

## Section 7 Nonferrous Metal(Chip)

### 1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		Cu	Sn	Zn	Mg	P	Ni	Cr	Mn	Fe	Ti	Si	
NCS HC 28933	Low Tin Aluminum Alloy	2.53	7.05				1.88			0.32		0.56	75
NCS HC 28934	Low Tin Aluminum Alloy	1.52	7.40				0.77			0.31		3.83	75
NCS HC 28938	ZL202	9.91		0.23	0.076				0.192	0.575		0.50	75
NCS HC 28939	ZL203	3.91		0.235					0.187	0.57		0.52	75
NCS HC 28942	LD6	2.28		0.053	0.65		0.0048	0.037	0.423	0.397	0.076	0.476	50
NCS HC 28944	LD8	2.29		0.065	1.33		1.38		0.081	1.17	0.055	0.99	100
NCS HC 28945	LD9	3.41		0.073	0.60		1.73		0.22	0.70	0.024	0.575	50
NCS HC 28951	LY16	7.44		0.166	0.076		0.032		0.63	0.247	0.146	0.196	100
NCS HC 28959	AL-2	0.073							0.0050	0.35			90
NCS HC 28960	AL-1	0.0082							0.0020	0.20			70
NCS HC 28961	AL-3	0.115						0.010	0.79				70
NCS HC 28963	AL-0	0.011							0.0029	0.18			70
NCS HC 28966	ZL103A	1.79		0.200	0.345	0.012		0.32	0.23				75
NCS HC 28967	ZL104A	0.300		0.242	0.280			0.35	0.175				75
NCS HC 28968	ZL105A	1.62		0.264	0.425		0.099		0.164	0.22			50
NCS HC 28969	ZL106A	1.74		0.213	0.27				0.362	0.28			75
NCS HC 28970	ZL108A	1.42		0.157	0.39		0.027		0.378	0.275			100
NCS HC 28971	ZL108+RE	1.88		0.23	0.56				0.60	0.224			100
NCS HC 28973	ZL108A+RE	1.71		0.593	0.697		0.0245		0.44	0.39			100
NCS HC 28974	ZL107	3.73		0.385	0.071		0.048		0.062	0.51	0.005	7.03	50
			Ti	Si	RE								
NCS HC 28959	AL-2	0.0015	0.52	0.075									
NCS HC 28960	AL-1	0.0015	0.20	0.143									
NCS HC 28961	AL-3	0.0025	0.79	0.163									
NCS HC 28963	AL-0	0.0022	0.15	0.92									
NCS HC 28966	ZL103A	0.0032	5.96										
NCS HC 28967	ZL104A		9.38										
NCS HC 28968	ZL105A		5.68										
NCS HC 28969	ZL106A		8.35										
NCS HC 28970	ZL108A		10.14										
NCS HC 28971	ZL108+RE	0.026	9.74	0.72									
NCS HC 28973	ZL108A+RE	0.0105	11.70	1.06									
Number	Name	Chemical Composition(Percent)								Unit Size (in g)			
		Cu	Zn	Mg	Ni	As	Ti	Si					
NCS HC 41913	LD7	2.18	0.0094	1.58	1.15	1.22	0.12	0.094	100				
NCS HC 41915	Al-00	0.0034				0.106		0.099	100				
NCS HC 41916	LD2	1.07		0.758		0.332	0.080	1.05	100				
NCS HC 41917	ZL103	2.55	0.097	0.55		0.33		5.66	100				
NCS HC 41918	ZL108	1.29	0.2	0.74		0.23	0.01	11.87	100				

