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24-Hour Emergency Phone: (800) 328-8501
International Emergency Phone: (409) 727-0831
Asia Pacific Emergency Phone: (65) 6336-6011

Effective Date: 10/24/06

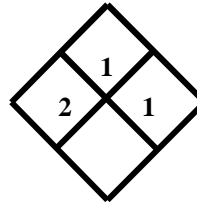
Material Safety Data Sheet

MSDS No: 5637

1. PRODUCT IDENTIFICATION

Trade Name: Araldite 2042/A

Chemical Family: Isocyanate



NFPA RATING

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

HMIS RATING

Intended Use or Product Type: Two component polyurethane 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				
*	68133-49-3	Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), polymer with 1,1'-methylenebis(4-isocyanatobenzene) Polymeric MDI Common Name:	NE	NE	NE	NE	NE	NR	NR	NR

NE = Not Established NR = Not Reviewed * = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: Causes skin, eye, and respiratory irritations. May cause allergic skin and respiratory reactions.

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

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.

Effective Date: 10/24/06

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: Contact with liquid causes eye and skin irritation. If inhaled causes breathlessness, chest discomfort, and reduced pulmonary function. May cause allergic skin and respiratory reactions in some individuals, leading to asthma type spasms of the bronchial tubes and difficulty in breathing.

Medical Conditions Aggravated by Exposure: Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases, eye conditions or recurrent skin eczema or sensitization should be excluded from working with isocyanates.

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. Avoid water contamination in closed containers or confined spaces. Carbon dioxide evolved.

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Absorb with absorbent material and place in open top container. Under good ventilation, decontaminate absorbant and spill area with a mixture of 90% water, 8% ammonia and 2% detergent (exothermic reaction). Leave ventilated 24 hours before disposal. Avoid contact.

7. HANDLING AND STORAGE

Signal Word: Warning!

Precautions: Causes irritation if inhaled and can cause skin irritation, eye irritation, allergic respiratory reaction, and allergic skin reaction. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

Other Handling Information: Nuisance dust may be generated when sanding or sawing cured material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Effective Date: 10/24/06

Skin Protection: Impervious synthetic gloves.

Respiratory Protection: If a person is concerned with exposure to isocyanates, an organic respirator can provide protection at less than the TLV. It is not a requirement at an exposure level less than the TLV. For exposures in excess of the TLV, an air supplied respirator would be required. Conditions that may create exposures above the TLV are spray applications, the material being strongly heated in excess of 125F before application, or the use of material in poorly ventilated areas.

Eye Protection: Wear splash-proof chemical goggles.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Milky
Color:	White
Physical State:	Liquid
Solubility in Water:	Reacts with water
Vapor Pressure:	Not Determined
Specific Gravity:	1.14 (water = 1)
Boiling Point:	Not Determined
Evaporation Rate:	Not Determined
Vapor Density:	Not Determined
VOC:	0 g/L
pH:	Not Determined

Percent Volatile: Negligible.

10. STABILITY AND REACTIVITY

Conditions to Avoid: Contamination with moisture and other products that react with isocyanates. Avoid prolonged heating over 160f or storing below 75f. Avoid water contamination.

Stability: Stable.

Incompatibility: Water, alcohols, strong oxidizing agents, strong bases, metal-organic compounds.

Hazardous Decomposition Products: Combustion may form toxic materials. Carbon monoxide, carbon dioxide, benzene, toluene, oxides of nitrogen, hydrogen cyanide.

Hazardous Polymerization: May occur.

11. TOXICOLOGICAL INFORMATION

Acute Inhalation Exposure Effects: Respiratory irritant.

Sensitization: Causes allergic skin and respiratory reactions.

Skin Irritation: Irritant.

Effective Date: 10/24/06

Eye Irritation: Irritant.

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.

Additional Information: Disposal of Cured Product: This product when cured may contain very small quantities of organic mercury compounds. It is the responsibility of the user to determine if the selected disposal method complies with applicable regulations.

14. TRANSPORT INFORMATION**DOT: Non-Bulk**

Proper Shipping Name: Resin compounds, N.O.I.

