

## MATERIAL SAFETY DATA SHEET (2-parts)

### SECTION I – Product/Company Identification

**1.1 Product Trade Name:** Panocast PART - A  
**1.2 Part (Item) Number:** SP400702R, SP400711R, SP400745R, SP400702W, SP400711W, SP400745W  
**1.3 Division Name:** ArtMolds  
**1.4 Address:** 18 Bank Street  
City State ZIP Summit NJ 07901  
**1.5 Emergency Telephone:** 1-866-278-6653  
**1.6 Information Telephone:** 1-908-273-5401  
**1.7 Date Prepared:** 8/28/02 **Date Revised** 9/20/05

### SECTION II – Hazardous Ingredients/Identity Information

<u>Hazardous Components</u>	<u>%</u>	<u>SHA PEL</u>	<u>ACGIH TLV</u>	<u>CAS Number</u>
4, 4- Diphenylmethane Diisocyanate	45-50	.02 PPM		101688
Higher Oligomers of MDI	40-50			9016879

### SECTION III – Physical/Chemical Properties

**3.1 Boiling Point:** 646 deg F  
**3.2 Vapor Pressure:** <0.0001  
**3.3 Vapor Density:** 8.6  
**3.4 Solubility in water:** Reacts  
**3.5 Appearance and odor:** Viscous liquid with light to dark amber color  
**3.6 Specific Gravity:** 1.2  
**3.7 Melting point:** N/A  
**3.8 Evaporation rate:** <1

### SECTION IV – Fire and Explosion Hazard Data

**4.1 Flash Point (method used):** 425 deg F astm D56 tag closed cup  
**4.2 Flammability (explosive limits):** **LEL:** nonvolatile liquid **UEL:** nonvolatile liquid  
**4.3 Extinguishing media:** Dry chemical extinguishers or water spray for large fires  
**4.4 Special fire fighting procedures:** Use approved respirator and body protection when water use, use large amounts as the reaction between hot isocyanates and water can be vigorous.  
**4.5 Unusual fire and Explosion hazards:** Water contamination will produce carbon dioxide. Do not reseal containers as pressure builds up it may rupture them.

### SECTION V – Reactivity Data

**5.1 Stability:** **Unstable:** **Stable: X**  
**5.2 Conditions to avoid:** Avoid temperatures and water greater than 347 deg F.  
**5.3 Incompatibility (materials to avoid):** Water, strong bases, alcohols, metal compounds and surface agents. Will cause some corrosion to copper alloys and aluminum. Strong oxidants and ignition sources due to petroleum solvent.  
**5.4 Hazardous decomposition or byproducts:** @ >400 deg F, carbon monoxide, oxides or nitrogen and traces of hydrogen cyanide as well as co and aldehydes.  
**5.5 Hazardous polymerization:** **May Occur: X** **May not occur:**  
**5.6 Conditions to avoid (polymerization)** CO2, NH3, CO

### SECTION VI – Health Hazard Data

<b>6.1 Primary routes(s) of entry:</b>	<b>Inhalation?:</b> Yes	<b>Skin?:</b> Yes	<b>Ingestion?:</b> Yes
<b>6.2 Health Hazards (acute and chronic):</b>	<b>Acute:</b> N/A		
	<b>Chronic:</b> N/A		
<b>6.3 Carcinogenicity:</b>	<b>NTP?:</b> No	<b>IARC monographs:</b> No	<b>OSHA Regulated?:</b> No
<b>6.4 Signs and symptoms of exposure:</b>			
<b>6.5 Medical conditions generally aggravated by exposure:</b>			
<b>6.6 Emergency First aid procedures:</b>	Eye: Flush with clean, warm water at low pressure for at least 15 minutes occasionally lifting the eyelids. Consult a physician immediately. Skin: Wash exposed skin with warm soapy water thoroughly. Alcohol may be helpful. Consult a physician if swelling or redness occurs.		

## SECTION VII – Precautions for Safe Handling

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<b>7.1 Steps to be taken in case material is released or spilled:</b>	Only properly protected personnel should remain in the area. Contain the spill, cover liquid with absorbent material (kitty litter, vermiculite) place in open top containers and treat with a decontamination solution (90% water, 6% ammonia, 4% detergent) Remove containers to a safe area and let stand 24-48 hours. Ventilate area to remove vapors. Dispose by local regulations.
<b>7.2 Waste Disposal methods:</b>	Dispose by local regulations.
<b>7.3 Precautions to be taken in handling and storage:</b>	Keep container closed. Store in a cool place.
<b>7.4 Other precaution:</b>	Keep away from heat, sparks and flame. Use only with adequate ventilation. Wash thoroughly after handling.

