

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: **RUTHENIUM 2,4-PENTANEDIONATE - AKR670**

CHEMICAL NAME: RUTHENIUM 2,4-PENTANEDIONATE

SYNONYMS: RUTHENIUM ACETYLACETONATE

CHEMICAL FAMILY: RUTHENIUM COMPOUND

FORMULA: C₁₅H₂₁O₆Ru

HMIS CODES HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 1

INGREDIENTS

IDENTITY	CAS NO.	%	TLV
RUTHENIUM 2,4-PENTANEDIONATE	14284-93-6	>95	not established

PHYSICAL DATA

Boiling Point: NA

Specific Gravity: >1

Vapor Density: NA

% volatiles: <1

Molecular Weight: 398.40

Appearance & Color: Red-brown powder.

Melting Point: 226-230°C- decomposes

Vapor Pressure: not determined

Solubility in water: insoluble

Evaporation rate: N/A

Soluble: acetone, methanol, methylene chloride

FIRE & EXPLOSION DATA

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

Flammability Limits- LEL: NA UEL: NA

Extinguishing Media: Water spray, foam, carbon dioxide, dry chemical.

Special Fire Fighting Procedures: 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.

-1-(AKR670)

ENVIRONMENTAL INFORMATION

Spill response: Sweep material and transfer to a suitable container for disposal.

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

HEALTH HAZARD DATA

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: Material decomposes slowly in contact with air by reaction with water and carbon dioxide.

Hazardous decomposition products: Organic acid vapors and ruthenium oxide fumes.

-2-(AKR670)

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 and industrial use only.

Storage and Handling: Store in sealed containers.

TRANSPORTATION

DOT SHIPPING NAME: CHEMICALS, NOI

DOT HAZARD CLASS: None required

DOT LABEL: None required

DOT ID No: None required

Prepared by safety and environmental affairs

ISSUE DATE AKR670: 1/29/03

SUPERSEDES: 1/05/01

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.