Department of Transportation: Not regulated as a hazardous material by the U.S. Dept. of Transportation (DOT) 49 CFR 172.101 hazardous materials table.

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 specifically listed as hazardous waste under RCRA (40 CFR 261). However, it is strongly recommended that compound be treated as a hazardous waste and disposed of accordingly.

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.

State Regulations:

California Proposition 65: This product does not contain any chemicals currently on the California list of Known Carcinogens and Reproductive Toxins.

Effective Date: 10/24/06

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

Chemical Name: Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), polymer with 1,1'-methylenebis(4-isocyanatobenzene)

Common Name: Polymeric MDI

CAS Number: 68133-49-3

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

16. OTHER INFORMATION

MSDS No:	5637
Approved By:	Dianne Blessing
Title:	EHS Specialist

Disclaimer: The information and recommendations contained herein are based upon tests in controlled laboratory conditions, are believed to be correct, and are provided for the sole purpose of hazard communication as part of Huntsman's product safety program. This product has not been tested for, and therefore is not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses.

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4917 Dawn Avenue
East Lansing, MI 48823-5691

8am to 5pm Phone: (517) 351-5900
24-Hour Emergency Phone: 1-888-354-3323

Effective Date: 5/27/05

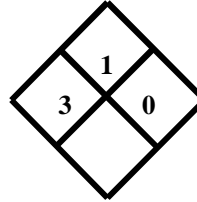
Material Safety Data Sheet

MSDS No: 5638

1. PRODUCT IDENTIFICATION

Trade Name: Araldite 2042/B

Chemical Family: Polyol



NFPA RATING

Health:	3*
Flammability:	1
Reactivity:	0
Personal Protection:	

HMIS RATING

Intended Use or Product Type: Polyurethane adhesive hardener

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 Common Name:	Quartz (SiO ₂) Crystalline silica	0.05 mg/m ³	NE	0.1 mg/m ³	NE	NE	Yes	Yes	NR
*	3077-13-2 Common Name:	2-Propanol-1,1'-(phenylamino)bis 2-Hydroxypropyl aniline	NE	NE	NE	NE	NE	NR	NR	NR
*	61788-32-7 Common Name:	Terphenyl, hydrogenated Plasticizer	0.5 ppm	NE	0.5 ppm	NE	NE	NR	NR	NR
*	69102-90-5 Common Name:	Homopolymer, hydroxy terminated 1,3-butadiene Polybutadiene polyol	NE	NE	NE	NE	NE	NR	NR	NR
*	694-83-7 Common Name:	1,2-Cyclohexanediamine 1,2-Diaminocyclohexane	NE	NE	NE	NE	NE	NR	NR	NR
*	94-96-2 Common Name:	2-Ethyl-1,3-hexanediol 2-Ethyl-1,3-hexanediol	NE	NE	NE	NE	NE	NR	NR	NR

* = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: Corrosive - Causes eye burns and skin irritation.

Effective Date: 5/27/05

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

Chronic: Contains crystalline silica. Breathing dust may cause cancer and delayed lung injury. 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: If conscious, give 2 - 4 glasses of water to drink. Do not induce vomiting. Call a physician.

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

Inhalation: Remove to fresh air. Call a physician.

Eyes: Immediately flush eyes with water for at least 15 minutes. Call a physician.

Overexposure Effects: Corrosive - causes eye burns. Causes skin irritation.

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: 205°F (96 °C)

Flash Point Method Used: PMCC

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.

6. ACCIDENTAL RELEASE MEASURES

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

7. HANDLING AND STORAGE

Signal Word: Danger!

Effective Date: 5/27/05

Precautions: Corrosive - causes eye burns. Can cause skin irritation. Do not get in eyes. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling. Notice! Contains crystalline silica. Breathing dust may cause cancer and delayed lung injury.

