

# Material Safety Data Sheet

## Pro-Cast Tool Resin Part A

Date of Preparation: December 9, 2008

Revision:

### Section 1 - Chemical Product and Company Identification

**Product/Chemical Name:** Pro-Cast Tool Resin Part A

**Chemical Family:** Isocyanate

**CAS Number:** N/A

**Other Designations:** N/A

**General Use:** N/A

**Manufacturer:** Pro-Cast, 1101 Moore Road, Avon, OH 44011 Phone (440) 934-1902, FAX (440) 934-7200, Hours of Operation 8-5, Emergency phone number 1-800-424-9300

**HMIS**

**H** 2

**F** 2

**R** 0

**PPE**†

†Sec. 8

#### ☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Combustible. Causes skin, eye, and respiratory irritations. May cause allergic skin and respiratory reactions.

### Section 2 - Composition / Information on Ingredients

**Ingredient Name**

**CAS Number**

Polymeric Diphenylmethane Diisocyanate

9016-87-9

Ingredient	OSHA		ACGIH		Vapor Pressure
	PEL	STEL	TLV	STEL	
Polymeric Diphenylmethane Diisocyanate	none estab.	none estab.	none estab.	none estab.	N/A

### Section 3 - Physical and Chemical Properties

**Appearance and Odor:** White liquid, mild odor

**Vapor Pressure:** Not determined

**Vapor Density (Air=1):** Not determined

**VOC Content:** Not determined

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 1.80

**Water Solubility:** Reacts with water

**Boiling Point:** Not determined

**% Volatile:** Not determined

**Evaporation Rate:** Not determined

**pH:** Not determined

### Section 4 - Fire-Fighting Measures

**Flash Point:** >230 °F (> 110°C)

**Flash Point Method:** Estimated

**LEL:** Not established

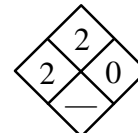
**UEL:** Not established

**Extinguishing Media:** Foam, CO<sub>2</sub>, dry chemical.

**Fire-Fighting Equipment:** Use self-contained breathing apparatus.

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

NFPA



### Section 5 - Stability and Reactivity

**Stability:** Stable.

**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.

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

**Hazardous Combustion Products:** Carbon dioxide, carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors.

**Hazardous Polymerization:** May occur. Avoid contact with moisture or other material, which react with isocyanates. May occur at temperatures above 400° F (204° C).

## Section 6 - Health Hazard Information

### Potential Health Effects

**Primary Entry Routes:** Skin; Inhalation from heated vapors.

**Acute Effects**

**Inhalation:** Irritation to eyes, skin, and respiratory tract. May cause asthmatic-like symptoms.

**Eye:** Eye irritation may include tearing, reddening, and swelling.

**Skin:** Skin irritation may include reddening, swelling, rash, scaling or blistering, and in some cases, skin sensitization.

**Ingestion:** Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

**Medical Conditions Aggravated by Long-Term Exposure:** Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyperactivity) skin allergies, eczema.

**Chronic Effects**

**Inhalation:** As a result of previous repeated overexposures, certain individuals develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed (up to several hours after exposure). Sensitization can either be temporary or permanent.

**Eye:** None found.

**Skin:** Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapors.

**Ingestion:** None found.

**Carcinogenicity:** IARC, NTP, and OSHA do not list any component as carcinogenic.

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### Emergency and First Aid Procedures

**Inhalation:** Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Call a physician.

**Eye Contact:** Flush with plenty of water for at least 15 minutes, holding eyelids open all the time. Get medical attention.

**Skin Contact:** Wash thoroughly with soap and water. Remove contaminated clothing and laundry before reuse. Destroy contaminated shoes.

**Ingestion:** Do not induce vomiting. Give 1 to 2 cups of milk or water to drink. Do not give anything by mouth to an unconscious person. Consult a physician.

## Section 7 - Spill, Leak, and Disposal Procedures

**Spill /Leak Procedures:** Evacuate and ventilate spill area; dike spill to prevent entry in to water system; wear full protective equipment including respiratory equipment during clean up. Clean up remainder with absorbent materials such as sand or vermiculate. Mop up and dispose of.

**Disposal:** Dispose in safety containers as a solid waste material. Incineration is the preferred method. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

**Ecological Information:** N/A

**Toxicology Information:**

**Acute Inhalation Exposure Effects:** Respiratory irritant.

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

**Skin Irritation:** Irritant.

**Eye Irritation:** Irritant.

**Regulatory Information:**

**US Federal Regulations:**

OSHA (Occupational Safety and Health Act): This Material Safety Data Sheet 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.

