

FERRO ALLOYS																						CHIP/POWDER				
		B																								
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy	
054-F21	%	1.55	20.9	0.028				0.013						0.012			0.73									
054-F22	%	8.64	8.4	0.144				3.76						0.023		0.015	8.7					Zn 0.0055	100g	CRM		
202-HC38601	%	1.71	22.51	0.031										0.018			1.09						75g	CRM		
202-HC38602	%	0.66	15.29	0.078										0.013			0.59						75g	CRM		
222-587-1	%	0.047	18.7	0.738		-0.01	-0.1			0.272	-0.005			-0.02		-0.001	-0.129		-0.04	0.004			100g	CRM		
		CaSi																								
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy	
054-F25	%	0.462			19.6				27.14					0.0088		0.0038	50.6						100g	CRM		
054-F26	%	1.49			29.7				6.03					0.022		0.029	60.3		0.153				100g	CRM		
361-119	%	0.48		0.3	31.5				3					0.034		-0.013	62.5						100g	RM		
		Cr																		LOW CARBON						
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy	
171-14B	%			0.023		0.044	72.84	0.009		0.29		0.043	0.317	0.014		0.022	0.65			0.097		Zn (0.014)	100g	CRM		
187-65	%	9.2		0.051		0.016	71.2		17.9	0.128			0.077	0.006		0.016	0.71						100g	CRM		
202-HC25609	%			0.053			64.17							0.015		0.011	0.53						50g	CRM	Low C	
202-HC25626	%			0.178			66.96			0.356				0.026			1.02						50g	CRM	Low C	
222-509-1	%			0.012			72.85					-0.03		-0.019			0.23						100g	CRM		
222-580-1	%			0.019		0.047	72.18					0.035		0.011			0.306			0.083			100g	CRM		
331-196	%			0.035			70.87			0.28							0.38			0.12			100g	CRM		
		Cr																		HIGH CARBON						
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy	
031-10	%			6.99		0.0512	53.7		36.04	0.16			0.19	0.0173		0.0611	1.95		0.2	0.32			100g	CRM		
171-15A	%			7.54		0.049	55.08			0.275		0.02	0.33	0.02		0.022	3.03		0.3	0.19		Mg 0.017	100g	CRM		
202-HC25603	%			6.55			68.75			0.14				0.025		0.043	1.29						50g	CRM		
202-HC25622	%			6.19			58.37			1.3				0.073		0.013	5.79						50g	CRM		
202-HC25623	%			7.51			61.74			0.5				0.049		0.009	3.89						50g	CRM		
222-507-1	%			5.4			70.3			0.27		0.049		0.017			1.2						100g	CRM		
222-585-1	%			6.87		0.044	57.6		31.1	0.86		0.023	0.197	0.018		0.039	2.76		0.36	0.33			100g	CRM		
331-64C	%			4.68		0.051	68	0.005	24.98	0.16		0.045	0.43	0.02		0.067	1.22		0.02	0.15			100g	CRM		
361-130-1	%			7.06			51.6	-0.011		1.2				0.016		0.034	4.46		-0.16	-0.39			100g	RM		
361-130-2	%			7.76			52.6	-0.007		0.45				0.013		0.045	2.12		-0.1	-0.38			100g	RM		
361-130-3	%			6.54			49	-0.011		0.77				0.014		0.029	6.25		-0.18	-0.39			100g	RM		
391-732-2	%			7.76			56.15							0.021		0.013	3.86						150g	CRM		
		MgSi																								
		Al	B	C	Ca	Co	Cr	Cu	Mg	Mn	Mo	N	Ni	P	RE	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy	
331-347	%	0.78	-0.003	0.017	0.81	0.004	0.14	0.065	4.49	0.53	-0.03		0.082	0.023	0.86	0.005	47.6			0.036		-0.007	Ce 0.45 La 0.26	100g	CRM	

FERRO ALLOYS																					CHIP/POWDER					
		As	Bi	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy	
054-F29	%			0.133					2.15	86.7		5.43a		0.055		0.033							100g	CRM		
134-33.1	%			0.115						85.48				0.129			1.74						100g	CRM		
134-33.2	%			6.82						80.8				0.19			1.14						100g	CRM		
