

EXPLORE, INSPIRE,  
DELIVER. REPEAT.™



**MATERION**

Materials for Large Area  
Glass Coating



# Materials for Large Area Glass Coating

To achieve optimal results when coating glass requires sputtering targets that produce consistent uniform thin films. The materials used must be high purity and meet or exceed industry standards. Since many coating processes and deposition chambers are unique to their application, the precious and non-precious metals and alloys must be available in custom sizes and forms.

Materion is one of the world's leading suppliers of sputtering targets for the glass coating industry. We offer:

- Processes for target materials to deliver consistent products that meet or exceed our customers' specifications
- High purity materials with optimized microstructure for complete coverage
- Customizable target forms and alloys that exceed performance standards
- Targets designed for your individual deposition chambers

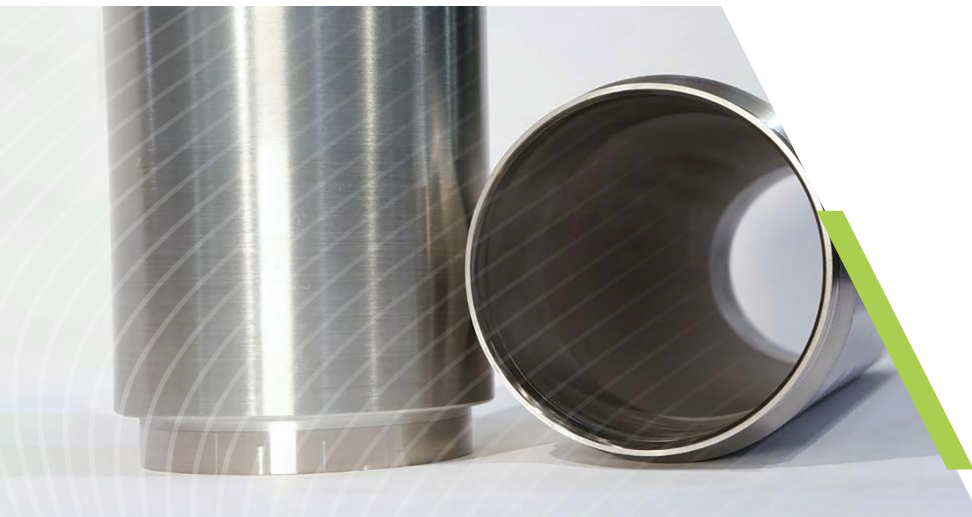
## BENEFITS

Materion offers the convenience of a global manufacturing network.

- 25+ years experience in large area coating
- Faster line speeds
- Longer production runs
- Better material utilization
- Large geometry materials
- Leader in innovative materials development
- Full range R&D assistance
- All production & testing certified ISO 9001

## APPLICATIONS

- Architectural glass
- Automotive glass
- Residential glass
- Electrochromic glass
- Mirrors
- Photovoltaics
- Specialty films







## MORE ABOUT OUR TARGETS

Cylindrical shaped, rotatable targets deliver tangible production and cost advantages:

- Provide smooth sputtering behavior
- Improve material utilization
- Extend production cycle times
- Enable high power sputtering

Planar and rotatable targets:

- Produced in different shapes and lengths up to 13.2 feet (4 meters)
- Reproducible materials – Consistent from lot-to-lot, target-to-target
- Customized manufacturing techniques offering dedicated material characteristics

## CAPABILITIES

Materion's state-of-the-art production capabilities include:

- Melting and Casting
- Powder Metallurgy
- Sintering and Hot Pressing
- Thermal Spraying
- Metal Forming
- Bonding
- Developing Innovative Layer Stack Materials

## OTHER SERVICES

Materion offers multiple services to support your production requirements:

- R&D Expert Assistance
- Refining and Reclaim
- Vacuum Chamber Shield Cleaning
- Precious and Valuable Metal Management
- Material and Product Development
- Chemical Synthesis and Processing