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### 1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		Cu	Sn	Pb	Zn	Mg	Ni	Mn	Fe	Ti	Si	Be	Zr		
NCS HC 50920	Aluminum Alloy	1.14		0.0071	0.038	0.084	1.44	1.04	0.38	0.19		12.74			100
NCS HC 50922	Aluminum Alloy						0.028		1.53	0.282	0.117	0.216			100
NCS HC 50923	Aluminum Alloy	4.43		0.0075	0.044	0.152	0.028		0.094	0.662	0.154	1.22		0.101	100
NCS HC 50924	Aluminum Alloy	0.114				0.141	4.96		0.274	0.392	0.142	1.22			100
NCS HC 50928	Aluminum Alloy	3.99		0.0096	0.041	0.19	0.085		0.23	0.26		7.21			100
NCS HC 50931	Aluminum Alloy	0.28				12.80	0.14		0.26	0.27		6.93			100
NCS HC 50932	Aluminum Alloy	1.45	margin	0.016	0.042	0.18	0.58		0.33	0.20	0.12	5.12	0.037		100
NCS HC 50933	Aluminum Alloy	1.57	margin	0.016	0.043	0.12	0.60		0.25	0.26	0.1	9.57	0.17		100
NCS HC 50934	Aluminum Alloy	0.096	margin	0.0085	0.043	1.62	0.60		0.088	0.18		5.87			100
NCS HC 50937	Aluminum Alloy	3.98				0.175	1.49			0.482		0.673			100

  

Number	Name	Chemical Composition(Percent)										Unit Size (in g)			
		Cu	Zn	Mg	Ni	Cr	Mn	Fe	Sb	Ti	Si				
NCS HC 53902	Aluminum Alloy	0.095	0.10	0.02			1.38	0.38			0.18				50
NCS HC 53906	Aluminum Alloy	4.12	0.25	0.52	0.083		0.35	0.44		0.051	0.60				100
NCS HC 53907	Aluminum Alloy	6.31	0.11	0.086	0.094	0.19	0.39	0.26		0.038	0.45				100
NCS HC 53908	Aluminum Alloy	0.098	0.08	2.30	0.048		0.29	0.55		0.096	0.40				100
NCS HC 53913	Aluminum Alloy	0.11	0.16	0.055	0.0061		0.080	0.49		0.012	5.55				100
NCS HC 53914	Aluminum Alloy	0.015	0.096	0.010	0.0048		0.20	0.48		0.11	11.75				100
NCS HC 53916	Aluminum Alloy	1.52	6.17	2.44		0.17	0.39	0.23			0.29				100
NCS HC 53917	Aluminum Alloy	0.21	0.053	4.98	0.011		0.16	0.51		0.0098	0.40				100

