

MATERIAL SAFETY DATA SHEET

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SECTION 1 - MATERIAL IDENTIFICATION  
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100478

PRODUCT NAME                    AIRTHANEX PET-90A POLYURETHANE INTERMEDIATE  
                                  \*AIRTHANE is a registered trademark of Air  
                                  Products and Chemicals, Inc.

PRODUCT CODE                    PET90A

MSDS REVISION NUMBER         3

MANUFACTURER                   Air Products and Chemicals, Inc. 7201  
                                  Hamilton Blvd., Allentown, PA 18195-1501

TELEPHONE NUMBER              800-345-3148

EMERGENCY TELEPHONE NUMBER(S)  
                                  800-523-9374 (Continental U.S.)  
                                  610-481-7711 (Outside Continental U.S.)

DATE PREPARED                   MARCH 1997

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EMERGENCY OVERVIEW  
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HMIS HEALTH RATING    1                    FLAMMABILITY    1                    REACTIVITY    1  
PHYSICAL FORM            Viscous liquid

COLOR                            Straw yellow

ODOR                              Odorless

HAZARDS                         Mild eye irritant. Mild skin irritant.

EXTINGUISHING MEDIA    Ignition will give rise to a Class B fire. In  
                                  case of large fire use: Alcohol Foam. In case of  
                                  small fire use: Carbon Dioxide (CO2), Dry  
                                  Chemical, Dry sand or limestone.

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C.A.S. CHEMICAL NAME         POLYMER WITH TDI AND PTMEG

SYNONYMS                        None

CHEMICAL FAMILY                Polyurethane

EMPIRICAL FORMULA             No Data

INTENDED USE                    Cast Elastomer

REVISION NOTES                 Updated health hazard data

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**SECTION 2 - INGREDIENTS**  
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#	%	CAS Number and Chemical Name
1.	100.00	9069-50-5 POLYMER WITH TDI AND PTMEG

**OSHA (ACGIH) EXPOSURE LIMITS**

	TWA		STEL		CEILING	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
1. OSHA	N/E	N/E	N/E	N/E	N/E	N/E
ACGIH	N/E	N/E	N/E	N/E	N/E	N/E

N/E = Not Established.

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**SECTION 3 - HEALTH HAZARDS**  
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**ROUTES OF EXPOSURE**

Eye Contact  
Skin Contact  
Ingestion

**EXPOSURE STANDARDS**

See Section 2 for exposure standards on ingredients. Maintain air contaminant concentrations in the workplace at the lowest feasible levels.

**HEALTH HAZARDS**

Mild eye irritant.  
Mild skin irritant.

**TARGET ORGANS**

None known

**SIGNS AND SYMPTOMS OF EXPOSURE (Acute effects)**

Contact with eyes causes mild irritation and discomfort. Contact with skin causes mild irritation and discomfort. Inhalation of mists may cause irritation in the respiratory tract.

Risk of exposure to hazardous concentrations of vapor under normal working conditions in a well ventilated space is minimal. However, conditions such as spraying, or sudden release of hot liquid, which generate an aerosol, mists or fog should be avoided.

**SIGNS AND SYMPTOMS OF EXPOSURE (Possible Longer Term Effects)**

No known effects

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE**

None known

**CARCINOGENS UNDER OSHA, ACGIH, NTP, IARC, OTHER**

This product contains no carcinogens in concentrations of 0.1 percent or greater.

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**SECTION 4 - FIRST AID**  
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**EYE CONTACT**

Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes.

**SKIN CONTACT**

Wash affected area with soap and water. Remove contaminated clothing and shoes.

**INHALATION**

Move patient to fresh air. If breathing has stopped or is labored give assisted respiration (e.g. mouth-to-mouth). Prevent aspiration of vomit. Turn victim's head to the side. Seek medical advice.

**INGESTION**

If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

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**SECTION 5 - FIRE AND EXPLOSION DATA**  
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FLASH POINT (closed cup) >177.00 C (>350.60 F)

UPPER EXPLOSION LIMIT (UEL) No Data

LOWER EXPLOSION LIMIT (LEL) No Data

AUTOIGNITION TEMPERATURE No Data

FIRE HAZARD CLASSIFICATION (OSHA/NFPA)

Class IIIB

**EXTINGUISHING MEDIA**

Ignition will give rise to a Class B fire. Do not add water or other liquids to this product. In case of large fire use: Alcohol Foam. In case of small fire use: Carbon Dioxide (CO<sub>2</sub>), Dry Chemical, Dry sand or limestone.

**SPECIAL FIRE FIGHTING PROCEDURES**

Firefighters should wear butyl rubber boots, gloves, and body suit and a self-contained breathing apparatus.

Retain expended liquids from fire fighting for later disposal.

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

May generate toxic or irritating combustion products.

May generate carbon monoxide gas. May generate hydrogen cyanide

gas.

Personnel in vicinity and downwind should be evacuated.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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### CONTAINMENT TECHNIQUES (Removal of ignition sources, diking etc)

Shut off or remove all ignition sources.

### CLEAN-UP PROCEDURES

If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent (sodium bisulfate) and place in a container or dumpster pending disposal. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Clean-up personnel must be equipped with self contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck. Prepare a decontamination solution of 0.2-5% liquid detergent and 3-8% concentrated ammonium hydroxide in water. Treat spill area with decontamination solution, using about 10 parts of the solution for each part of the spill and allow it to react for at least 10 minutes for trace amounts and 48 hours for large spills. Neutralize the waste. Carbon dioxide will evolve, leaving insoluble polyureas.

