



MATERIAL SAFETY DATA SHEET  
COMPLIES WITH 29 CFR 1910.1200.  
OSHA HAZARD COMMUNICATION RULE

DATE OF LAST REVISION: 11/05/05

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## CHEMICAL IDENTITY

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LABEL IDENTITY	<b>LEAD ZIRCONIUM TITANIUM OXIDE</b>
FORMULA	<b>PbZrTi OXIDE</b>
TRADE NAME AND SYNONYMS	<b>PZT</b>

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## PHYSICAL AND CHEMICAL PROPERTIES

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COLOR, FORM AND ODOR	<b>Off white powder, odorless</b>
BOILING POINT	<b>ND</b>
VAPOR DENSITY	<b>ND</b>
VAPOR PRESSURE	<b>ND</b>
% VOLATILE BY VOLUME (%)	<b>ND</b>
SPECIFIC GRAVITY	<b>ND</b>
EVAPORATION RATE (H2O=1)	<b>None</b>
SOLUBILITY	<b>Mineral Acids</b>
MELTING POINT	<b>ND</b>

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## FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT	<b>None</b>
FLAMMABLE LIMITS	<b>None</b>
EXTINGUISHING MEDIA	<b>Use suitable means for extinguishing surrounding fire</b>
SPECIAL FIRE FIGHTING PROCEDURES	<b>Use full protective clothing and NIOSH approved self-contained breathing apparatus.</b>
UNUSUAL FIRE & EXPLOSION HAZARDS	<b>None</b>

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## HEALTH HAZARD INFORMATION

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TLV: **R & D material. Limits not established.**

EFFECTS OF OVEREXPOSURE: **R&D Material, effects not established.**

EMERGENCY FIRST AID PROCEDURE:

INHALATION: **remove to fresh air**

INGESTION: **seek immediate medical attention.**

SKIN EXPOSURE: **wash thoroughly with soap and water.**

**SEEK IMMEDIATE MEDICAL ATTENTION IN ALL CASES.**



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### REACTIVITY DATA

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STABILITY	<b>Stable</b>
CONDITIONS TO AVOID	<b>Damp and hot</b>
INCOMPATIBILITY (MATERIALS TO AVOID)	<b>Mineral Acids</b>
HAZARDOUS DECOMPOSITION PRODUCTS	<b>None</b>
HAZARDOUS POLYMERIZATION	<b>Will Not Occur</b>
CONDITIONS TO AVOID	<b>ND</b>

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### SAFE HANDLING AND USE

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: **Pick up and place in a suitable container for reclamation or disposal in a method that does not generate dust.**

WASTE DISPOSAL METHOD: **Dispose of in accordance with local, state and federal regulations.**

NORMAL HANDLING AND STORAGE: **Keep in tightly closed container, store in a cool, dry ventilated area, isolate from incompatible substances.**

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### SPECIAL PROTECTIVE INFORMATION

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RESPIRATORY PROTECTION	<b>Wear NIOSH approved, consult supplier for limitations.</b>
LOCAL EXHAUST	<b>Preferred. Consult ACGIH document "Industrial Ventilation, A manual of Recommended Practices"</b>
PROTECTIVE GLOVES	<b>Recommended</b>
EYE PROTECTION	<b>Safety goggles</b>
OTHER PROTECTIVE EQUIPMENT	<b>Lab coat or apron</b>

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### SPECIAL PRECAUTIONS

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**For laboratory use only. Not for drug, household or other uses. This is an R & D Material and should only be used by qualified staff.**

PRECAUTIONARY LABELING **NONE**

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NA = NOT APPLICABLE

ND = NO DATA

NC = NOT CLASSIFIED