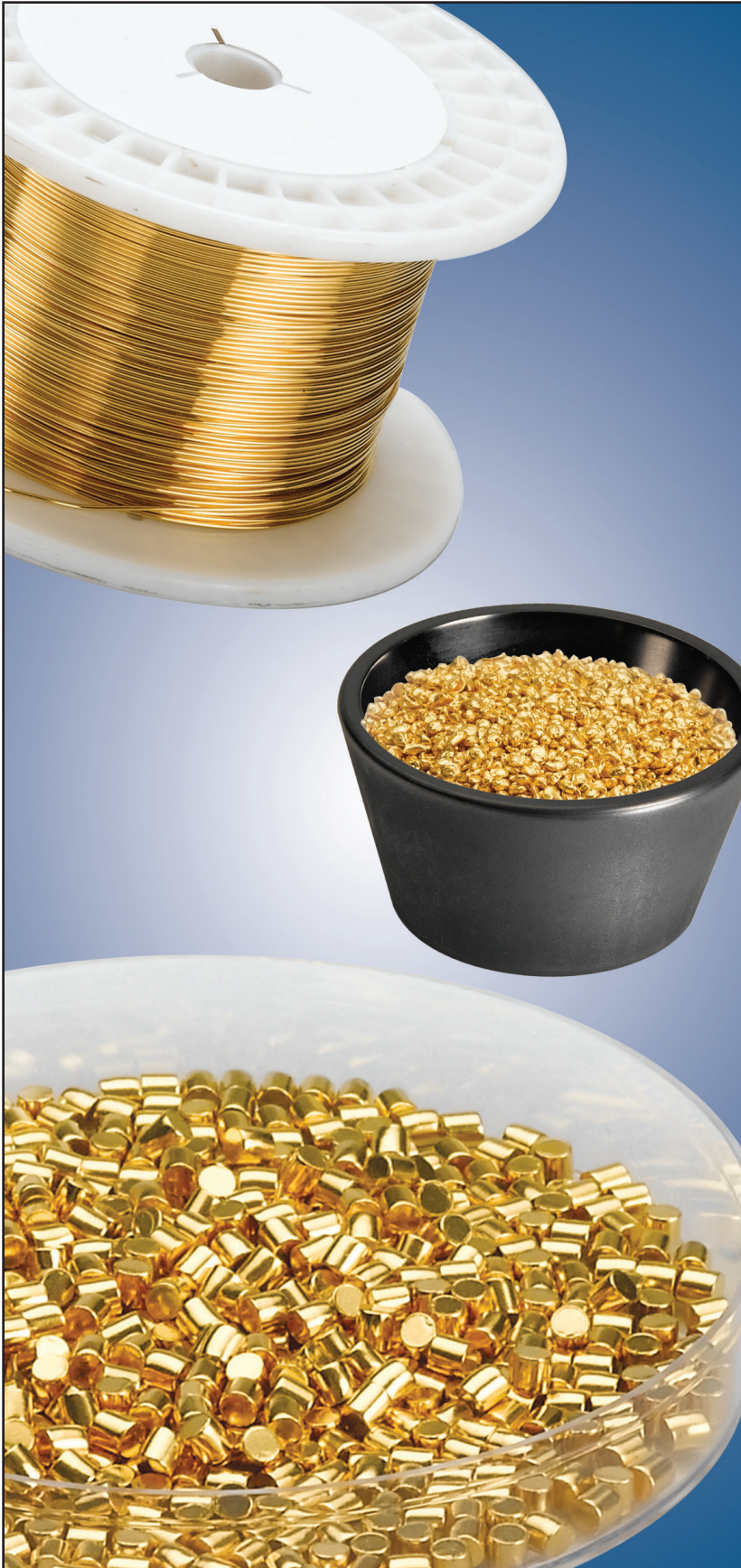


Gold

Evaporation Materials



Kurt J. Lesker[®]
Company

MATERIALS[™]
DIVISION

Applications

- Electron beam and thermal evaporation
- Conductive contact layer in electronic device applications including; sensors, aerospace, opto-electronics, and memory storage