RCRA (Resource Conservation and Recovery Act): 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 311/312 Codes: Acute Health, Fire.

SARA Toxic Chemical (40 CFR 372.65): This product contains the following toxic chemical subject to the reporting requirements of Section 313 of SARA Title III of 1986 and of 40 CFR 372.

Polymeric Diphenylmethane Diisocyanate      CAS # 9016-87-9      15.0 – 25.0 %

TSCA Inventory Status: All ingredients are in compliance with TSCA inventory requirements.

**State Regulations:**

Contains Titanium Dioxide (CAS # 13463-67-7) which is on the New Jersey and Pennsylvania Right to Know Lists

### Section 8 - Exposure Controls / Personal Protection

**Ventilation:** General mechanical and local exhaust in accordance with ACGIH recommendations. Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2).

**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 beyond the TLV, a supplied air respirator is recommended. Conditions that may create exposures above TLV are spray applications, material being heated above 125 F or use in poorly ventilated areas.

**Skin Protection:** Wear impermeable gloves.

**Eye Protection:** Wear splash-proof chemical goggles.

**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

### Section 9 - Special Precautions and Comments

**Handling & Storage:** Store at ambient temperatures or below 90F. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. When resealing cans use a nitrogen purge (Magic Blanket).

**Precautions:** Causes irritation if inhaled and can cause skin irritation, eye irritation, allergic respiratory reaction, and allergic skin reaction. Avoid contact with skin and eyes. Do not breathe vapors. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations.

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

#### DOT Transportation Data (49 CFR 172.101):

**Shipping Name:** Liquid Plastic  
N.O.I., Non-Regulated

**Shipping Symbols:**

**Hazard Class:**

**ID No.:**

**Packing Group:**

**Label:**

**Special Provisions (172.102):**

**Packaging Authorizations**

a) **Exceptions:**

b) **Non-bulk Packaging:**

c) **Bulk Packaging:**

**Quantity Limitations**

a) **Passenger, Aircraft, or Railcar:**

b) **Cargo Aircraft Only:**

**Vessel Stowage Requirements**

a) **Vessel Stowage:**

b) **Other:**

**Prepared By:**

**Revision Notes:**

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# Material Safety Data Sheet

## Pro-Cast Tool Hardener Part B

Date of Preparation: December 9, 2008

Revision:

### Section 1 - Chemical Product and Company Identification

**Product/Chemical Name:** Pro-Cast Tool Hardener Part B

**Chemical Family:** Polyol

**CAS Number:** N/A

**Other Designations:** N/A

**General Use:** N/A

**Manufacturer:** Pro-Cast , 1101 Moore Road, Avon, OH 44011 Phone (440) 934-1902, FAX (440) 934-7200, Hours of Operation 8-5, Emergency phone number 1-800-424-9300.

**HMIS**

**H** 1

**F** 2

**R** 0

**PPE**†

†Sec. 8

#### ☆☆☆☆ Emergency Overview ☆☆☆☆

Combustible. Causes eye, skin, and respiratory irritations.

### Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number
Urethane Polyol	Proprietary
Aromatic Solvent	Blend
Carbon Black	1333-86-4

Ingredient	OSHA		ACGIH		Vapor Pressure
	PEL	STEL	TLV	STEL	
Urethane Polyol	none estab.	none estab.	none estab.	none estab.	N/A
Aromatic Solvent	100 ppm	none estab.	25 ppm	none estab.	1.7 mm Hg @ 68°F
Carbon Black	none estab.	none estab.	none estab.	none estab.	N/A

### Section 3 - Physical and Chemical Properties

**Appearance and Odor:** Liquid, , Gray mild odor

**Vapor Pressure:** Not determined

**Vapor Density (Air=1):** Not determined

**VOC Content:** 1.15 lbs/gal

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 1.80

**Water Solubility:** Slight

**Boiling Point:** Not determined

**% Volatile:** 5-10%

**Evaporation Rate:** Not determined

**pH:** Not determined

### Section 4 - Fire-Fighting Measures

**Flash Point:** 150 °F (66 °C)

**Flash Point Method:** SETA

**LEL:** Not established

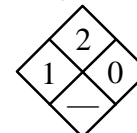
**UEL:** Not established

**Extinguishing Media:** Foam, water, CO<sub>2</sub>, or dry chemical

**Fire-Fighting Equipment:** Use self-contained breathing apparatus.

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

NEPA



### Section 5 - Stability and Reactivity

**Stability:** Stable.

**Conditions to Avoid:** Contamination with materials containing active NCO compounds, excessive heat for prolonged period.

