

# SPUTTERING TARGETS FOR THIN FILM DEPOSITION



## STANDARD SPUTTER TARGET MATERIALS

Our sputtering targets are used for many Physical Vapor Deposition (PVD) applications in a variety of industries. A selection of our standard target materials is listed below with the respective standard purity, other materials are available upon request. Umicore has the knowledge and resources to work with you on special materials needed for your unique deposition requirements.

<p style="text-align: center;"><b>General ICs* Backend</b> UBM*, RDL*, BSM*, Wafer bonding</p> <p style="text-align: center;">Al (alloys)   Ag   Au   Cu   Ge   Ni (alloys)   Ti   WTi</p>	<p style="text-align: center;"><b>LED*, Laser Diodes packaging</b></p> <p style="text-align: center;">Au   Al   GaZnO   Pt   Si   WTi</p>
<p style="text-align: center;"><b>MEMS*, Sensor, Passives</b> UBM*, RDL*, BSM*, Wafer bonding</p> <p style="text-align: center;">Al   AlSc   Hf   Nb   NiCr   NiFe   Si   Ta</p>	<p style="text-align: center;"><b>Thin Film Batteries</b></p> <p style="text-align: center;">LiCoO<sub>2</sub>   Li<sub>3</sub>PO<sub>4</sub>ding</p>

Sputtering targets can be produced for of the most common sputter tool OEMs\* such as Evatec, Applied Materials, SPTS, Ulvac and many more.

## STANDARD TARGET MATERIALS WITH RESPECTIVE STANDARD PURITY

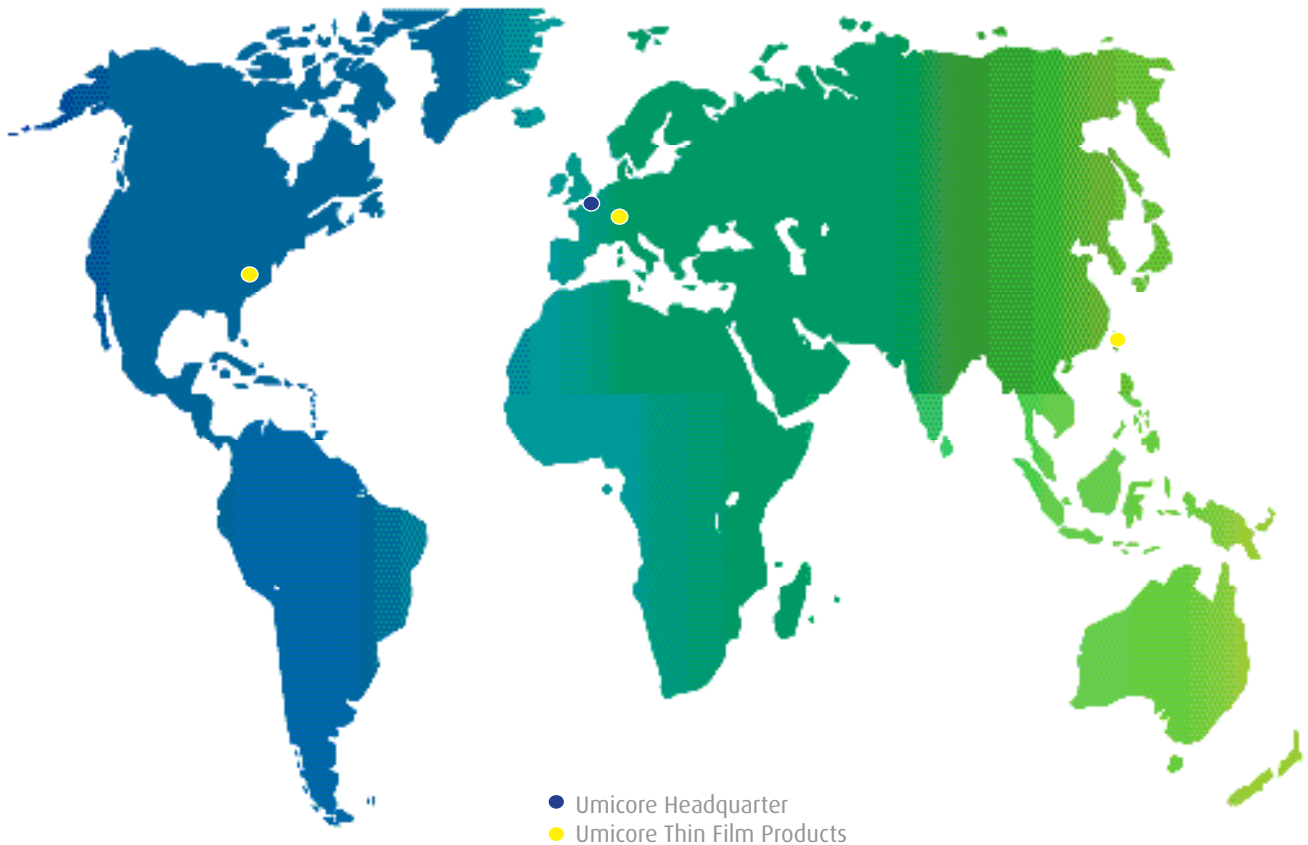
Metals		Alloys		Non-Metals		Precious Metals	
Al	5N5	AlCu0.5	5N5	Al <sub>2</sub> O <sub>3</sub>	4N	Ag	4N
Cr	3N5	AlCu4	5N5	GaZnO (ZnO/Ga <sub>2</sub> O <sub>3</sub> 95/5)	3N	Au	4N
Cu	4N5	AlSc	3N5	Ge	5N	AuZn3	4N
In	4N	AlSi0.5	5N5	ITO (In <sub>2</sub> O <sub>3</sub> /SnO <sub>2</sub> 90/10)	4N	Pd	4N
Hf	3N7	AlSi1	5N5	LiCoO <sub>2</sub>	3N	Pt	4N
Mo	3N5	AlSi1Cu0.5	5N5	Li <sub>3</sub> PO <sub>4</sub>	3N	Ru	4N
Nb	3N	NiCr20	3N	Si	5N		
Ni	3N5	NiFe21.5	3N	SiO <sub>2</sub>	4N		
Sc	2N5	NiFe55	3N				
Sn	4N5	NiV7	3N5				
Ta	4N	WTi10	4N5				
Ti	5N						
W	5N						

