High Quality Planar Sputtering Target

IKS provides high-quality planar sputtering targets for a wide range of applications for ferromagnetic, complex oxides, and semiconducting films. Our targets are offered in various purity levels to suit your specific requirements with the minimum purity of 99.5% up to 99.99% for pure elements and alloys.

Adopting advanced hot isostatic pressing (HIP), vacuum sintering and vacuum melting technologies, the planar sputtering targets from IKS are characterized by high purity, high density, homogenous composition, fine grain size and long service life. We monitor every step (from the raw materials to the finished products) to make sure that only high-quality targets can be shipped from our factories.

IKS manufactures all shapes and sizes of high quality planar targets. Let us know the material and dimensions you need and we will meet your special requirement.

Application

In recent years, sputtering has been widely applied in semiconductor industry for Thin Film deposition of various materials in integrated circuit processing, architectural and automotive glass for energy conservation, colorful decorative coatings for hardware, hard wearing coatings for tools and consumer goods, and deposition of metals during fabrication of CDs, etc.

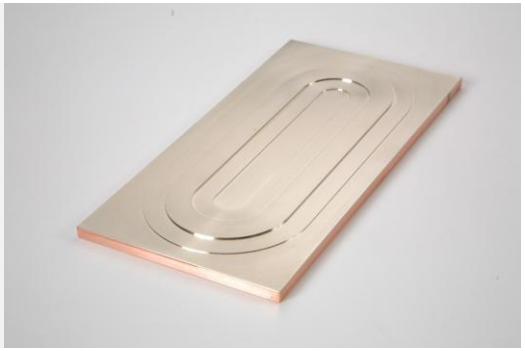
Main Products

Material	Symbol	Atomic Ratio	Purity	Relative Density	Stock Dimensions	Technology	Features
Chromium	Cr	_____	99.5%~99.95%	>99%	750x125x10mm 170x75x12mm	Hot Isostatic Pressing (HIP)	Good Oxidation Resistance
Tungsten	W	_____	99.9%~99.95%	>99%	750x125x10mm 170x75x12mm	Hot Isostatic Pressing (HIP)	High Hardness
Titanium	Ti	_____	99.9%~99.99%	>99%	750x125x10mm 170x75x12mm	Vacuum Melting	Good Wear Resistance
Nickel	Ni	_____	99.9%~99.99%	>99%	750x125x10mm 170x75x12mm	Vacuum Melting	Great Corrosion Resistance
Molybdenum	Mo	_____	99.9%~99.99%	>99%	750x125x10mm 170x75x12mm	Vacuum Melting	Great Corrosion Resistance
Silicon	Si	_____	99.99%	>99%	750x125x10mm 170x75x12mm	Vacuum Sintering	High Hardness
Silver	Ag	_____	99.9%~99.99%	>99%	750x125x10mm 170x75x12mm	Vacuum Melting	Good Electrical and Thermal Conductivity
Tantalum	Ta	_____	99.9%~99.99%	>99%	750x125x10mm 170x75x12mm	Vacuum Melting	High Ductility
Copper	Cu	_____	99.9%~99.99%	>99%	750x125x10mm 170x75x12mm	Vacuum Melting	High Ductility, Good Thermal Conductivity and Corrosion Resistance
Graphite		_____	99.9%~99.99%	>99%	750x125x10mm 170x75x12mm	Vacuum Sintering	High Hardness
Aluminum	Al	_____	99.9%~99.99%	>99%	750x125x10mm 170x75x12mm	Vacuum Melting	Good Ductility, Thermal Conductivity and Corrosion Resistance
Silicon-Aluminum	SiAl	25/75 30/70 40/60 50/50	99.9%~99.99%	>99%	750x125x10mm 170x75x12mm	Hot Isostatic Pressing (HIP)	High Ductility and Good Wear Resistance

Titanium-Aluminum	TiAl	30/70 33/67 40/60 45/55 50/50 60/40 70/30 75/25 80/20	>99.7% (2N7)	>99%	754x154x18mm 331x174x22mm	Hot Isostatic Pressing (HIP)	High Mechanical Strength and Good Corrosion Resistance
Chromium-Aluminum	CrAl	25/75 30/70 40/60 50/50	>99.7% (2N7)	>99%	754x154x18mm 490x96x8mm	Hot Isostatic Pressing (HIP)	Good Oxidation Resistance and Corrosion Resistance
Titanium-Aluminum-Silicon	TiAlSi	30/60/10 40/50/10	>99.7% (2N7)	>99%	754x154x18mm 331x174x22mm	Hot Isostatic Pressing (HIP)	High Hardness and Ductility
Chromium-Aluminum-Silicon	CrAlSi	30/60/10 40/50/10	>99.7% (2N7)	>99%	754x154x18mm 331x174x22mm	Hot Isostatic Pressing (HIP)	Good Oxidation Resistance and Corrosion Resistance

