



MATERIAL SAFETY DATA SHEET

PTi Paste – Tube Formulation, Part B

24 Hour Emergency	General MSDS Information	HMIS		
856-273-9700		Health	Fire	Reactivity
		2	1	1

1. **Chemical Family:** Manganese dioxide cure paste
 Date Prepared: February 28, 2003
 Date Revised:

2. **HAZARDOUS INGREDIENTS:**

Common Name	CAS #	Approximate % (w/w)		
Calcium carbonate	471-34-1	30	-	40
Chlorinated paraffin wax	63449-39-8	20	-	30
Phthalic acid, benzyl/alkyl (C7-C8) ester	68515-40-2	20	-	30
Manganese oxide	1313-13-9	5	-	10
Titanium Dioxide	13463-67-7	1	-	5
Toluene	100-88-3	1	-	5
Non-hazardous and other ingredients	Proprietary			
Balance below reportable levels				

3. **HEALTH HAZARD DATA:**

Emergency Overview: Inhalation may cause dizziness, headache and incoordination. May cause digestive tract irritation. Ingestion may cause nausea, vomiting, pain, upset stomach, diarrhea. Inhalation may cause nausea, vomiting, upset stomach. May cause eye irritation. May cause skin irritation. Prolonged exposure may cause eye, nose and respiratory tract irritation. See sections 3, 5, & 6.

Primary Routes of Exposure: Eye. Skin.

Eye Contact: May cause slight to mild irritation.

Skin Contact: May cause slight to mild irritation.

Inhalation (Breathing): Can be irritating to eyes, nose, and respiratory tract following prolonged exposure. Can cause dizziness, headaches, and incoordination. Nausea, vomiting, and stomach upset can occur.

Ingestion (Swallowing): Irritating to the mouth, throat, and stomach. May cause nausea, vomiting, pain, and stomach upset (e.g., diarrhea).

Target Organs/Chronic Effects: Liver. Kidneys. Lungs and respiratory system. Skin.

Carcinogenicity:	ACGIH	IARC	NTP	OSHA
Calcium carbonate	No	No	No	No
Chlorinated paraffin wax	No	No	No	No
Phthalic acid, benzyl/alkyl (C7-C8) ester	No	No	No	No
Manganese oxide	No	No	No	No
Titanium Dioxide	No	No	No	No
Toluene	No	No	No	No

4. **FIRST AID:**

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

Skin Contact: Immediately flush with water. Remove contaminated clothing and shoes. Get medical attention if irritation persists. Professionally wash clothing and shoes before reuse.

Inhalation (Breathing): Remove to fresh air. If symptoms develop, seek immediate medical attention. If not breathing, give artificial respiration.

Ingestion (Swallowing): Seek medical attention. Immediately induce vomiting, as directed by medical personnel. Never give anything by mouth to an unconscious person.

Notes To Physicians: Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.

5. **FIRE AND EXPLOSION HAZARD DATA:**

Flash Point	: 105°(40.5°C)	Method	: Not Applicable
Explosive Lmts ...	: LEL(%) 1.2%	UEL(%)	: 7.0%
Autoignition	: Not Applicable		



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Hazardous Combustion and Decomposition Products: Smoke, soot, and toxic/irritating fumes (i.e., carbon dioxide, carbon monoxide, etc.). Hydrogen chloride. Metallic oxides.

Fire and Explosion Hazards: During a fire, irritating and highly toxic gases may be generated during combustion or decomposition.

Extinguishing Media: Small Fires: Dry chemical, carbon dioxide, halon, water spray, or foam. Large Fires: Water spray, fog, or alcohol foam.

Fire Fighting Procedures/Equipment: Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH-approved positive pressure self-contained breathing apparatus (SCBA) and full protective clothing.

6. ENVIRONMENTAL AND DISPOSAL INFORMATION:

Evacuation: Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Containment: Safely stop discharge. Contain material, as necessary, with a dike or barrier. Stop material from contaminating soil, or from entering sewers or bodies of water.

Clean-Up/Personal Protection Equipment: Appropriate safety measures and protective equipment should be used. Use supplied air respirator or self-contained breathing apparatus in enclosed spaces or if airborne exposure limits can be exceeded.

Collection And Disposal: Stop discharge, if safe to do so. Use proper protective equipment. Cover spills with absorbent clay or sawdust and place in closed chemical waste containers. Dispose of according to applicable local, state and federal regulations.

Reporting: Spills of this material in excess of a component's RQ must be reported to the National Response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations. No regulated ingredients.

7. HANDLING AND STORAGE:

Storage Temperature < 100°F 37.7°C

Storage Conditions: Store in cool, dry, well-ventilated area.

Transfer: No special precautions are needed. Follow good manufacturing and handling practices.

Personal Hygiene: Wash thoroughly after handling, especially before eating, drinking, smoking, and using restroom facilities. Wash contaminated goggles, faceshield, and gloves. Professionally launder contaminated clothing before re-use.