\* IC's = Integrated Circuits  
MEMS = Microelectromechanical systems  
RDL = Redistribution Layer  
OEM = Original Equipment Manufacturer

LED = Light-Emitting Diode  
UBM = Under Bump Metallization  
BSM = Backside/Back-Side Metallization

# NETWORK FOR GLOBAL SUPPLY

Umicore Thin Film Products AG, a globally active business line within the Umicore Group, is one of the leading manufacturers of coating materials for physical vapor deposition (PVD) with more than 70 years of experience in the field. Our micro-electronics portfolio covers a wide range of highly effective sputtering targets and evaporation materials.



Find more information here:  
[www.tfp.umicore.com](http://www.tfp.umicore.com)

Umicore Thin Film Products production sites:

Umicore Thin Film Products AG  
Headquarter  
Alte Landstrasse 8  
9496 Balzers  
Principality of Liechtenstein  
Tel +423 388 7300  
Fax +423 388 7450  
[sales.materials@umicore.com](mailto:sales.materials@umicore.com)

Umicore Optical Materials  
USA Inc.  
2976 S. 614 Road  
Quapaw, OK 74363  
USA  
Tel +1 918 673 1650  
Fax +1 918 673 2121  
[sales.materials.us@umicore.com](mailto:sales.materials.us@umicore.com)

Umicore Thin Film Products  
Taiwan Co., Ltd.  
No. 22, Aly. 4, Ln. 711 Bo'ai St.,  
Zhubei City,  
Hsinchu County 302  
Taiwan ROC  
Tel +886 3553 2999  
Fax +8863553 2525  
[sales.materials\\_hc@umicore.com](mailto:sales.materials_hc@umicore.com)