**Chemical Incompatibilities:** Strong oxidizing agents, acids, metal-organic compounds.

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

**Hazardous Polymerization:** Will not occur. Avoid inadvertent mixture of A and B parts.

## Section 6 - Health Hazard Information

### Potential Health Effects

**Primary Entry Routes:** Skin; Inhalation from heated vapors.

**Acute Effects:**

**Inhalation:** Irritates the respiratory tract

**Eye:** Causes irritation

**Skin:** Causes irritation

**Ingestion:** Swallowing can cause abdominal irritation, nausea, vomiting, and diarrhea.

**Medical Conditions Aggravated by Long-Term Exposure:** Persons with severe skin problems should avoid use.

**Chronic Effects:** No known chronic effects associated with this material.

**Carcinogenicity:** IARC has classified Carbon Black to be a Class 2B suspect human carcinogen.

### Emergency and First Aid Procedures

**Inhalation:** Remove to fresh air. If breathing is difficult, give oxygen and/or artificial respiration.

**Eye Contact:** Flush with plenty of water for 15 minutes and get medical attention.

**Skin Contact:** Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

**Ingestion:** If conscious, give 2-4 glasses of water to drink. Do not induce vomiting. Get medical attention.

## Section 7 - Spill, Leak, and Disposal Procedures

**Spill /Leak Procedures:** Stop spill at source. Dike area and contain. Clean up remainder with absorbent materials such as sand or vermiculite. Mop up and dispose of.

**Disposal:** Dispose of in safety containers as a solid water material. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

**Ecological Information:** N/A

**Toxicology Information:**

**Acute Inhalation Exposure Effects:** Respiratory irritant.

**Skin Irritation:** Irritant.

**Eye Irritation:** Irritant.

**Regulatory Information:**

**US Federal Regulations:**

OSHA (Occupational Safety and Health Act): This Material Safety Data Sheet 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.

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

SARA 311/312 Codes: Acute Health, Fire.

SARA Toxic Chemical (40 CFR 372.65): This product contains the following toxic chemical subject to the reporting requirements of Section 313 of SARA Title III of 1986 and of 40 CFR 372.

Xylenes	CAS # 1330-20-7	< 0.1 %
Naphthalene	CAS # 91-20-3	< 0.1 %

TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.

**State Regulations:**

**Revision:**

**Pro-Cast Tool Hardener Part B**

CA Proposition 65 Carbon Black (CAS # 1333-86-4) (airborne particles of respirable size) and naphthalene (CAS # 91-20-3) are listed as cancer hazards.  
Carbon Black (CAS # 1333-86-4) is listed on the New Jersey and Pennsylvania Right to Know Lists.  
May contain trace amounts of xylene (CAS # 1330-20-7) and naphthalene (CAS # 91-20-3) which are on the New Jersey, Pennsylvania and Massachusetts Right to Know lists.  
Barium Sulfate (CAS #7727-43-7) is listed on the Pennsylvania Right to Know List.

**Section 8 - Exposure Controls / Personal Protection**

**Ventilation:** Local exhaust recommended. General mechanical is acceptable. Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2).  
**Respiratory Protection:** Use a NIOSH approved respirator when vapor/mist exposure is likely.  
**Eye Protection:** Wear splash-proof chemical goggles.  
**Skin Protection:** Wear impermeable gloves.  
**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.  
**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

**Section 9 - Special Precautions and Comments**

**Handling & Storage:** Use with adequate ventilation. Avoid prolonged breathing of vapor. Avoid prolonged or repeated contact with skin. Wear safety goggles or face shield. Wear gloves, apron and footwear impervious to this material. Wash clothing before reuse. Store at ambient temperatures or below 90 F. When resealing cans, use a nitrogen purge (Magic Blanket). Keep container tightly closed and upright when not in use to prevent leakage.  
**Other Handling Information:** Nuisance dust may be generated when sanding or sawing cured material.

**DOT Transportation Data (49 CFR 172.101):**

**Shipping Name:** Liquid Plastic,  
N.O.I., Non-Regulated  
**Shipping Symbols:**  
**Hazard Class:**  
**ID No.:**  
**Packing Group:**  
**Label:**  
**Special Provisions (172.102):**

**Packaging Authorizations**  
**a) Exceptions:**  
**b) Non-bulk Packaging:**  
**c) Bulk Packaging:**

**Quantity Limitations**  
**a) Passenger, Aircraft, or Railcar:**  
**b) Cargo Aircraft Only:**

**Vessel Stowage Requirements**  
**a) Vessel Stowage:**  
**b) Other:**

**Prepared By:**  
**Revision Notes:**

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