## Section 7 Nonferrous Metal(Chip) 2)Copper & Copper Alloy

Number	Name	Chemical Composition(Percent)								Unit Size (in g)			
		Cu	Al	Sn	Zn	P	Fe	Si					
NCS HC 28901	H68	68.55			31.33	0.023	0.0105			100			
NCS HC 28907	Q Sn4-0.3			4.02		0.322				100			
NCS HC 28910	Q Sn7-0.2	92.62		7.11		0.185				100			
NCS HC 28911	Q Sn6.5-0.1			6.25		0.21				100			
NCS HC 28912	Q Sn6.5-0.1			6.44		0.137				100			
NCS HC 28913	Q Sn6.5-0.4			6.35		0.137				100			
NCS HC 28920	ZQ Al9-2		8.29				0.14	2.09		100			
NCS HC 28922	ZQ Al10-3-1.5		9.17				2.98	1.64		100			
NCS HC 28927	H68	68.52			31.4	0.0023	0.0105			100			
NCS HC 28931	Tin Bronze			6.54		0.136				100			
Number	Name	Chemical Composition(Percent)								Unit Size (in g)			
		Cu	Sn	Pb	Zn	P	Fe	Sb	Si				
NCS HC 41904	ZQ Sn3-7-5-1	81.45	4.08	6.16	6.96	1.07				100			
NCS HC 41905	ZQ Sn17-4-4	72.25	4.24	17.62	5.37					100			
NCS HC 41909	Tin-Phosphor Bronze	93.72	5.79			0.423				150			
NCS HC 41910	Tin-Phosphor Bronze	92.85	6.82			0.238				100			
NCS HC 41911	Tin-Phosphor Bronze	91.73	7.93			0.106				100			
NCS HC 41912	Tin-Phosphor Bronze	93.70	5.79	0.021		0.372	0.011	0.006	0.001	100			
NCS HC 41924	Phosphor Bronze	92.85	6.82			0.238				150			
NCS HC 41925	Phosphor Bronze	91.73	7.92			0.106				150			
NCS HC 41926	Phosphor Bronze	93.70	5.79	0.021		0.372	0.011	0.0058	0.0012	150			
Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		Cu	Al	Sn	Pb	Zn	P	Mn	Fe	As	Sb	Bi	
NCS HC 43909	Q Al9-2		9.80					2.46					80
NCS HC 43914	H Sn62-1	61.67		0.89	0.089		0.0070		0.090		0.0048	0.0018	60
NCS HC 43918	H Sn70-1A	70.04		0.91						0.039			100
NCS HC 43919	H Al177-2A	77.39	2.04							0.044			100
NCS HC 43925	Q Sn6-6-2			5.94	2.90	6.06							50
Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		Cu	Al	Sn	Pb	Zn	Mg	P	Mn	Fe	Sb	Bi	
NCS HC 45913	H Pb59-1	58.87			1.30					0.022			100
NCS HC 45914	H Te59-1	59.22	0.46	0.54					0.73	0.88			100
NCS HC 45915	Tin Bronze			3.55	1.97	3.92							100
NCS HC 45916	Iron Bronze	58.00	0.26	0.54	0.19			0.0076	0.73	0.89	0.0091	0.0024	50
NCS HC 45918	Aluminum Bronze				0.019	20.81	0.033	0.0048	0.32	0.47	0.0020	0.0019	100
NCS HC 45918	Aluminum Bronze		Si	As	Ni								
		0.146	0.0098	14.87									
Number	Name	Chemical Composition(Percent)								Unit Size (in g)			
		Cu	Al	Sn	Pb	P	Fe	Sb	Bi				
NCS HC 50902	Copper Alloy	77.05	2.35		0.054		0.046	0.0043	0.0020				100
NCS HC 50904	Copper Alloy	57.54			0.78	0.012	0.78	0.0082	0.0020				100
NCS HC 50907	Copper Alloy	90.31		0.50	0.035	0.0064	0.044	0.0043	0.0020				100
NCS HC 50911	74-3	74.54			2.82	0.0069	0.11	0.0070	0.0018				100
Number	Name	Chemical Composition(Percent)					Unit Size (in g)						
		Cu	Sn	Sb									
NCS HC 28979	Ch Pb Sb 14-5	0.38	5.14	14.20			100						
Number	Name	Chemical Composition(Percent)								Unit Size (in g)			
		Al	Fe	Mn	Ni	Pb	Si	Zn	C				
NCS HC93901	High Manganese Aluminum Bronze	10.97	5.41	10.16	3.02	0.034	0.183	0.114	0.034				100
NCS HC93902	High Manganese Aluminum Bronze	9.6	4.21	11.53	2.72	0.018	0.107	0.224	0.029				100
NCS HC93903	High Manganese Aluminum Bronze	8.16	3.22	13.52	2.42	0.014	0.147	0.312	0.025				100
NCS HC93904	High Manganese Aluminum Bronze	7.84	3.16	14.53	2.14	0.025	0.062	0.464	0.03				100
NCS HC93905	High Manganese Aluminum Bronze	6.51	2.46	16.69	1.81	0.011	0.047	0.517	0.027				100
NCS HC93906	High Manganese Aluminum Bronze	4.73	1.85	18.62	1.53	0.0012	0.013	0.628	0.011				100

