



PRASEODYMIUM METAL MATERIAL SAFETY DATA SHEET

DATE PREPARED: 12-18-95

1. CHEMICAL PRODUCT

CHEMICAL NAME	PRASEODYMIUM METAL
SYNONYMS	PRASEODYMIUM
MOLECULAR FORMULA	Pr
CAS REGISTRY NUMBER	7440-10-0

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS REGISTRY NUMBER	OSHA HAZARD	%
Praseodymium	7440-10-0	Yes	>99

3. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:

PHYSICAL APPEARANCE AND ODOR	Silver ingot solid, odorless
WARNING STATEMENTS	Flammable solid as coarse flake, powder, dust or fume. Reducing agent reacts with water and dilute acids to produce flammable, explosive hydrogen gas.

B. POTENTIAL HEALTH EFFECTS:

ACUTE EYE: **non-irritating; may cause foreign body irritation only.**
ACUTE SKIN: **skin absorption not likely; essentially non-irritating.**
ACUTE INHALATION: **low acute inhalation toxicity; may cause upper respiratory tract irritation.**
ACUTE INGESTION: **low acute ingestion toxicity.**

CHRONIC EFFECTS: **this product does not contain any ingredient designated by IARC, NTP or ACGIH or OSHA as probable or suspected human carcinogens.**

4. FIRST AID MEASURES

FIRST AID MEASURES FOR ACCIDENTAL :

EYE EXPOSURE: **rinse particulate matter from eye; seek medical attention if irritation develops or persists or if visual changes occur.**

SKIN EXPOSURE: **in case of contact, wash with plenty of soap and water; seek medical attention if irritation develops or persists.**



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4. FIRST AID MEASURES CONTINUED

INHALATION: if respiratory irritation or distress occurs remove victim to fresh air; seek medical attention if respiratory irritation or distress continues.

INGESTION: if victim is conscious and alert, give 1-2 glasses of water to drink; do not give anything by mouth to an unconscious person; seek medical attention; **DO NOT** leave victim unattended.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE: inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis.

NOTES TO PHYSICIAN: all treatments should be based upon observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
Treaty symptomatically. No specific antidote available.

5. FIRE FIGHTING MEASURES

FLASH POINT	NA
EXTINGUISHING MEDIA RECOMMENDED	Dry chemical, Class D Extinguisher, DO NOT USE WATER!
SPECIAL FIRE FIGHTING PROCEDURES	firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.
UNUSUAL FIRE/EXPLOSION HAZARDS	product will burn under fire conditions, may react with water liberating flammable, explosive hydrogen gas.

6. ACCIDENTAL RELEASE MEASURES

EVACUATION PROCEDURES AND SAFETY: wear protective gear for the situation. See personal protection information in section 8.

CONTAINMENT OF SPILL: follow procedure described below under cleanup and disposal.

CLEANUP AND DISPOSAL OF SPILL: sweep up and place in an appropriate closed container (see section 7: Handling & Storage). Clean up residual material by washing area with water.

ENVIRONMENTAL AND REGULATORY REPORTING: do not flush to drain; Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.



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7. HANDLING AND STORAGE

MIN/MAX STORAGE TEMPERATURE **No data available**

HANDLING: avoid breathing dusts or vapors; avoid direct or prolonged contact with skin and eyes. Store under inert gas.

STORAGE: store in tightly closed containers; store in area that is dry.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

INTRODUCTORY REMARKS: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

EXPOSURE GUIDELINES: no exposure limits (ACGIH, OSHA or other) were found for this product or any of its ingredients.

ENGINEERING CONTROLS: where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: general area dilution/exhaust ventilation.

RESPIRATORY PROTECTION: when respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the latest OSHA standard (29 CFR 1910.134) and/or ANSI Z88.2 recommendations. Under normal conditions, in the absence of other airborne contaminants, the following devices should provide protection from this material up to the conditions specified by OSHA/ANSI: Air purifying (half-mask/full face) respirator with cartridges/canister approved for use against dusts, mists and fumes.