### OTHER EMERGENCY ADVICE

Wear protective clothing, boots, gloves, and eye protection.

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## SECTION 7 - HANDLING AND STORAGE

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### STORAGE

Keep away from: oxidizers, moisture.

### HANDLING

Avoid contact with skin or eyes. When handling, do not eat, drink, or smoke.

### OTHER PRECAUTIONS

Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations (e.g. OSHA).

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## SECTION 8 - PERSONAL PROTECTION/EXPOSURE CONTROLS

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### EYE PROTECTION

Chemical safety glasses. Full face shield with goggles underneath when molten material is being handled.

### HAND PROTECTION

Insulated gloves when handling hot material.

#### RESPIRATORY PROTECTION

Not required under normal conditions in a well-ventilated workplace.

#### PROTECTIVE CLOTHING

Long sleeved clothing.

#### ENGINEERING CONTROLS

Maintain air concentrations in work spaces in accord with standards outlined in Sections 2 and 3.

#### WORK AND HYGIENIC PRACTICES

Provide readily accessible eye wash stations and safety showers.

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### SECTION 9 - TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

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PHYSICAL FORM	Viscous liquid
COLOR	Straw yellow
ODOR	Odorless
pH	9.00
VAPOR PRESSURE (mm Hg at 21C (70F))	<1.00
VAPOR DENSITY (Air = 1)	No Data
BOILING POINT	>250.00 C (>482.00 F)
MELTING POINT	No Data
SOLUBILITY IN WATER	Reacts slightly with water
SPECIFIC GRAVITY (Water = 1)	1.06
MOLECULAR WEIGHT	No Data

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### SECTION 10 - STABILITY AND REACTIVITY

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#### CHEMICAL STABILITY

Stable

#### CONDITIONS TO AVOID (if unstable)

Not applicable

#### INCOMPATIBILITY (Materials to Avoid)

Oxidizing Agents (i.e. perchlorates, nitrates etc.). Sodium or Calcium Hypochlorite. Alcohols. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Product reacts slowly with water which results in the liberation of carbon dioxide.

#### HAZARDOUS DECOMPOSITION PRODUCTS (from burning, heating, or reaction with other materials).

Carbon Monoxide in a fire. Carbon Dioxide in a fire. Irritating and toxic fumes at elevated temperatures. nitriles. cyanic acid. isocyanates. cyanogens. amides. carbamates. toxic cyanates.

**HAZARDOUS POLYMERIZATION**

Will not occur

**CONDITIONS TO AVOID (if polymerization may occur)**

Not applicable

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**SECTION 11 - TOXICOLOGICAL PROPERTIES**  
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**ACUTE ORAL TOXICITY (LD50, RAT)**

>5000.00 mg/kg (No deaths) (Estimate)

**ACUTE DERMAL TOXICITY (LD50, RABBIT)**

>5000.00 mg/kg (No deaths) (Estimate)

**ACUTE INHALATION TOXICITY (LC50, RAT)**

>10.00 mg/L / 1 hr (No deaths) (Estimate)

**MISCELLANEOUS TOXICITY DATA**

Industrial chemicals such as this material with acute toxicity values shown above and whose vapors or mists are not likely to be encountered by humans when used in any reasonably foreseeable manner would not require a toxic label according to U.S. domestic and international transport regulations.

**OTHER ACUTE EFFECTS**

No Data

**IRRITATION EFFECTS DATA**

Irritation data based on estimates.

**CHRONIC/SUBCHRONIC DATA**

No delayed, subchronic or chronic test data are known.

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**SECTION 12 - ECOLOGICAL INFORMATION**  
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No Data

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**SECTION 13 - DISPOSAL CONSIDERATIONS**  
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**WASTE DISPOSAL**

Comply with all Federal, State and Local Regulations.

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**SECTION 14 - TRANSPORT INFORMATION**  
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DOT NON-BULK SHIPPING NAME      RESIN COMPOUND - Not DOT Regulated

IMO SHIPPING DATA                      RESIN COMPOUND - Not IMO Regulated  
ICA0/IATA SHIPPING DATA              RESIN COMPOUND - Not IATA Regulated

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**SECTION 15 - REGULATORY INFORMATION**  
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**US FEDERAL REGULATIONS**

**TOXIC SUBSTANCES CONTROL ACT (TSCA)-**

All components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

OSHA Hazard Communication Standard (29CFR1910.1200) hazard class(es)  
None

EPA SARA Title III Section 312 (40CFR370) hazard class  
None

EPA SARA Title III Section 313 (40CFR372) toxic chemicals above "de minimis" level are  
None

**STATE REGULATIONS**

PROPOSITION 65 SUBSTANCES (component(s) known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986")

2,4-TOLUENEDIISOCYANATE  
2,6-TOLUENEDIISOCYANATE

NEW JERSEY TRADE SECRET REGISTRY NUMBER(S)  
None

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**SECTION 16 - INTERNATIONAL REGULATIONS**  
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**CANADA**

DSL

Included on Inventory.

WHMIS HAZARD CLASSIFICATION

None

WHMIS TRADE SECRET REGISTRY NUMBER(S)

None

WHMIS SYMBOLS

None

**EUROPEAN ECONOMIC COMMUNITY (EEC)**

EINECS MASTER INVENTORY

Included on Inventory.

Chemicals, Inc.

ward

-1501

-4911

**AIR**  
**PRODUCTS** 

**SPECIAL PHRASES**

Contains Isocyanates. See information supplied by the manufacturer.