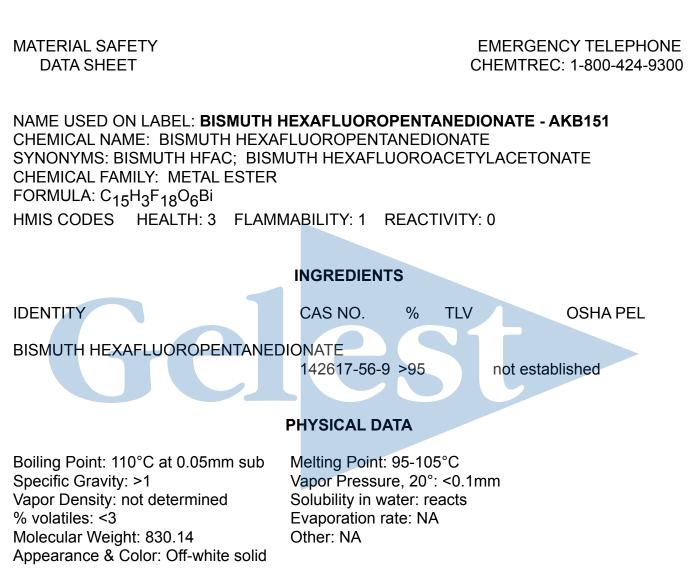
GELEST, INC. 11 East Steel Rd. Morrisville, PA 19067

Phone: (215) 547-1015



FIRE & EXPLOSION DATA

Flash Point, COC: >110°C (>230°F) Autoignition Temp.: not determined Flammability Limits- LEL: NA UEL: NA

Extinguishing Media: Alcohol resistant foam, carbon dioxide, dry chemical. Special Fire Fighting Procedures: Avoid water spray as t-amyl alcohol will be generated. Avoid eye and skin contact. Do not breathe fumes or inhale vapors. Unusual Fire and Explosion Hazards: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

Abbreviations: ND: Not Determined, No Data; NA: Not Applicate (AKB151) Dose, LC: Lethal Concentration; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; HMIS: Hazardous Material information System; CAS No.: Chemcial Abstract Service Registration Number Gelest, Inc. © 2008

ENVIRONMENTAL INFORMATION

Spill response: Utilize non-flammable absorbent, then sweep material and transfer to a suitable container for disposal.

Recommended Disposal: After absorption onto non-flammable absorbent, dispose of as solid waste. Follow all chemical pollution control regulations.

HEALTH HAZARD DATA

Bismuth and it's compounds can cause kidney damage, although the degree of damage is usually mild.

Eye Contact: May cause immediate or delayed severe eye irritation.

Skin contact: May produce irritation or contact dermatitis. Prompt and thorough washing with soap and water will reduce or eliminate potential dermal effects.

Inhalation: Inhalation of dust or particulates may irritate the respiratory tract.

Oral Toxicity: not determined Chronic Toxicity: not determined

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. Administer oxygen if needed. Call a physician.

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

REACTIVITY DATA

Stability: Stable Conditions to avoid: Avoid contact with oxidizers. Hazardous decomposition products: Organic acid vapors, hydrogen fluoride and bismuth oxide fumes.

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SPECIAL PROTECTION INFORMATION

Ventilation: Local exhaust is required. Mechanical is recommended. Respiratory Protection: If exposure exceeds TLV, NIOSH approved dust and mist 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.

TRANSPORTATION

DOT SHIPPING NAME: CHEMICALS, NOI DOT HAZARD CLASS: NOT REQUIRED DOT LABEL: NOT REQUIRED DOT ID No: NOT REQUIRED

Prepared by safety and environmental affairs

AKB151 ISSUE DATE: 9/26/02 SUPERSEDES: 6/29/00

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore.

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