187-54	%			1.2			0.043	0.059	15.9	80.4			0.14	0.22		0.003	1.74						120g	CRM		
202-HC25601	%			1.34						80				0.277		0.0024	0.92						50g	CRM		
202-HC25604	%			6.27						72.96				0.162		0.0115	1.43						50g	CRM		
202-HC25629	%			0.3						84.28				0.196		0.0018	0.63						50g	CRM	Low C	
202-HC41601	%	0.048	0.5a	0.86		0.145	0.335	0.107	13.48	83.35		0.018	0.08	0.18	0.068	0.003	0.948	0.0019		0.03		Sb 0.015 Zn 0.12	150g	CRM	Medium C	
222-503-1	%			0.7						80.8				0.069		-0.009	0.865						100g	CRM		
222-583-1	%			0.333					-12.3	86.42		-0.041		0.146		0.007	0.396						100g	CRM		
331-68C	%			6.72			0.074		12.3	80.04				0.19		0.008	0.005					As 0.021	100g	CRM		
361-121	%			1.62			-0.08	-0.15	14.9	81.4	-0.017	-0.022		0.38		0.004	0.62		-0.001		-0.0002		100g	RM		
391-701.5	%			6.81						74.14				0.144		0.002	0.04						150g	CRM		
Mo																										
		As	Bi	C	Ca	Co	Cr	Cu	Mg	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy	
054-F17	%	0.0158	0.0034	0.049				0.574			60.4			0.033	0.005	0.094	1.16	0.026				Sb 0.055, W 0.373, Zn 0.0049	100g	CRM		
134-32.1	%									69.95						0.08	0.97						100g	CRM		
202-HC25602	%			0.066				0.177		62.73						0.08	0.23						50g	CRM		
202-HC25614	%			0.097				0.178		59.16				0.024		0.072	0.67						50g	CRM		
202-HC25615	%			0.049				0.191		60.08				0.023		0.065	0.45						50g	CRM		
222-508-1	%			0.052						59.65				0.035		0.085	0.56						100g	CRM		
222-578-1	%			0.016				0.136		72.23				0.024		0.065	0.208						100g	CRM		
261-FEMO-2	%									53.2						0.12	0.12						100g	CRM		
391-745.3	%			0.03				0.45		62.06				0.05		0.025	0.55					Al (0.037)	150g	CRM		
Nb																										
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Nb	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy	
054-F20	%	2.91		0.061								0.157	55.7	0.068		0.0032	1.77	0.0006	0.06				Nb=Nb+Ta	100g	CRM	
202-HC25625	%	4.8		0.068				0.0051					76.08	0.014		0.008	1.6		0.013				Ta 0.51	50g	CRM	
222-576-1	%	2.53		0.201						43.9						1.79	0.195	1.32					Ta 0.306	100g	CRM	
222-579-1	%	1.86		0.037		0.0051				62.87			0.064		0.021	1.03	0.344	0.567					Ta 3.85	100g	CRM	
391-755-2	%	1.79		0.065						68.14			0.065		0.15	1.82	0.053						Ta (0.37)	150g	CRM	
P																										
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy	
202-HC25607	%			0.244						0.47				17.9		0.0681	1.87						50g	CRM		
202-HC38603	%			0.488						1.07				15.58		0.06	0.93						75g	CRM		
331-90	%													26.2									75g	CRM		
Si																										
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy	
031-33	%	0.62		1.01			0.43	0.29	80.2	0.75			0.28	0.043		-0.008	15.6						100g	CRM		
134-31.2	%	1.23			1.8									0.031			74.37						100g	CRM		
171-39	%	1.45		0.105	0.24			0.013	21.6	0.165						(<0.001)	75.9		0.116				50g	CRM		
187-56	%	0.31		0.032	0.34		0.011	0.001	24.1	0.029			0.003	0.022		0.001	75		0.02			Mg 0.023	60g	CRM		
187-70	%	0.21		0.087	0.16		0.046	0.066	54.1	0.283			0.022	0.018		-0.006	44.7		0.018			Mg 0.016	60g	CRM		
202-HC28602	%	1.55		0.17	0.98		0.057	0.04	25.14	0.131			0.011	0.011			70.75						50g	CRM		
