

GELEST, INC.

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MATERIAL SAFETY
DATA SHEET

EMERGENCY TELEPHONE
CHEMTREC: 1-800-424-9300

NAME USED ON LABEL: **ZIRCONIUM TETRAIODIDE - INZR070**

CHEMICAL NAME: ZIRCONIUM TETRAIODIDE

SYNONYMS: TETRAIODOZIRCONIUM

CHEMICAL FAMILY: ZIRCONIUM IODIDE

FORMULA: ZrI_4

HMIS CODES HEALTH: 3 FLAMMABILITY: 2 REACTIVITY: 1

INGREDIENTS

IDENTITY	CAS NO.	%	TLV
ZIRCONIUM TETRAIODIDE	13986-26-0	>95	not established

PHYSICAL DATA

Boiling Point: not determined

Specific Gravity: >4

Vapor Density (air=1): >1

% volatiles: NA

Molecular Weight: 598.84

Appearance & Color: Red-brown crystalline solid with acrid odor of hydrogen iodide.

Melting Point: 499°C

Vapor Pressure, 25°: <2mm

Solubility in water: reacts

Evaporation rate: NA

Other: NA

FIRE & EXPLOSION DATA

Flash Point, COC: >110°C(>230°F) Autoignition Temp.: not determined

Flammability Limits- LEL: NA UEL: NA

Extinguishing Media: Carbon dioxide, dry chemical. Use of high expansion foam (100:1) is recommended to cover flames.

Special Fire Fighting Procedures: Use only dry media to extinguish flames. Water spray or fog should only be used to knock down iodine and hydrogen iodide vapors in areas downwind from the fire. Avoid eye and skin contact. Do not breathe fumes or inhale vapors.

Unusual Fire and Explosion Hazards: Irritating fumes of iodine and hydrogen iodide vapors may develop when material is exposed to water or open flame.

Unusual Fire and Explosion Hazards: Irritating fumes and acid vapors may develop when material is exposed to elevated temperatures or open flame.

-1-(INZR070)

ENVIRONMENTAL INFORMATION

Spill response: May be hazardous to aquatic life if released to open waters. Cover spill with absorbent material. Transfer to a suitable container for disposal.

Recommended Disposal: Dispose of absorbent material as solid waste. Follow all chemical pollution control regulations.

HEALTH HAZARD DATA

Eye Contact: Will cause immediate or delayed severe damage to eye tissue.

Skin contact: May produce tissue damage or irritation or contact dermatitis which may be delayed several hours. Prompt and thorough washing with soap and water will reduce or eliminate potential dermal effects. Prolonged absorption of iodides may produce skin rashes, running nose, headache, mucous membrane irritation, anemia, loss of weight and depression.

Inhalation: Inhalation of vapors or particulates of ZIRCONIUM halides will irritate the respiratory tract. Overexposure may produce coughing, headache and nausea. Inhalation of large amounts is expected to cause necrosis of tracheal epithelium, bronchitis and interstitial pneumonia.

Oral Toxicity: Not determined.

Acute Toxicity: Not determined

Chronic Toxicity: There are no known chronic effects related to this compound.

SUGGESTED FIRST AID

EYES: In case of contact, immediately flush eyes with flowing water for at least 15 minutes. Get medical attention.

SKIN: Flush with water, then wash with soap and water. *Note to physician:* ZIRCONIUM tetraiodide reacts with water to form hydroiodic acid, consequently treatment for acid burns may be considered.

INHALATION: Move exposed individual to fresh air. Call a physician.

INGESTION: Never give fluids or induce vomiting if patient is unconscious or having convulsions. Get medical attention.

REACTIVITY DATA

Stability: Stable

Incompatibility (materials to avoid): Reacts with water and moisture in air liberating hydrogen iodide.

Hazardous decomposition products: Hydrogen iodide, iodine, zirconium dioxide.

-2-(INZR070)

SPECIAL PROTECTION INFORMATION

Ventilation: Local exhaust is required. Mechanical is recommended.

Respiratory Protection: If exposure exceeds TLV air-supplied or NIOSH approved acid gas respirator.

Eye and Face Protection: Chemical worker's goggles. Do not wear contact lenses.

Other Clothing and Equipment: Rubber, neoprene or nitrile gloves. An eyewash and emergency shower should be available. Launder clothing before reuse.

OTHER PRECAUTIONS

For research use only.

Storage and Handling: Store in sealed containers. Avoid contact with water.

TRANSPORTATION

DOT SHIPPING NAME: CORROSIVE SOLID, ACID, INORGANIC, N.O.S
(ZIRCONIUM TETRAIODIDE)

DOT HAZARD CLASS: 8

DOT LABEL: CORROSIVE

DOT ID No: 3260

PG: II

Prepared by safety and environmental affairs

ISSUE DATE INZR070: 4/8/10

SUPERSEDES: none

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-3-(INZR070)

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