

Advanced Targets Materials Co., Ltd

Your reliable partner for

Sputtering targets and arcing cathodes!



For what we do: it is made up by 4 main parts.

1.Sputtering Targets

Various materials and hundreds of different type



3.Machining service

2.1 sputtering targets business

Various type and different materials





2.2 Key manufacturing process

Sputtering targets manufacture method 1. Hot Isostatic Pressing



(F)

2.2 Key manufacturing process

2.Melting process





Main equipments HIP equipment

Ours is made by Sweden one of the most advanced





3.2 Machining equipment

Wire electrode cutting workshop Large size materials by HIP method **CNC MACHING center**





Choose Advanced Targets to strengthen your advantages in hard coatings?

3.2-2 Machining equipment







Gantry milling machining

for huge size materials especially those melting method one



3.3 Key equipment for analysis



Metallographic microscope



LECO instrument



Powder size distribution analysis

F



XRF instrument



9

4.Qualification

4.1 ISO 9001 Quality management system certification IQNET Europe country.USA, Japn.....



V1.1

4.2 Qualification

High technology company certificated by Hebei **Provincial Government**



11

5. R&D Research and Development

We are always focused on manufacturing new advanced type materials to provide clients better usage.

Alloy	Composition										
Cr base	CrMo, C	CrMo,CrW,CrNiAlSi									
CrAI base	CrAlSi, (CrAIV, (Cı	AIW,	CrAIB, CrAISiW, AITiCrSiY						
TiAl base	TiAlCr, 7	TiAlCr,TiAlSi,TiAlTa,TiAlW, TiAlNb									
Others	NiCrAIY,	AISnC	u								
Effect of TiAl Matrix	. Composi	te Add	lit	ion or	Performance Improvement :						
+	hardness	Ta		В	+hardness +grain ref.						
+low friction +	hardness	V		Nb							
+oxidation res. +	hardness	Zr		Hf							
+corr	osion res.	Cr		Si	+hardness +Nano composite						
+oxidation res. +	Y		W	+low friction +wear res.							
+low friction +	Мо										
				•••							



5.2 R&D innovation



We have built the great cooperation with **Chinese Academy of Sciences** to strengthen our R&D. The main aim is developing new materials used in hard-coating field.



6.Our strength

- > HIP is our main manufacturing process.
- Using our state of art powder metallurgy technology, our TiAl/CrAl/TiSiAl products drove our customer to get more success in the market. This also guarantee the homogeneous powder distribution of the alloy products



CrAl targets homogeneous metallograph --- Uniform distribution and well grain size



Choose Advanced Targets to strengthen your advantages in hard coatings!

7. Our typical products

Dimension	Ti	TiAl	TiAl	TiAl	TiAl	Cr	CrAl	WC
/mm	TA1	30/70	33/67	50/50	50/50	99.8%	30/70	99.9%
Ф63*32								
Ф100*32								
Ф105*16								
Ф160*12								
170*75*12								
331*174*24								
488*87.5*6								
741*191*18								
754*154*18								
1040*191*18								
1701*132*12								
Process	Melting	HIP	HIP	HIP	Melting	HIP	HIP	HP

Other targets including TiAl-X and CrAl-X in accordance with customers' specifications are available on request. (X=Si, Nb, W, Mo etc)



Our products



TiAI 50/50at%D127*15mm



Cr 99.8% D105*16mm



TiAl 33/67at%741*191*18mm

Choose Advanced Targets to strengthen your advantages in hard coatings!

Our products



Cr 99.9% 170*75*12mm



TiAl 33/67at% D100*32mm



CrAI 30/70at% D160*12mm



Our products





TiAl for Platit

NiCr 80/20 at% 3010*244*18mm



Choose Advanced Targets to strengthen your advantages in hard coatings!

8. Targets specification 8.1 Chromium targets

1、 Chemical standard of PM Cr targets

	De	coration coating		cutting	tools coating
	Band	2N5	2N8	3N	3N5
Main cont	tent Cr (wt%)	≥99.5%	≥99.8%	≥99.9%	≥99.95%
	С	200	400	150	100
	N 500 O 1500 impurity S 100 Fe 1600	200	100	100	
		1000	500	300	
,		100	50	50	
impurity		800	500	150	
(ppm)	Al	1200	500	200	100
<	Si	2000	600	300	100
	Ni	-	-	-	50
	Cu	_	-	-	50
	Mn	-	-	-	50

2. Relative density, >99%;

3, Average grain size;

Band	2N5	2N8	3N	3N5
Average grain size (µm)	≤150	≤150	≤200	≤200



Al alloy targets spec.

Table 1 Chemical test requirements of PM TiAl targets Atomic ratio

Composition	Puritv wt%	Main content (wt%)			Gas impu	rity (ppm)	Metal impurity (ppm)		
· · · · · · · · · · · · · · · · · · ·	,,	Ti	Al	С	Ν	0	S	Fe	Si
TiAl 33/67at%		X±1wt%	Balance	300	300	3000	50	1000	600
TiAl 50/50at%		X±1wt%	Balance	300	300	4000	50	800	400

Table 2 Chemical test requirements of PM CrAl targets

Grade	Purity wt%	Main conte	Gas impurity, Ppm, ≤				Metal impurity, ppm, ≤		
		Cr	Al	С	Ν	0	S	Fe	Si
Cr30Al70 (at%)	≥99.8	(X±1)wt%	Balance	400	200	2000	50	1000	500



NiCR alloy targets spec.

Table 1	Chemical	test req	wirements	of Melting	NiCr targets	Purity 99.8%
I doite I	Chenneur	1051 100	unemento	or monthing	inci ungetto	Tunty 77.07

Composition	Puritv wt%	Main content (wt%)		Gas impurity (ppm)				Metal impurity (ppm)		
	,	Cr	Ni	С	Ν	0	S	Fe	Si	Al
NiCr 80/20wt%	2N8	X±1wt%	Balance	<100	<100	<300	<50	<800	<600	<500



Your reliable partner for sputtering targets and arcing cathodes!

Contact: Frank chen, 8613522719901, frank_chen@atargets.com

website: www.reliabletargets.com www.Atargets.com

Factory: No.9 Keyuan road, High-tech business development zone, Zhuozhou, Hebei.

Beijing Office: Tecent Marker Space A425, Huilongguan East Road No.338. Changping District, Beijing



Choose Advanced Targets to strengthen your advantages in hard coatings!

22