202-HC28601	%	1.13		0.075	0.29		0.068	0.028	22.43	0.129			0.0155	0.012		0.003	75.6						50g	CRM		
202-HC28604	%	1.16		0.063	0.067		0.094	0.079	49.7	0.31			0.021	0.015		0.003	47.62						50g	CRM		
202-HC28605	%	1.15		0.07	0.106		0.091	0.0735	46.07	0.285			0.0202	0.015		0.0034	51.46						50g	CRM		

FERRO ALLOYS		Si																			CHIP/POWDER				
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy
222-529-1	%	0.86		0.1	0.46				6.15	0.04				0.013			91.11		0.09			Mg 0.04	100g	CRM	
222-582-2	%	1.154		0.15	0.405		0.074		21.42	0.23				0.0184		-0.003	75.2		0.225				100g	CRM	
261-FESI-45	%	0.31		0.06						0.449				0.018		(<0.005)	46.2		0.038				100g	CRM	
261-FESI75-3	%	0.478		-0.05	0.65		0.162	0.032		0.16			-0.04	0.014		-0.01	74.73						100g	CRM	
331-195	%	-0.05	0.001	0.034			0.047	0.047	23.6	0.17				0.032	0.02	<0.002	75.3		0.037		(<0.02)		75g	CRM	
331-57A	%	0.47	0.001	0.024	0.17		0.024	0.004	0.5	0.015				0.008	0.003	0.003	98.5		0.04	0.013	0.002		60g	CRM	
331-58A	%	0.95	0.001	0.014			0.02	0.024	25.22	0.16				0.012	0.009	<0.002	73.2		0.051	-0.002	0.002		50g	CRM	
331-59A	%	0.35	0.06	0.04	0.04		0.08	0.05	50	0.76				0.03	0.016		48.2						50g	CRM	
361-140-1	%	0.68		-0.03	0.04		-0.25	0.13	52.8	0.46				0.15	-0.02	-0.004	45.2		0.09				100g	RM	
361-140-2	%	0.62		-0.03	0.03		-0.25	0.14	46.12	0.53				0.15	-0.02	-0.004	51.85		0.1				100g	RM	
361-140-3	%	0.59		-0.05	0.09		-0.18	0.09	50.85	0.6				0.09	-0.02	-0.004	47.2		0.07				100g	RM	
361-140-4	%	0.9		-0.05	0.09		-0.19	0.09	47.5	1				0.11	-0.02	-0.004	49.8		0.09				100g	RM	
391-720-4	%	1.52		-0.045						0.21					0.032		-0.003	76.35					150g	CRM	
		Si Ca																							
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy
202-HC11604	%	1.95		0.61	30.03				8.49	0.426				0.025		0.048	57.02						100g	CRM	
202-HC25610	%	1.3		0.3	27.12				10.17					0.026		0.028	59.02						50g	CRM	
		Si Ca RE																							
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	RE	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy
202-HC28613	%				5.01					0.455					23.78		40.01		0.28				100g	CRM	
202-HC28614	%				6.26					0.46					26.38		38.92		0.416				100g	CRM	
		Si Mg RE																							
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mg	N	Ni	P	RE	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy
202-HC28609	%				1.01				31.67	0.66	10.2				8.66		43.98		0.54				80g	CRM	
202-HC28610	%				0.76				43.4	0.42	5.52				3.71		42.2		0.275				80g	CRM	
		SiCr																							
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy
331-689	%	0.049	0.0017	0.043		0.034	36.4	0.013	23.2	0.32				0.2	0.026		0.002	39.5		0.4	0.09		100g	CRM	
202-HC25611	%			0.034			30.93								0.029		41.93						50g	CRM	
		SiMn																							
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy
202-HC11603	%			1.14				0.019	14.02	65.33					0.162		0.017	18.96					100g	CRM	
202-HC25605	%			0.922						66.66					0.217		0.0125	19.34					50g	CRM	
202-HC25612	%			1.08						64.95					0.178		0.13	18.56					50g	CRM	
202-HC25613	%			2.19						64.29					0.305		0.012	14.42					50g	CRM	
202-HC28607	%			1.3						67.12					0.195		0.018	15.84					50g	CRM	
