

EXPLORE, INSPIRE,  
DELIVER. REPEAT.™

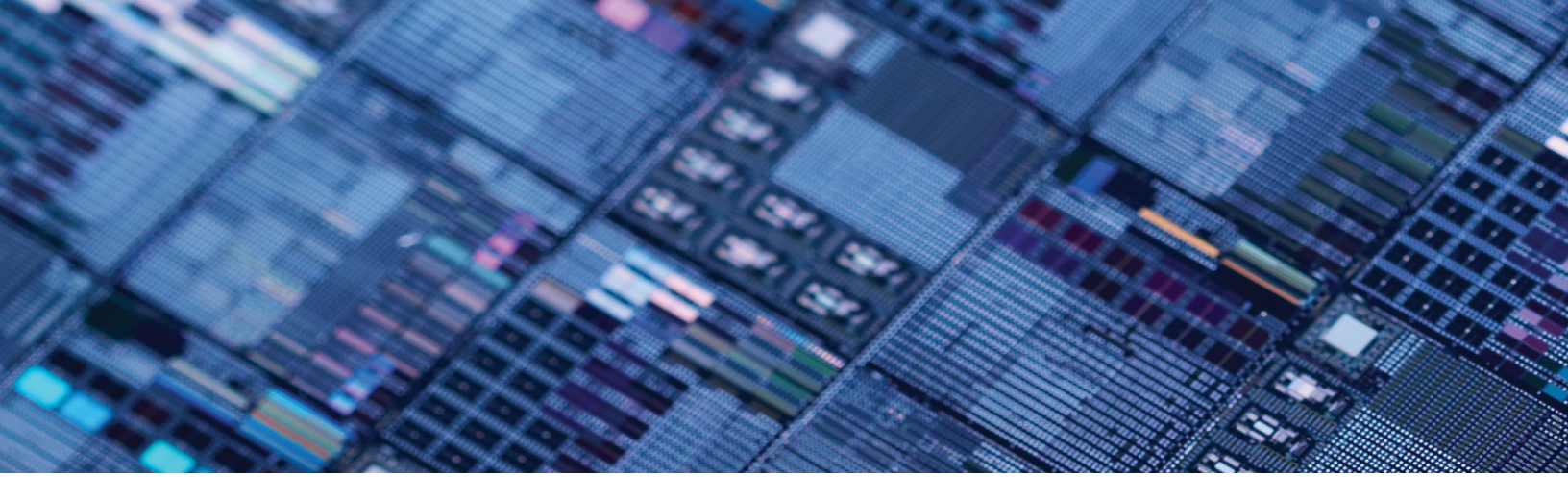


**MATERION**

Semiconductor Materials







## Semiconductor Materials

As demand for higher performing electronics in the semiconductor, MEMS, wireless and LED markets increases, the need for superior quality products arises. Optimal performance requires the use of consistently reliable and extremely clean materials. To achieve this level of quality, manufacturing facilities and processes must meet stringent conditions. Since the semiconductor industry is constantly seeking “smaller, faster, cheaper,” an active R&D program to develop better technologies and cost-effective processes is a necessity.

Materion offers customized products and capabilities to meet customer requirements for quality, reliability and cleanliness.

- Market-leading value in precious and non-precious metal sputtering targets
- Full range of hermetic lids that can be customized to your specific application
- Solder and braze alloys for superior joining
- RF and microwave packaging for very low thermal resistance and RF loss
- R&D team dedicated to collaborating on new product innovations and designs
- Manufacturing processes rigorously monitored to ensure product cleanliness and reliability

### BENEFITS

With our expertise in thin film materials and microelectronic packaging, we offer:

- Full cycle precious metal management
- Lower total cost of ownership
- Improved shield life through vacuum chamber parts cleaning
- Twin Wire Arc Spray (TWAS) coatings
- Reclaim and refine with flexible settlement option



## Environmental Leadership

Materion's disposal procedures comply with state and federal regulations. Our certifications include:

- ISO 9001:2015 Quality Systems
- ISO 14001:2015 Environmental Safety & Management Systems
- ISO 17025:2017 Analytical Laboratory
- LeanSigma



## SPUTTERING TARGETS

### AVAILABLE MATERIALS

- Precious and non-precious metal sputtering targets
- Standard and custom exotic alloys
- Ceramic and inorganic sputtering targets with customized chemistries

### AVAILABLE FORMS

- Large area targets
- Non-traditional materials
- Custom alloys
- Multiple shapes and sizes
- Support all OEM platforms
- Extended life designs

## EVAPORATION MATERIALS

Materials available in multiple forms:

- Precious and non-precious metals and alloys
- EVAPro™ high-performance metals
- Custom alloys
- Customizable purity levels up to 5N

## MICROELECTRONIC PACKAGING MATERIALS

We manufacture a wide variety of customizable electronic packaging to meet any requirement.

Available Lids

- Combo-Lid™ covers
- Seam Seal-Lid™ covers
- Visi-Lid™ covers
- Solder Reflow-Lid™ covers

## BRAZE AND SOLDER ALLOYS

High-performance alloys are available in custom forms and shapes.

- AuSn Preforms
- Braze Materials
- Braze Powder
- SilSeal Materials
- Solder Alloys
- Lead-Free Solders

## METAL MANAGEMENT

- 85+ years' experience refining, recycling and recovery of metals
- Vacuum chamber shield cleaning
- Valuable materials reclaimed and refined to purest forms
- Restart - Recycle

## RELATED SERVICES

- Sputtering target bonding
- Custom backing plates
- Plating anodes



### Thin Film Deposition Materials

Au	Al	NiPt	SiGe	Au Alloys
AuSn	Pt	Mo	SiN	Ag Alloys
AuGe	Ag	TaN	SiO2	Ni Alloys
AuZn	Pd	Ta	SiC	Al Alloys
TiW	Ti	Nb	Oxides	
Ni	Cu	Si	Indium	
Cr	W	Ge	Ru	

### Thin Film Deposition Products

Powders	Grain	Pieces	Wire/Rods	Starter Charges
Pellets	Shot	Slugs	Premelts	Sputtering Targets

### Microelectronic Packaging

Braze Materials	Solder Alloys	EpoLid™ Covers	Seam Seal Lid™ Covers	Non-Hermetic Lids
Lead-Free Solders	Air Cavity Packages	Visi Lid™ Covers	Hermetic Lids	SiSeal Materials
BeO Packages	Plated Flanges	Combo Lid™ Covers	AuSn Preforms	CuPack™ Packages

**FOR MORE INFORMATION ,  
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