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### 3)Lead Base Alloy

Number	Name	Chemical Composition(Percent)						Unit Size (in g)		
		Cu	Sn	Pb	Sb	Bi				
NCS HC 28986	Pb60 Sn40	0.027	40.54	59.02	0.354	0.056		100		
NCS HC 28987	Pb90 Sn10		10.12	89.84				100		
Number	Name	Chemical Composition(Percent)								Unit Size (in g)
		Cu	Al	Sn	Zn	Fe	As	Sb	Bi	
NCS HC 39901	Lead Base Alloy	1.63		15.69	0.105	0.041	0.065	16.01	0.028	100
NCS HC 39902	Lead Base Alloy	1.25		19.57	0.104	0.030	0.041	13.81	0.038	100
NCS HC 39903	Lead Base Alloy	2.62	0.0021	11.01	0.035	0.037	0.052	13.86	0.054	100
NCS HC 39904	Lead Base Alloy	0.5		7.44	0.0052		0.095	12.02	0.069	100
NCS HC 39905	Lead Base Alloy	0.31		4.81	0.0068		0.115	10.04	0.103	100
Number	Name	Chemical Composition(Percent)						Unit Size (in g)		
		Cu	Sn	Pb	As	Sb	Bi			
NCS HC 41919	Lead Base Bearing Alloy	1.98	15.97	65.73	0.014	16.09	0.024			100
NCS HC 41920	Lead Base Bearing Alloy	2.88	5.69	76.22	0.012	15.02	0.0075			100
Number	Name	Chemical Composition(Percent)				Unit Size (in g)				
		Cu	Sn	As	Sb					
NCS HC 50956	Lead Base Bearing Alloy	0.38	5.16	0.15	15.94	100				

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### 4)Tin Base Alloy

Number	Name	Chemical Composition(Percent)						Unit Size (in g)			
		Cu	Sn	Pb	As	Sb	Bi				
NCS HC 28988	Ch Sn Sb4-4	4.54			0.020	4.93	0.006	100			
NCS HC 28989	Ch Sn Sb8-4	4.9			0.016	8.07	0.085	100			
NCS HC 28990	Ch Sn Sb9-7	8.00			0.027	9.00	0.008	100			
NCS HC 28994	Pb50 Sn50		51.15	48.80				100			
Number	Name	Chemical Composition(Percent)								Unit Size (in g)	
		Cu	Sn	Pb	Zn	Fe	As	Sb	Bi		Ag
NCS HC 35902	Tin-Lead Solder	0.030	50.12					0.232	0.046		100
NCS HC 35903	Tin-Lead Solder	0.00090	30.12		(0.000083)		0.0034	1.73	0.127	0.047	100
NCS HC 35904	Tin-Lead Solder	0.0024	39.84		(0.000086)		0.0019	0.809	0.024	1.08	100
NCS HC 35905	Tin-Lead Solder	0.0019	49.72		(0.000086)		0.0032	0.409	0.021	3.61	100
NCS HC 35907	Tin-Lead Solder	0.0062	89.81		(0.000040)		0.013	0.036	0.0200	0.0024	100
NCS HC 35908	Tin-Lead Solder	0.029	3.66		0.000080		0.011	6.59	0.0045	0.0032	100
NCS HC 35910	Tin	0.029	99.79	0.076		0.0092	0.018	0.052	0.021		stick200
Number	Name	Chemical Composition(Percent)								Unit Size (in g)	
		Cu	Al	Zn	Mn	Fe	As	Sb	Bi		
NCS HC 39906	Tin Base Alloy	2.07		0.0028	18.36	0.049	0.036	13.54	0.029		100
NCS HC 39907	Tin Base Alloy	3.55	0.0036		9.30	0.038	0.070	12.03	0.064		100
NCS HC 39908	Tin Base Alloy	6.36	0.0029	0.0021	12.17	0.063	0.100	9.62	0.089		100
NCS HC 39909	Tin Base Alloy	6.97		0.0035	0.20	0.064	0.102	7.95	0.079		100
NCS HC 39910	Tin Base Alloy	4.64		0.0087	0.41	0.120		5.94	0.099		100
Number	Name	Chemical Composition(Percent)						Unit Size (in g)			
		Cu	Sn	Pb	As	Sb	Bi				
NSC HC 41921	Tin Base Alloy	4.06	86.61	1.32	0.018	7.87	0.014				100
NSC HC 41922	Tin Base Alloy	6.72	80.27	1.20	0.020	11.81	0.012				100
Number	Name	Chemical Composition(Percent)							Unit Size (in g)		
		Cu	Pb	Zn	Fe	As	Sb	Bi			
NSC HC 50945	Z Ch Sn Sb D12-3-10	0.409	9.90		0.069						90
NSC HC 50947	Tin Alloy	7.11	0.323	0.0046	0.073	0.065	9.14	0.073			100
NSC HC 50949	Tin Alloy	4.09	9.90	0.0021	0.069	0.069	12.10	0.064			100

