

# Polymer Technologies

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## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: **SUPER ALLOY TITANIUM PUTTY RESIN**  
MSDS Manufacturer Number: MT003R  
Manufacturer Name: ITW Polymer Technologies  
Address: 130 Commerce Drive  
Montgomeryville, PA 18936  
General Phone Number: (215) 855-8450  
Emergency Phone Number: (215) 855-8450  
CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300  
Canutec: In Canada, call CANUTEC: (613) 996-6666 (call collect)  
MSDS Revision Date: 10/10/2006

### HMIS

Health Hazard	2*
Fire Hazard	1
REACTIVITY	1
Personal Protection	X

\* Chronic Health Effects:

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Iron oxide	1309-37-1	30 - 60 by weight
Iron Silicide	8049-17-0	30 - 60 by weight
Bisphenol A diglycidyl ether resin	25068-38-6	10 - 30 by weight
Inert material	N/A	1 - 5 by weight
Magnesium silicate hydrate	14807-96-6	5 - 10 by weight

## SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview: WARNING! Potential Sensitizer Irritant.  
Route of Exposure: Eyes. Skin. Inhalation. Ingestion.  
Potential Health Effects:  
Eye: Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury.  
Skin: Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.  
Inhalation: Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.  
Ingestion: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.  
Chronic Health Effects: Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction  
Signs/Symptoms: Overexposure can cause headaches, dizziness, nausea, and vomiting.  
Target Organs: Eyes. Skin. Respiratory system. Digestive system.  
Aggravation of Pre-Existing Conditions: Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

## SECTION 4 - FIRST AID MEASURES

<b>Eye Contact:</b>	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
<b>Skin Contact:</b>	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
<b>Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
<b>Ingestion:</b>	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

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## SECTION 5 - FIRE FIGHTING MEASURES

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<b>Flash Point:</b>	>400°F (204.4°C)
<b>Flash Point Method:</b>	Pensky-Martens Closed Cup
<b>Auto Ignition Temperature:</b>	Not determined.
<b>Lower Flammable/Explosive Limit:</b>	Not determined.
<b>Upper Flammable/Explosive Limit:</b>	Not determined.
<b>Fire Fighting Instructions:</b>	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
<b>Extinguishing Media:</b>	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
<b>Unsuitable Media:</b>	Water or foam may cause frothing.
<b>Protective Equipment:</b>	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
<b>Unusual Fire Hazards:</b>	Sealed containers at elevated temperatures may rupture explosively and spread fire due to polymerization. Heating above 300 deg F in the presence of air may cause slow oxidative decomposition and above 500 deg F may cause polymerization.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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<b>Personnel Precautions:</b>	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
<b>Environmental Precautions:</b>	Avoid runoff into storm sewers, ditches, and waterways.
<b>Spill Cleanup Measures:</b>	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in section 8.
<b>Other Precautions:</b>	Pump or shovel to storage/salvage vessels.

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## SECTION 7 - HANDLING and STORAGE

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<b>Handling:</b>	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
<b>Storage:</b>	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.
<b>Special Handling Procedures:</b>	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.
<b>Hygiene Practices:</b>	Wash thoroughly after handling.

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## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

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<b>Engineering Controls:</b>	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training,
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<b>Eye/Face Protection:</b>	inspection and maintenance of the personal protective equipment.
<b>Skin Protection Description:</b>	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
<b>Respiratory Protection:</b>	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data. A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
<b>Other Protective:</b>	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

#### EXPOSURE GUIDELINES

##### Iron oxide :

Guideline ACGIH: ACGIH TLV-TWA 5 mg/m<sup>3</sup>

Guideline OSHA: OSHA PEL-TWA 10 mg/m<sup>3</sup>

##### Magnesium silicate hydrate :

Guideline ACGIH: ACGIH TLV-TWA 2 mg/m<sup>3</sup>

Guideline OSHA: OSHA PEL-TWA 20 mppcf

Notes : Only established PEL and TLV values for the ingredients are listed.

## SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

<b>Physical State Appearance:</b>	Paste.
<b>Color:</b>	Dark gray
<b>Odor:</b>	slight odor
<b>Boiling Point:</b>	>500°F (260°C)
<b>Melting Point:</b>	Not determined.
<b>Specific Gravity:</b>	2.44
<b>Solubility:</b>	negligible
<b>Vapor Density:</b>	>1 (air = 1)
<b>Vapor Pressure:</b>	0.03 mmHg @171°F
<b>Percent Volatile:</b>	0
<b>Evaporation Rate:</b>	<<1 (butyl acetate = 1)
<b>pH:</b>	Neutral.
<b>Molecular Formula:</b>	Mixture
<b>Molecular Weight:</b>	Mixture
<b>Flash Point:</b>	>400°F (204.4°C)
<b>Flash Point Method:</b>	Pensky-Martens Closed Cup
<b>Auto Ignition Temperature:</b>	Not determined.
<b>VOC Content:</b>	0 g/L
<b>Percent Solids by Weight</b>	100

## SECTION 10 - STABILITY and REACTIVITY

<b>Chemical Stability:</b>	Stable under normal temperatures and pressures.
<b>Hazardous Polymerization:</b>	Not reported.
<b>Conditions to Avoid:</b>	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Heating resin above 300 F in the presence of air may cause slow oxidative decomposition.
<b>Incompatible Materials:</b>	Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines).

## SECTION 11 - TOXICOLOGICAL INFORMATION

**Iron Silicide :**

Skin: Skin - Rabbit LD50: >20 gm/kg - [Details of toxic effects not reported other than lethal dose value.](RTECS)

**Bisphenol A diglycidyl ether resin :**

Skin: Skin - Rat LD: >2 gm/kg - [Nutritional and Gross Metabolic - other changes] (RTECS)

Ingestion: Oral - Rat LD: >5 gm/kg - [Nutritional and Gross Metabolic - other changes] (RTECS)

**Magnesium silicate hydrate :**

Skin: Skin - Human Standard Draize Test : 300 ug/3D-I - [mild](RTECS)

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**SECTION 12 - ECOLOGICAL INFORMATION**

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Ecotoxicity: No ecotoxicity data was found for the product.

Environmental Fate: No environmental information found for this product.

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**SECTION 13 - DISPOSAL CONSIDERATIONS**

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Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

RCRA Number: Not determined.

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**SECTION 14 - TRANSPORT INFORMATION**

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DOT Shipping Name: Non regulated.

DOT Hazard Class: Not applicable.

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**SECTION 15 - REGULATORY INFORMATION**

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**Iron oxide :**

TSCA Inventory Status: Listed

State Regulations: Listed in the State of Massachusetts Hazardous Substance List.  
Listed in the Pennsylvania State Hazardous Substances List.

**Iron Silicide :**

TSCA Inventory Status: Listed

**Bisphenol A diglycidyl ether resin :**

TSCA Inventory Status: Listed

**Magnesium silicate hydrate :**

TSCA Inventory Status: Listed

State Regulations: Listed in the State of Massachusetts Hazardous Substance List.  
Listed in the Pennsylvania State Hazardous Substances List.

Canadian Regulations. WHMIS Hazard Class(es): D2B  
All components of this product are on the Canadian Domestic Substances List.

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**SECTION 16 - ADDITIONAL INFORMATION**

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HMIS Fire Hazard: 1

HMIS Health Hazard: 2\*

HMIS Reactivity: 1

HMIS Personal Protection: X

MSDS Revision Date: 10/10/2006

MSDS Author: Actio Corporation

Disclaimer: This Health and Safety Information is correct to the best of our knowledge and

belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.

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