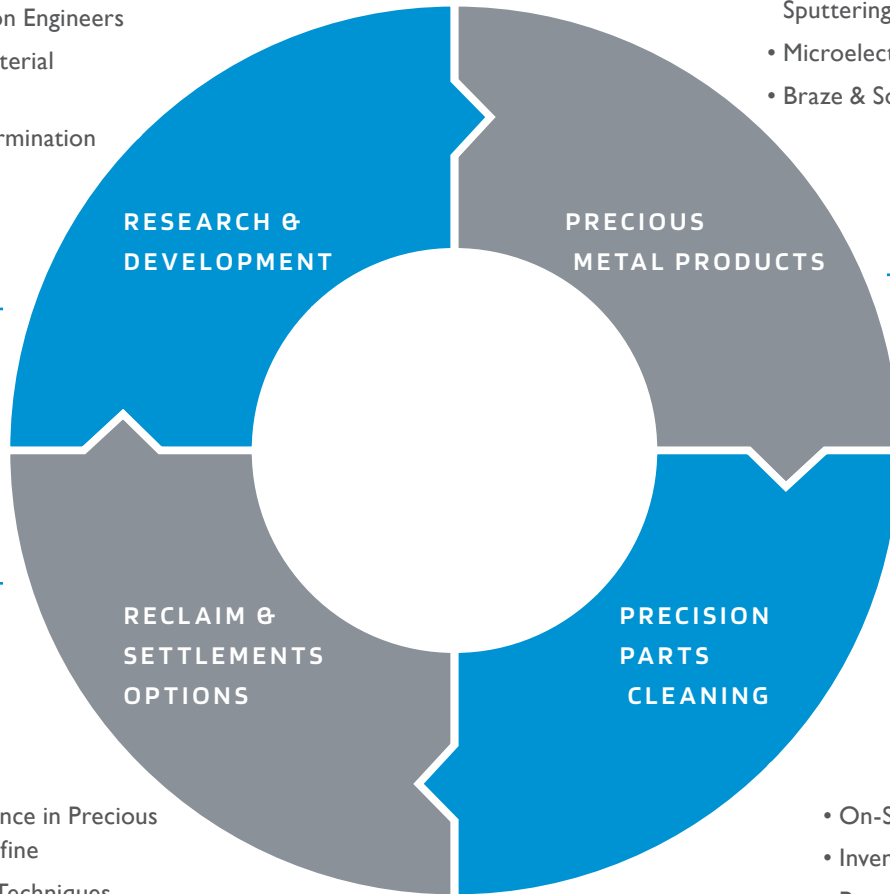
Available Materials	
Ag	Silver
Ag Alloys	Silver Alloys
Al	Aluminum
Au	Gold
Bi	Bismuth
C	Carbon
Cr	Chrome
Cu	Copper
CuGa	Copper-Gallium
In	Indium
InSn	Indium-Tin
ITO	Indium-Tin-Oxide
Li	Lithium

Available Materials	
Mo	Molybdenum
Nb	Niobium
NbOx	Niobium-Oxide
NiCr	Nickel-Chromium
NiV	Nickel-Vanadium
NiW	Nickel Tungsten
Pd	Palladium
Pt	Platinum
Ru	Ruthenium
Si	Silicon
SiAl	Silicon-Aluminum
Sn	Tin
SST	Stainless Steel

Available Materials	
Ti	Titanium
TiOx	Titanium-Oxide
W	Tungsten
Zn	Zinc
ZAO	Zinc Oxide- Aluminum Oxide
ZnAl	Zinc-Aluminum
ZnO	Zinc Oxide
ZnSn	Zinc-Tin
Zr	Zirconium
ZrOx	Zirconium Oxide
Others	Available Upon Request

- Dedicated Team of Experts
- Metallurgists
- Chemists
- Materials Scientists
- Processing/Application Engineers
- Microstructure & Material Property Analysis
- Precious Metal Determination

- Thin Film Deposition Materials
- Evaporation Materials
- Precious Metal Sputtering Targets
- Non-Precious Metal Sputtering Targets
- Microelectronic Packaging Materials
- Braze & Solder Alloys



- 85+ Years of Experience in Precious Metal Recovery & Refine
- Variety of Recovery Techniques
- Inventory Management
- Metal (Pool) Accounts
- Settlement Accuracy Database Manager
- Flexible Settlement Options

- On-Site Support
- Inventory & Fab Management
- Proprietary Chemical Cleaning & Degreasing
- Semiconductor Grade Final Packaging
- Advanced Surface Modification & Coatings

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