More Information

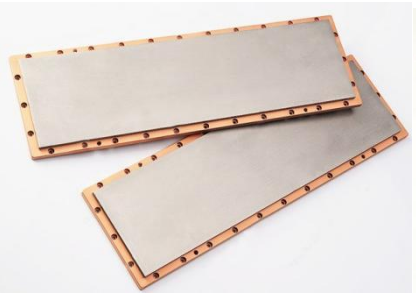
Certification: ISO9001
Average Grain Size: 30-40μm (national standard is 100μm)
Shape: Rectangular targets, Round target
Other special specifications are available on customer's request.

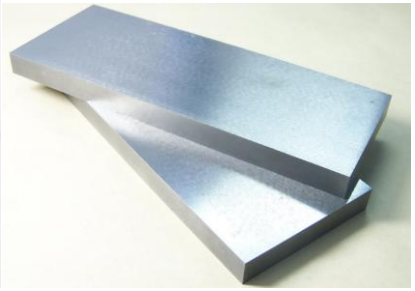


Quality Analysis of TiAl Sputtering Target

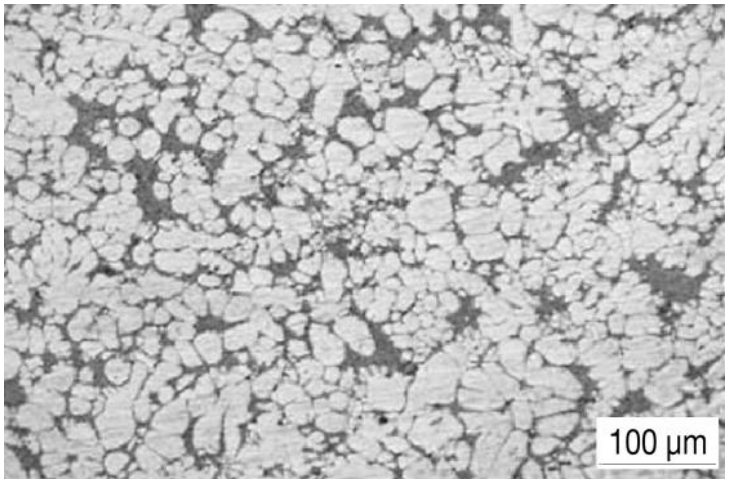
(Take TiAl 30/70 at% as a sample)

Main component (wt%)	Impurity content (%)					
TiAl	C	N	O	Fe	Si	S
>99.7	0.01	0.006	0.2	0.06	0.02	0.002
	Ti	Al				
	46.87%	balance				





Dimension: 754x154x18mm
True density: 3.31(g/cm^3)
Theoretical density: >99%



The average grain size of our planar target is 30-40μm which is far below the national standard (100μm).

The IKS Advantages

- Variety of materials including: Silver, Titanium, Aluminum, Silicon, Silicon-Aluminum Titanium-Aluminum-Silicon, Graphite and so on to suit your requirements.
- Incredibly tiny grain size and uniform microstructure assure consistent process performance through full end of life.
- Complete homogeneity and high purity levels of targets ensure the coating process is more stable and the deposited layers are of higher quality.
- Excellent density ensure the coating process can benefit from a particularly high level of conductivity
- The wonderful sputtering speeds due to the high density can help you save more time.

Function of Hard Wearing Coatings

Provide hard surfaces with excellent corrosion resistance and wear resistance for cutting tools, punching and forming moulds to increase their service time, at the same time, the higher feed speeds, good cutting performance and excellent metal removal rates can be achieved easily.

Also, when used in automotive engines, it can effectively reduce friction coefficient of surface on precision components.

Function of Decorative Coatings

Ensure good scratch resistance and decorative colorful finishes for hard coating on mobile phones, jewelry, watches, eyewear, automotive decoration, domestic appliances, bathroom and kitchen hardware, etc.