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### 5)Zinc Alloy

Number	Name	Chemical Composition(Percent)						Unit Size	
		Cu	Al	Mg			(in g)		
NCS HC 28974	Z Zn Al4		4.84	0.083			100		
NCS HC 28975	Z Zn Al4-1	1.56	4.48	0.074			100		
Number	Name	Chemical Composition(Percent)					Unit Size		
		Zn	PbO	Mn	CdO	L.O.I	(in g)		
NCS HC 35911	Zinc oxit	99.67	0.0019	0.000051	0.00066	0.387	30		
Number	Name	Chemical Composition(Percent)							Unit Size
		Cu	Al	Sn	Pb	Mg	Fe	Cd	(in g)
NCS HC 50955	Zinc Alloy	3.93	7.49	0.0049	0.0092	0.048	0.058	0.0056	100
Number	Name	Chemical Composition(Percent)				Unit Size			
		Cu	Pb	Fe	Cd	(in g)			
NCS HC 52904	Zinc	0.00012	0.0029	0.0011	0.011	200			

## Section 7 Nonferrous Metal(Chip)

### 6)Titanium Alloy & Other

Number	Name	Chemical Composition(Percent)							Unit Size (in g)						
		C	Si	Mo	Al	Zr	V	Fe							
NCSHC 57905	Titanium Alloy	0.0093			5.60			0.24							50
NCSHC 57909a	Titanium Alloy	0.013			6.20		4.02	0.17							50
NCSHC 57911a	Titanium Alloy	0.0084	0.29	3.41	6.66	1.80		0.048							50
Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		La <sub>2</sub> O <sub>3</sub>	CeO <sub>2</sub>	Pr <sub>6</sub> O <sub>11</sub>	Nd <sub>2</sub> O <sub>3</sub>	Sm <sub>2</sub> O <sub>3</sub>	Gd <sub>2</sub> O <sub>3</sub>	Tb <sub>4</sub> O <sub>7</sub>	Dy <sub>2</sub> O <sub>3</sub>	Ho <sub>2</sub> O <sub>3</sub>	Er <sub>2</sub> O <sub>3</sub>	Tm <sub>2</sub> O <sub>3</sub>	Yb <sub>2</sub> O <sub>3</sub>	Lu <sub>2</sub> O <sub>3</sub>	
NCSHC 63901	Europia	12.8	3.4	15.2	11.8	15.3	16.8	12.2	11.3	15.0	12.6	10.2	16.3	11.6	5
Number	Name	Y <sub>2</sub> O <sub>3</sub>	Na <sub>2</sub> O	SiO <sub>2</sub> (Acid)	SiO <sub>2</sub> (Base)	CaO	Fe <sub>2</sub> O <sub>3</sub>	NiO	CuO	ZnO	PbO <sub>2</sub>				Unit Size (in g)
		NCSHC 63901	Europia	17.2	31.1	30.0	(40.5)	13.0	7.2	9.6	6.7	15.6	8.0		
Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		C	Si	Al	Fe	Mo	V	Zr	Cd	Pb	Cu	Sn			
NCSHC11901	Titanium Alloy	0.012	0.261	6.74	0.097	3.37		1.52							20
NCSHC11902	Titanium Alloy	0.0093	0.018	6.24	0.191		4.19								20
NCSHC11903a	Zinc Alloy			0.111	0.032				0.005	0.0041	0.0046	0.0047			100
NCSHC11903b	Zinc Alloy			0.112	0.033				0.0045	0.0042	0.0043	0.0042			100