## SECTION VII – Control Measure / Personal Protection

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<b>8.1 Respiratory protection:</b>	For short term exposures use an organic filter respirator mask of a type approved by niosh or U.S. mining enforcement and safety administration. Supply air or self-contained breathing apparatus is preferred. MDI has a low vapor pressure and is mandatory. No smoking or open lights permitted.
<b>8.2 Ventilation:</b>	General mechanical or local exhaust to maintain levels below TLV.
<b>8.3 Protective gloves:</b>	Chemical resistant gloves such as natural rubber or vinyl. Cover as much of the exposed skin as possible with appropriate clothing. If skin creams are used, keep area covered by cream to a minimum.
<b>8.4 Eye protection:</b>	Liquid chemical goggles or full face shield. No contact lenses should be worn.
<b>8.5 Other protective clothing or equipment:</b>	Safety showers and eye wash stations should be accessible in all work areas. All employees should be properly trained.
<b>8.6 Work/Hygienic practices:</b>	N/A

NFPA – National Fire Protection Association  
N/A – Not Applicable  
N/E – Not Established

NFPA HAZARD CLASSIFICATIONS	
Health	1
Flammability	1
Reactivity	1
Special	

## MATERIAL SAFETY DATA SHEET (2-parts)

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### SECTION II – Hazardous Ingredients/Identity Information

<u>Hazardous Components</u>	<u>%</u>	<u>SHA PEL</u>	<u>ACGIH TLV</u>	<u>CAS Number</u>
Hydroxyl Terminated Poly, (oxyalkylene) Polyether Tertiary Amine Bearing Compound	96% <2%	N/E N/E	N/E N/E	9082002 N/E

### SECTION III – Physical/Chemical Properties

**3.1 Boiling Point:** Decomposes  
**3.2 Vapor Pressure:** NE  
**3.3 Vapor Density:** NE  
**3.4 Solubility in water:** Slightly Soluble  
**3.5 Appearance and odor:** Viscous liquid, color different by type, with slight ammonia odor.  
**3.6 Specific Gravity** 1.06  
**3.7 Melting point:** N/A  
**3.8 Evaporation rate:** N/A

### SECTION IV – Fire and Explosion Hazard Data

**4.1 Flash Point (method used):** 325 deg F ASTM D56 tag closed cup  
**4.2 Flammability (explosive limits):** LEL: NE UEL: NE  
**4.3 Extinguishing media:** Dry chemical type monoammonium phosphate, potassium, sulfate, potassium chloride, carbon dioxide, high expansion (proteinic) chemical foam, water spray for large fires.  
**4.4 Special fire fighting procedures:** Do not direct solid water, stream, or foam into hot burning pools.  
**4.5 Unusual fire and Explosion hazards:**

### SECTION V – Reactivity Data

**5.1 Stability:** Unstable: Stable: X  
**5.2 Conditions to avoid:** NE  
**5.3 Incompatibility (materials to avoid):** Isocyanates, acids and oxidizing materials  
**5.4 Hazardous decomposition or byproducts:** None  
**5.5 Hazardous polymerization:** May Occur: May not occur: X  
**5.6 Conditions to avoid (polymerization)** N/A

### SECTION VI – Health Hazard Data

**6.1 Primary routes(s) of entry:** Inhalation?: Yes Skin?: Yes Ingestion?: Yes  
**6.2 Health Hazards (acute and chronic):** Acute N/A Chronic: N/A  
**6.3 Carcinogenicity:** NTP?: No IARC monographs: No OSHA Regulated?: No  
**6.4 Signs and symptoms of exposure:** N/A

**6.5 Medical conditions generally aggravated by exposure:**

N/A

**6.6 Emergency First aid procedures:**

Eye: Flush with clean , lukewarm water at low pressure for at least 15 minutes, occasionally lifting eyelids. Consult a physician immediately. Ingestion: Induce vomiting. Never induce vomiting or give anything to drink to an unconscious person.. Inhalation: remove victim from area of exposure to fresh air. Skin: Remove contaminated clothing. Wash exposed areas thoroughly with warm soapy water. Contaminated clothing should be properly laundered before reusing.

## **SECTION VII – Precautions for Safe Handling**

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**7.1 Steps to be taken in case material is released or spilled:**

Contain the spill or leak, scrape up with cardboard or a bag and place in a container.

**7.2 Waste Disposal methods:**

Waste material may be incinerated or disposed of under local, state, and federal regulations.

**7.3 Precautions to be taken in handling and storage**

Storage temperature: (min/max): 64 def F (18c) to 86 deg F ( 30c)

**7.4 Other precaution:**

This product is hygroscopic. Containers should be tightly sealed to prevent moisture contamination. Do not expose to high temperatures for any length of time.

## **SECTION VII – Control Measure / Personal Protection**

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**8.1 Respiratory protection:**

N/A

**8.2 Ventilation:**

N/A

**8.3 Protective gloves:**

N/A

**8.4 Eye protection:**

N/A

**8.5 Other protective clothing or equipment:**

N/A

**8.6 Work/Hygienic practices:**

N/A

NFPA – National Fire Protection Association  
N/A – Not Applicable  
N/E – Not Established

<b>NFPA HAZARD CLASSIFICATIONS</b>	
Health	1
Flammability	1
Reactivity	0
Specific Hazard	