GELEST, INC.
11 East Steel Rd. Morrisville, PA 19067
Phone: (215) 547-1015

MATERIAL SAFETY
DATA SHEET

EMERGENCY TELEPHONE
CHEMTREC: 1-800-424-9300

NAME USED ON LABEL: **GERMANIUM, powder - GEG5020**
CHEMICAL NAME: GERMANIUM, powder
SYNONYMS: ELEMENTAL GERMANIUM
CHEMICAL FAMILY: METAL
FORMULA: Ge
HMIS CODES HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

INGREDIENTS

IDENTITY	CAS NO.	%	TLV
GERMANIUM	7440-56-4	>98	not established (OSHA PEL, nuisance dust: 15mg/m^3)

PHYSICAL DATA

Boiling Point: 2830°C
Specific Gravity: 5.32
Vapor Density: NA
% volatiles: 0
Molecular Weight: 72.59
Appearance & Color: White powder

Melting Point: 947°C
Vapor Pressure: not determined
Solubility in water: insoluble
Evaporation rate: NA
Other: NA

FIRE & EXPLOSION DATA

Flash Point, COC: Not Flammable Autoignition Temp.: not determined
Flammability Limits- LEL: N/A UEL: N/A

Extinguishing Media: Use Met-L-X or other appropriate metal-extinguishing powder. Do not apply water to burning material.
Special Fire Fighting Procedures: Avoid eye and skin contact. Do not breathe fumes or inhale vapors.
Unusual Fire and Explosion Hazards: May form flammable or explosive dust-air mixtures. Irritating fumes vapors may develop when material is mixed with other materials and exposed to elevated temperatures or open flame.

ENVIRONMENTAL INFORMATION

Spill response: Sweep material while wearing a dust mask. Transfer to a suitable container for disposal.

Recommended Disposal: Dispose of as solid waste. Follow all chemical pollution control regulations. Large quantities may be recycled by return to the Gelest, the manufacturer.

HEALTH HAZARD DATA

Eye Contact: May cause irritation or conjunctivitis.

Skin contact: Reported to be non-irritating.

Inhalation: Inhalation of vapors or particulates will irritate the respiratory tract. Inhaled dust is absorbed. 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: reported to be moderately toxic by subcutaneous route (Sax).
Chronic Toxicity: No data available

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.

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): Explosive reaction when heated with potassium nitrate or potassium chlorate. Incompatible with aqua regia, sulfuric acid.
Hazardous decomposition products: Germanium oxides.

SPECIAL PROTECTION INFORMATION

Ventilation: Local exhaust is required. Mechanical is recommended.
Respiratory Protection: If exposure exceeds TLV, dust masks should be worn.
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 and industrial use only.

Storage and Handling: Store in sealed containers.

TRANSPORTATION

DOT SHIPPING NAME: CHEMICALS, NOI
DOT HAZARD CLASS: Not Regulated
DOT LABEL: Not Required
DOT ID No: Not Required

Prepared by safety and environmental affairs ISSUE DATE GEG5020: 4/30/03
SUPERSEDES: 6/29/00