

4917 Dawn Avenue  
East Lansing, MI 48823-5691

8am to 4:30pm Phone: (517) 351-5900  
24-Hour Health/Environmental Emergency Phone: 1-888-354-3323

**Effective Date:** 11/8/00

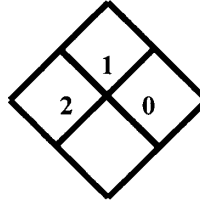
**Material Safety Data Sheet**

MSDS No: 5719

**1. PRODUCT IDENTIFICATION**

**Trade Name:** Arathane AW 5540

**Chemical Family:** Isocyanate



NFPA RATING

Health	2*
Flammability	1
Reactivity	0
Protective Equipment	

HMIS RATING

**Synonyms:**  
RP 5540 Resin

**Intended Use or Product Type:** Polyurethane Adhesive Resin.

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				MFR.	CARCINOGEN STATUS		
			ACGIH		OSHA			IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	101-68-8	Benzene, 1,1'-Methylenebis[4-Isocyanato-MDI Common Name:	.005 ppm	NE	.02 ppm	NE	NE	NR	NR	NR
*	14808-60-7	Quartz (SiO <sub>2</sub> ) Common Name: Crystalline Silica	.1 mg/m <sup>3</sup>	NE	mg/m <sup>3</sup>	NE	NE	Yes	Yes	NR
*	9016-87-9	Isocyanic Acid, Polymethylenepolyphenylene Ester Common Name: Polymethylene polyphenyl isocyanate	NE	NE	NE	NE	NE	NR	NR	NR
	53862-89-8	MDI PREPOLYMER	NE	NE	NE	NE	NE	NR	NR	NR

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

**3. HAZARDS IDENTIFICATION**

**Emergency Overview:** Harmful if inhaled. Causes skin and eye irritation. Causes allergic skin and respiratory reactions.

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**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:** 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:** 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**

<b>Flash Point:</b>	> 350°F (> 177 °C)
<b>Flash Point Method Used:</b>	PMCC
<b>Flammable Limits in Air (Lower - % by volume):</b>	Not established
<b>Flammable Limits in Air (Upper - % by volume):</b>	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:** Warning!

**Precautions:** Can cause skin irritation, eye irritation, allergic respiratory reaction, and allergic skin reaction. Can be harmful if inhaled. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Keep container closed when not in use. Use

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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

<b>Color:</b>	Dark Brown
<b>Physical State:</b>	Viscous Liquid
<b>Solubility in Water:</b>	Reacts with water
<b>Vapor Pressure:</b>	< 0.001 mm Hg at 77°F (25 °C)
<b>Specific Gravity:</b>	1.4 (water = 1)
<b>Boiling Point:</b>	Not Determined
<b>Evaporation Rate:</b>	Not Determined
<b>Vapor Density:</b>	> 1 (Air = 1)
<b>VOC:</b>	0 g/L
<b>pH:</b>	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

**Sensitization:** Causes allergic skin and respiratory sensitivity in some people.

**Skin Irritation:** Irritant.

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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 contains a toxic chemical(s) for routine annual toxic chemical release reporting under section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Chemical Name: Isocyanic Acid, Polymethylenepolyphenylene Ester

Common Name: Polymethylene polyphenyl isocyanate

Percent in Composition: 15 % by wt

Comment:

Chemical Name: Benzene, 1,1'-Methylenebis[4-Isocyanato-

Common Name: MDI

Percent in Composition: 15 % by wt

Comment:

**TSCA Section 8(b) - Inventory Status:** Chemical components listed on TSCA Inventory.

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**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:** 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 (SiO<sub>2</sub>)  
Common Name: Crystalline Silica  
CAS Number: 14808-60-7  
Percent in Composition: 33.9998 % 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: 0.0001 % 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: 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.

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

Chemical Name: MDI PREPOLYMER  
CAS Number: 53862-89-8  
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Quartz (SiO<sub>2</sub>)  
Common Name: Crystalline Silica  
CAS Number: 14808-60-7  
Comment: Hazardous Substance

Chemical Name: Isocyanic Acid, Polymethylenepolyphenylene Ester  
Common Name: Polymethylene polyphenyl isocyanate  
CAS Number: 9016-87-9  
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Benzene, 1,1'-Methylenebis[4-Isocyanato-  
Common Name: MDI  
CAS Number: 101-68-8

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Comment: Environmental Hazardous Substance

**16. OTHER INFORMATION**

**MSDS No:** 5719  
**Approved By:** Kenneth L. Payne  
**Title:** E,H&S Manager

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