Features

- High purity
- Available in pellet, shot, and wire
- Custom quantity packaging
- Prices locked in at order confirmation
- Large Inventory

Manufacturing Process

- Refining
 - Material purification
- Melting
 - Assay is run and certificate of analysis is completed
- Fabrication
 - Extrusion of rod and wire
 - Precision cut to shape
- Cleaning and Final Packaging
 - Cleaned for use in vacuum
 - Protection from environmental contaminants
 - Tamper-proof packaging

Options

- 99.99% and 99.999% purities
- Pellets
 - 1/8" Diameter x 1/8" Length
 - 1/4" Diameter x 1/4" Length
- Shot
 - <4mm
- Wire
 - 0.5mm Diameter
 - 1mm Diameter
- Starter sources for e-beam evaporation
- Custom lengths and quantities
- Full reclaim service

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Specifications

Typical Analysis - 99.99% (4N) Purity
Metallic Impurities, ppm by weight

Ag	Cu	Si	Na	Fe
<40	<10	<10	<10	<10

Typical Analysis - 99.999% (5N) Purity
Metallic Impurities, ppm by weight

Ag	Cu	Fe	Si
<10	<10	<10	<10

Theoretical Density	19.32 g/cm ³
Thermal Conductivity (26.85°C)	320 W/m·K
Melting Point	1064°C
Vapor Pressure @ Given Temperature	1132°C at 10 ⁻⁴ Torr
Appearance	Metallic Yellow

Compatible Evaporation Sources (including but not limited to):

Thermal Evaporation: Shielded tantalum crucible using boron nitride (BN) or tall intermetallic (BN/TiB₂) crucibles, alumina coated tungsten wire basket heaters, alumina coated tungsten boat heaters

Electron Beam Evaporation: Fabmate®, Molybdenum or tungsten crucible liner

Precious Metals Reclaim Service

Spent sputtering targets and similar precious metal scrap can be reclaimed and the resulting credit will be applied towards a customer's account per the terms outlined below. Your KJLC customer service representative can provide an RA# to ship the precious metal reclaim to KJLC headquarters in Pittsburgh, PA. KJLC policy requires a product safety form be included with the shipment to ensure safe handling.

Pure Gold Reclaim

(Pure spent sputtering targets and pure slugs, pellets, etc.)

Reclaim of this type will be credited to the customer's account within 48 hours of receipt of material. The credit is calculated using the Engelhard Industrial Bullion price on the day of receipt.

Amount (Troy ounces)	Percentage Yield	Refining Fee
<4 toz	94%	\$5/toz
4-20 toz	95%	\$5/toz
>20 toz	97%	\$5/toz

Middle-Grade Gold Reclaim

(Crucibles and E-beam crucible liners containing melted slugs of pure metal, De-bonded sputtering targets containing trace amounts of indium or other solder.)

Reclaim of this type will be credited to the customer's account within 1 week of receipt of material. The credit is calculated using the Engelhard Industrial Bullion price on the day the credit is processed.

Amount (Troy ounces)	Percentage Yield	Refining Fee
<4 toz	93%	\$15/toz
4-20 toz	94%	\$10/toz
>20 toz	96%	\$10/toz

Low-Grade Gold Reclaim

(Alloy targets or slugs, evaporation boats coated with gold, crucibles and crucible liners that alloy or react with the metal, chamber and shield scrapings, etc.)

Reclaim of this type will be credited to the customer's account within 6 weeks of receipt of material. The credit is calculated using the Engelhard Industrial Bullion price on the day the credit is processed.

Amount (Troy ounces)	Percentage Yield	Refining Fee
<10 toz	70%	\$5/toz
10-20 toz	80%	\$5/toz
>20 toz	85%	\$5/toz

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