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:	Red
Odor:	Mild
Physical State:	Liquid
Solubility in Water:	Slight
Vapor Pressure:	3.7 mm Hg at 95°C (203 °F)
Specific Gravity:	1.33 (water = 1)
Boiling Point:	Not Determined
Evaporation Rate:	Not Determined
Vapor Density:	Not Determined
VOC:	26.13 g/L
pH:	Not Determined

Percent Volatile: Negligible.

10. STABILITY AND REACTIVITY

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

Stability: Stable.

Incompatibility: Strong oxidizers, acids and bases.

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

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Effective Date: 5/27/05

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

Skin Irritation: Irritant.

Eye Irritation: Corrosive. Causes burns.

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.

Additional Information: Disposal of Cured Product: This product when cured may contain very small quantities of organic mercury compounds. It is the responsibility of the user to determine if the selected disposal method complies with applicable regulations.

14. TRANSPORT INFORMATION

DOT: Non-Bulk

Proper Shipping Name: Resin compounds, N.O.I.

Department of Transportation: Not regulated as a hazardous material by the U.S. Dept. of Transportation (DOT) 49 CFR 172.101 hazardous materials table.

15. REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Resource Conservation and Recovery Act (RCRA): D 009 contains mercury.

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(s) comprising this product are either exempt or listed on the TSCA inventory.

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

Effective Date: 5/27/05

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: 22.1399 % by wt
Comment: Warning! This chemical is known to the State of California to cause cancer.

Chemical Name: Phenyl Mercury Acetate
Common Name: Organomercury catalyst
CAS Number: 62-38-4
Percent in Composition: 0.9 % by wt
Comment: Warning! This chemical is known to the State of California to cause birth defects or other reproductive harm.

Chemical Name: Cyclohexene, 4-ethenyl-
Common Name: Vinyl cyclohexane
CAS Number: 100-40-3
Percent in Composition: 0.0016 % by wt
Comment: Warning! This chemical is known to the State of California to cause cancer.

Chemical Name: Benzene, methyl-
Common Name: Toluene
CAS Number: 108-88-3
Percent in Composition: 0.0013 % by wt
Comment: Warning! This chemical is known to the State of California to cause birth defects or other reproductive harm.

Chemical Name: 1,3-Butadiene
Common Name: Butadiene
CAS Number: 106-99-0
Percent in Composition: 0.0002 % by wt
Comment: Warning! This chemical is known to the State of California to cause cancer.

Chemical Name: Lead
CAS Number: 7439-92-1
Percent in Composition: 0.0001 % by wt
Comment: Warning! This chemical is known to the State of California to cause cancer and birth defects or other reproductive harm.

Chemical Name: Cadmium
CAS Number: 7440-43-9
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.

Chemical Name: Arsenic
CAS Number: 7440-38-2
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.

Effective Date: 5/27/05

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

Chemical Name: Homopolymer, hydroxy terminated 1,3-butadiene

Common Name: Polybutadiene polyol

CAS Number: 69102-90-5

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Limestone

Common Name: Calcium carbonate

CAS Number: 1317-65-3

Comment: Hazardous Substance

Chemical Name: Quartz (SiO₂)

Common Name: Crystalline silica

CAS Number: 14808-60-7

Comment: Hazardous Substance

Chemical Name: 2-Propanol-1,1'-(phenylamino)bis

Common Name: 2-Hydroxypropyl aniline

CAS Number: 3077-13-2

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: 2-Ethyl-1,3-hexanediol

Common Name: 2-Ethyl-1,3-hexanediol

CAS Number: 94-96-2

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Terphenyl, hydrogenated

Common Name: Plasticizer

CAS Number: 61788-32-7

Comment: Hazardous Substance

Chemical Name: Silica

Common Name: Fumed Silica

CAS Number: 7631-86-9

Comment: Hazardous Substance

16. OTHER INFORMATION

MSDS No:	5638
Approved By:	Dianne Blessing
Title:	EHS Specialist

Disclaimer: The information and recommendations contained herein are based upon tests in controlled laboratory conditions, are believed to be correct, and are provided for the sole purpose of hazard communication as part of Huntsman's product safety program. This product has not been tested for, and therefore is not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses.

Effective Date: 5/27/05

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