

EXPLORE, INSPIRE,
DELIVER. REPEAT.™



MATERION

Reclaim and Refining Services





Reclaim and Refining Services

Precious metals are often lost as a result of internal manufacturing processes, thus increasing the cost of production. Metals can adhere to chamber shields, or remain in cleaning solutions, or become by-products or scrap. The challenge is to recover the greatest amount of precious metal feasible; and to render it in the purest form. This requires technical capabilities that can both reclaim precious metal and refine it – in order to return high-purity metal that meets the customer’s requirements

Materion employs a comprehensive approach to reclaiming precious metal from the production waste stream, as well as refining the recovered metal.

- New techniques allow us to identify, collect, segregate and recover a wide variety of precious metal by-products
- Chamber shield cleaning for the most effective recovery of metal from shields as well as from chemical solutions
- Two of the largest state-of-the-art chemical and electrolytic refiners in North America
- Choice of multiple refining methods to increase metal recovery
- Refining outturn upgraded to high purity for customer’s use in products
- Specialized experts in precious metals materials management assist with metal recovery plans for improved profitability

BENEFITS

Materion is your source for precious metals management, offering:

- Technical expertise with 85+ years of experience refining, recycling and recovering precious metals
- Higher metal returns and fast settlements within the industry
- Ability to support full Mass Balance
- Returned metals tested to identify any trace elements using ICAP, GDMS & XRF
- Strategically located cleaning sites in the US and global recovery presence
- R&D team continuously exploring new methods to increase recovered value



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



KEY INDUSTRIES

We serve diverse industries that utilize precious metals in their production processes.

- Semiconductor
- Sensing
- LED
- Photovoltaic
- Data Storage
- Braze
- Wireless
- Industrial
- Medical
- X-Ray
- Photographic
- Dental
- Catalysis
- Photonics

PRECIOUS METAL REFINING

Multiple technologies and refining processes ensure that customers receive full recoverable value.

REFINING METHODS

- Blending
- Melting
- Incineration
- Screening/Sifting
- Milling
- Thermal Reduction
- Smelting
- Electrochemical refining
- Hydrometallurgical refining
- Electrochemical refining

RECOVERABLE MATERIALS

We can reclaim precious metals from a broad range of sources.

- Semiconductor and solar cell wafers
- Spent plating solutions
- Large area coating
- Sputtering targets
- Plating baths
- Industrial manufacturing
- Coated films and more

TYPES OF METALS

- Gold
- Rhodium
- Palladium
- Ruthenium
- Platinum
- Others
- Silver

CHAMBER SHIELD CLEANING

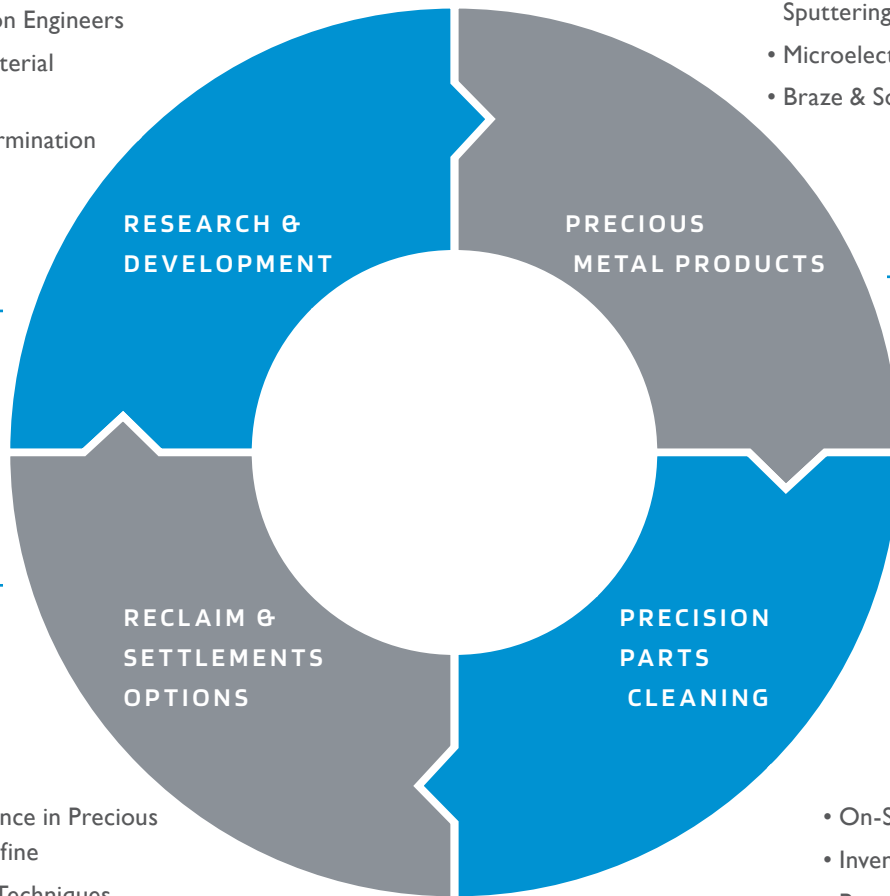
Best-cost models can be obtained through use of our PVD materials and chamber shield cleaning services.

- Fullest possible recovery of precious metals from chemical cleaning solutions
- Lower equipment cost of ownership
- Variety of flexible settlement plans with fast turn-around for improved cash flow



- 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

MATERION

2978 Main Street
Buffalo, NY 14214 USA

Contact Us

materion.com/advanced-materials
1.800.327.1355

Materion Global Headquarters

6070 Parkland Boulevard
Mayfield Heights, OH 44124 USA
© 2022 Materion Corporation