Empty Container Precautions: Attention! This container can be hazardous when empty. Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption or where skin contact can occur.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Exposure Guidelines:

ACGIH - TLV

Calcium carbonate	10 mg/M3	Total dust
Manganese oxide	5 mg/M3	Dusts and compounds, as Mn
Manganese oxide	1 mg/M3	Fume
Titanium Dioxide	10 mg/M3	
Manufacturers PEL/TLV		
Phthalic acid, benzyl/alkyl (C7-C8) ester	5 mg/M3	
Toluene	50 ppm	(skin) TWA
Toluene	150 ppm	(skin) STEL
OSHA - PEL		
Calcium carbonate	5 mg/M3	Resp. dust
Manganese oxide	1 mg/M3	Fume
Titanium Dioxide	10 mg/M3	
Toluene	200 ppm	TWA
	300 ppm	Per ceiling

Engineering Controls/Ventilation: Local exhaust ventilation is recommended when vapors, mists, or dusts can be released in excess of established airborne exposure limits (TLVs or PELs).

Eye Protection: Wear chemical splash goggles or safety glasses with side shields. An eye wash facility should be readily available.

Skin Protection: Wear protective clothing and appropriate impervious gloves. Because a variety of protective gloves exist, consult a glove manufacturer to determine the proper type for a specific operation.

Respiratory Protection: Wear NIOSH/MSHA-approved equipment. Determine the appropriate type by consulting the respirator manufacturer. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator. Respiratory protection programs must be in compliance with 29 CFR 1910.134.



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9. PHYSICAL DATA:

Appearance	: Gray	Odor	: Slight
Physical State	: Paste	Solubility	: Insoluble
pH	: Not Applicable	Vapor Pressure	: Not Applicable
Vapor Density	: Not Applicable	Evaporation Rt	: Not Applicable
VOC Material	: Approximately 1.4 g/L 0 lbs/gal	Specific Grvty	: 1.64
VOC Coating	: 39 g/L 0.33 lbs/gal		
%Non-Vol (w/w) :	96-98%		

Note: The physical data presented above are typical values and should not be construed as a specification.

10. REACTIVITY DATA:

Chemical Stability: Stable under normal conditions of use.

Hazardous Polymerization: Will not occur.

Conditions To Avoid: High temperatures.

Incompatibility With Other Materials: Oxidizers. Acids. Peroxides.

11. TOXICITY DATA:

Components:

Calcium carbonate: Repeated exposure to dusts can lead to particulate deposition in the lungs (i.e., pneumoconiosis).

Chlorinated paraffin wax: May cause transient irritation to eyes and/or skin.

Phthalic acid, benzyl/alkyl (C7-C8) ester:

Oral LD50	Rat	> 15,800 mg/kg
Dermal LD50	Rabbit	> 7,940 mg/kg

Manganese oxide: Eye, skin, and respiratory tract irritant. Can cause liver and kidney injury.

Titanium Dioxide: In a 2 year study in rats, an increase in benign and malignant lung tumors was observed at 250 mg/M3 respirable dust level. This level is 50 times the current occupational exposure level and is not expected to correlate to human exposures.

Toluene: NO DATA

12. ECOLOGICAL DATA:

No data are available on this product.

13. DISPOSAL INFORMATION:

Disposal: Dispose in accordance with all local, state, and federal regulations.

General Statements: Federal regulations may apply to empty containers. State and/or local regulations may be different.

General Recommendations: Of the methods of disposal currently available, it is recommended that an alternative be selected according to the following order of preference, based upon environmental acceptability: (1) recycle or rework, if feasible; (2) incinerate at an authorized facility; or (3) treat at an acceptable waste treatment facility.

Special Instructions: Be sure to contact the appropriate government environmental agencies if further guidance is required.

14. TRANSPORTATION INFORMATION:

Weight (lb) Shipping Name	49	CFR	IATA	IMO
Non-regulated		Y	Y	Y

Not hazardous by DOT standards.



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15. REGULATORY INFORMATION:

Federal: This product is considered hazardous under the OSHA Hazard Communication Standard (29 CAR 1910.1200).

SARA Title III - Section 311/312 - Hazard Categories:

- N - Fire Hazard
- N - Sudden Release of Pressure Hazard
- N - Reactivity Hazard
- Y - Immediate (acute) Health Hazard
- Y - Delayed (chronic) Health Hazard

Ozone-Depleting Chemicals - No regulated ingredients.

SARA Section 302 Extremely Hazardous Mat - No regulated ingredients.

SARA Section 313 Toxic Chemicals
Manganese oxide

Chemical Listing - Listed on the following Country Chemical Inventories:

United States Toxic Substance Control Act
Chemical component(s) in this product are on the section 8(b) Chemical Substance Inventory List (40 CFR 710).

State Right-To-Know:

Pennsylvania - New Jersey R-T-K		
Calcium carbonate	471-34-1	30 - 40
Chlorinated paraffin wax	63449-39-8	20 - 30
Phthalic acid, benzyl/alkyl (C7-C8) ester	68515-40-2	20 - 30
Manganese oxide	1313-13-9	5 - 10
Titanium dioxide	13463-67-7	1 - 5
Non-hazardous trade secret ingredient(s)	Proprietary	
Toluene	108-88.3	1 - 5

California - California Proposition 65 - No regulated ingredients.

CONEG - No data available.

Canada: This is a controlled product under the Canadian Workplace Hazardous Materials Information System (WHMIS).

Class D Division 2 Sub-division B

CEPA - NPRI
Manganese oxide

16. OTHER INFORMATION:

Users Responsibility: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if or where precautions (in addition to those described herein) are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

The information herein is given in good faith. No warranty, expressed or implied, is given regarding the accuracy of these data or the results obtained from the use thereof. Consult Prevention Technologies, Inc. for further information.