EYE/FACE PROTECTION: eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material. It is generally regarded as good practice to wear a minimum of safety glasses with side shields when working in industrial environments.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION CONTINUED

SKIN PROTECTION: skin contact should be minimized through use of gloves and suitable long-sleeved clothing (i.e., shirts and pants). Consideration must be given both to durability as well as permeation resistance.

WORK PRACTICE CONTROLS: personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes of contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties here represent typical properties of this product.

PHYSICAL APPEARANCE AND ODOR	Silver ingot solid, odorless
pH	NA
SPECIFIC GRAVITY	No data available
DENSITY	6.77 g/m at 25°C (77°F)
WATER SOLUBILITY	Insoluble
MELTING POINT RANGE	919°C (1686°F)
BOILING POINT RANGE	3020°C (5468°F) at 760 mmHg
VAPOR PRESSURE	No data available
VAPOR DENSITY	No data available
MOLECULAR WEIGHT	140.91

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: this material is stable under normal handling and storage conditions described in section 7.

CONDITIONS TO BE AVOIDED: dusting conditions, electric arcs, open flame, spark
MATERIALS/CHEMICALS TO BE AVOIDED: air, moisture, strong acids, strong oxidizing agents, acid chlorides, halogens, chlorates, bromates, iodates.

The following Hazardous Decomposition Products Might be Expected: Decomposition Type:

Hydrolysis **Hydrogen**

Hazardous Polymerization will not occur.

Avoid the following to inhibit Hazardous Polymerization: **ND**



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11. TOXICOLOGICAL INFORMATION

ACUTE EYE IRRITATION	no test data found for product
ACUTE SKIN IRRITATION	no test data found for product
ACUTE DERMAL TOXICITY	no test data found for product
ACUTE RESPIRATORY IRRITATION	no test data found for product
ACUTE INHALATION TOXICITY	no test data found for product
ACUTE ORAL TOXICITY	no text data found for product

CHRONIC TOXICITY: This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be “probable” or “suspected” human carcinogens.

No additional test data found for product.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION	no data found for product
CHEMICAL FATE INFORMATION	no data found for product

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local requirements regarding the proper disposal of this material.

CONTAINER HANDLING AND DISPOSAL: any containers or equipment used should be decontaminated immediately after use.

EPA HAZARDOUS WASTE: No

14. TRANSPORTATION INFORMATION

TRANSPORTATION STATUS: US DEPARTMENT OF TRANSPORTATION DOT SHIPPING NAME: NOT REGULATED



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15. REGULATORY INFORMATION

FEDERAL REGULATIONS

TSCA INVENTORY STATUS: **all ingredients of this product are listed on the TSCA Inventory.**

SARA TITLE III HAZARD CLASSES:

FIRE HAZARD	Yes
REACTIVE HAZARD	Yes
RELEASE OF PRESSURE	No
ACUTE HEALTH HAZARD	No
CHRONIC HEALTH HAZARD	No

STATE REGULATIONS: **this product does not contain any components that are regulated under California Proposition 65.**

16. OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS—NEPA(R):

1 Health Hazard Rating	Slight
2 Flammability Rating	Serious
3 Reactivity Rating	Moderate

NATIONAL PAINT & COATING HAZARDOUS MATERIALS IDENTIFICATION SYSTEM—HMIS(R):

1 Health Hazard Rating	Slight
2 Flammability Rating	Serious
3 Reactivity Rating	Moderate

KEY LEGEND INFORMATION:

NAV	Not Available
NAP	Not Applicable
ND	Not Determined
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety and Health Administration
TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
TWA	Time Weighted Average
STEL	Short Term Exposure Limit
NTP	National Toxicology Program
IARC	International Agency for Research on Cancer

DISCLAIMER: **The information herein is given in good faith but no warranty, expressed or implied, is made.**