222-586-1	%	0.022		0.025	0.039	0.007	0.044		2.89						0.041		34			0.041			100g	CRM	
391-705.4	%			2.11						61.56					0.081		-0.014	14.76					150g	CRM	

FERRO ALLOYS																						CHIP/POWDER			
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy
054-F16	%	8.44		0.055			0.118	1.45		0.65	0.114			0.055		0.024	6.38	0.023	33.04	0.21	0.023		100g	CRM	
134-34.1	%	5.54															2.55		24.91				100g	CRM	
202-HC25608	%	5.08		0.023				0.012		2.54				0.04		0.012	4.68		28.76				100g	CRM	
202-HC26601	%	8.85		0.053				0.47		2.93				0.054		0.017	4.82		25.18				80g	CRM	
202-HC26602	%	7.14		0.051						2.39				0.03		0.012	3.59		29.68				80g	CRM	
202-HC26606	%	6.37		0.062				0.01								0.012	4.58		29.89				80g	CRM	
222-510-1	%	4.9		0.058										-0.035			4.65		26.95				100g	CRM	
222-584-1	%	7.19		0.044						1.13				0.032		0.03	1.8		37.17				100g	CRM	
222-589-1	%	5.34		0.132		0.115	0.506	0.146	16.93	0.151	0.934	0.64	0.663	-0.011		0.0152	-0.412	0.151	68.4	2.32	0.866	Sn 0.55	100g	CRM	
261-FETI-2	%	6.94												0.029			2.09		25.34				100g	CRM	
361-FETI1	%	12.5	0.6	0.57	1.12	0.028	0.33	0.6		7.7	0.06	0.143	0.17	0.05		0.009	2.9	0.11	19.9	0.69	3.6	Nb 0.05 Mg (0.4) Zn (0.04)	100g	RM	
		V																							
		Al	As	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy
054-F19	%	0.057	0.001	0.379				0.068		2.57				0.061		0.008	2.01			44.3			100g	CRM	
054-F32	%									3.5		6.15								37.05			100g	CRM	
134-35.1	%																			52.1			100g	CRM	
202-HC26603	%			0.39						0.197				0.056		0.0054	1.83			52.5			80g	CRM	
202-HC26604	%	1.23		0.046						0.076				0.043		0.0055	0.81			81.12			80g	CRM	
202-HC26608	%			0.329						0.317				0.048		0.004	1.75			52.82			50g	CRM	
222-511-1	%			0.049										-0.016		0.018	0.341			80.7			100g	CRM	
222-577-1	%	0.414		0.089				0.054		0.158			0.053	0.035		0.034	1.79			50.16			100g	CRM	
222-591-1	%	3.19		0.141				0.0596	14.59	0.307		0.0141		0.0299		0.0153	0.847			79.72			100g	CRM	
261-FEV-2	%	1	0.015	0.19			0.7	0.065		0.22				0.013		0.08	0.59			51			100g	CRM	
361-FEV42	%	-0.06		0.3			5.21	0.31	39.45	3.37	0.024	0.2	3.85	0.12		0.31	3.81		0.033	42.35			100g	RM	
361-FEV45	%	-0.013		0.24			5.82	0.41	33.8	4.14	0.01	0.26	4.28	0.12		0.33	4.86		0.022	45.27			100g	RM	
391-750-2	%	3.2		0.14										0.018		0.011	0.52			53.4			150g	CRM	
		W																							
		Al	As	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	W	Zr	Others/Set Only	Size	Type	Alloy
054-F18	%		0.027	0.084				0.108		0.158	0.55			0.042		0.071	0.35	0.038		74.3			100g	CRM	
171-17	%		0.076	0.74													0.23	0.05		81			100g	CRM	
202-HC25606	%			0.055				0.043						-0.028		0.048	0.34			76.66			100g	CRM	
222-555-1	%	0.14		0.025					-15.2					-0.02		-0.018	1.75	0.034		79.9			100g	CRM	
222-590-1	%	-0.37		0.025				0.0484	-17.9	0.136	0.101					-0.07	1.05	0.045		79.55			100g	CRM	
261-FEW-2	%			1.08						0.41				0.026			0.39	0.027		81.47			100g	CRM	
		Zr																							
		Al	B	C	Ca	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	Zr	Others/Set Only	Size	Type	Alloy
054-F27	%	7.97		0.112				1.54						0.042			26.07		0.228		49.7		100g	CRM	