Component(s) are slightly toxic, 1000 - 2000 mg/kg (rabbit).

Butanediol diglycidyl ether= 1130 mg/kg (rabbit)

Sensitization: Possible in susceptible individuals.

Carcinogenicity: This product contains crystalline silica. Repeated inhalation of respirable free crystalline silica dust may cause delayed lung injury (silicosis) and cancer.

Based on several dermal studies in mice, IARC had concluded in 1999 that diglycidyl ether of bisphenol A is not classifiable as a human carcinogen (Group 3) and has limited evidence of carcinogenicity in animals.

Skin Irritation: Irritant.

Eye Irritation: Irritant.

Reproduction: For diglycidyl ether of bisphenol A- There were no treatment-related histologic changes noted nor effects on reproductive performance in rats at any oral dose tested.

Teratogenicity: For diglycidyl ether of bisphenol A- No adverse effects on embryonic or fetal development was observed in rabbits after dermal exposure.

Mutagenicity: For diglycidyl ether of bisphenol A- In vitro tests showed mutagenic effects which were not observed with in vivo tests.

Test results for 1,4-Butanediol diglycidyl ether:

Ames test: positive

Sister chromatid exchange (Chinese hamster): Negative

Nucleus anomaly (Chinese hamster): Positive

Mouse lymphoma: Positive with and without activation.

Mutagenicity results were reported to the EPA.

Sub-Chronic: Diglycidyl ether of bisphenol A, applied to the skin of rats five times per week for approximately 13 weeks, caused no apparent systemic toxicity with the exception of decreased body weight and body weight gain.

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Consult qualified local or corporate personnel for method that will comply with local, state and federal health and environmental regulations.

14. TRANSPORT INFORMATION

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DOT: Non-Bulk

Proper Shipping Name: Not Regulated

IATA: Non-Bulk

Proper Shipping Name: Not Regulated

IMDG: Non-Bulk

Proper Shipping Name: Not Regulated

TDG: Non-Bulk

Proper Shipping Name: Not Regulated

15. REGULATORY INFORMATION**US Federal Regulations:**

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261).

SARA Title III: Section 313 Toxic Chemical List (TCL): This product does not contain any chemicals for routine annual toxic chemical release reporting under Section 313 (40 CFR 372).

TSCA Section 8(b) - Inventory Status: All chemical components of this product are in compliance with TSCA inventory requirements.

TSCA Section 12(b) - Export Notification: This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

International Regulations:

Canadian Inventory Status: This product contains only chemicals that are currently listed on the Canadian Domestic Substance List.

Canadian WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. D2A D2B

State Regulations:

California Proposition 65: The following is required composition information. This product contains the following chemical(s) which are currently listed on the California list of Known Carcinogens and Reproductive Toxins:

Chemical Name: Quartz (SiO₂)

Common Name: Crystalline silica

CAS Number: 14808-60-7

Percent in Composition: 0.1 - 1 % by wt

Comment: Warning! This chemical is known to the State of California to cause cancer.

Chemical Name: Arsenic

CAS Number: 7440-38-2

Percent in Composition: 0 % by wt

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Comment: Warning! This chemical is known to the State of California to cause cancer and birth defects or other reproductive harm.

Chemical Name: Lead

CAS Number: 7439-92-1

Percent in Composition: 0 % by wt

Comment: Warning! This chemical is known to the State of California to cause cancer and birth defects or other reproductive harm.

Pennsylvania Right-to-Know: The following is required composition information:

Chemical Name: Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane

Common Name: Bisphenol A diglycidyl ether polymer

CAS Number: 25068-38-6

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Carbonic Acid Calcium Salt (1:1)

Common Name: Calcium carbonate

CAS Number: 471-34-1

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Talc

Common Name: Talc

CAS Number: 14807-96-6

Comment: Hazardous Substance

Chemical Name: Oxirane, 2,2'-[1,4-Butanediylbis(Oxymethylene)]bis-

Common Name: Butanediol diglycidyl ether

CAS Number: 2425-79-8

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Siloxanes and silicones, di-me, reaction products with silica

Common Name: Amorphous hydrophobic fumed silica

CAS Number: 67762-90-7

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Phenol, 4-(1,1-dimethylethyl)-, polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol]

Common Name: Bisphenol A epoxy resin

CAS Number: 67924-34-9

Comment: Not on Pennsylvania Hazardous Substance List

16. OTHER INFORMATION

MSDS No:

5631

Approved By:

Dianne Blessing

Title:

EH&S Specialist

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