

Popular High-Temperature Steels Set

*THE LEADER IN "APPLICATION-SPECIFIC"
CERTIFIED REFERENCE MATERIALS*



IARMS
*INTERNATIONAL ANALYTICAL
REFERENCE MATERIALS*

"Application-Specific" means just that, IARMs that are readily available in the physical forms necessary to supply the calibration needs of your laboratory. In addition to our original **thin disks** for X-ray methods, all CRMs are available in physical forms tailored to your specific applications; **thick solid disk** for Optical Emission and Glow Discharge spectrometry, and **chips** for wet chemical or solution instrumental techniques (ICP, AA, etc.). Also, for combustion analysis, **chips** are available for carbon and sulfur analysis. Please see the reverse side of this brochure for a list of the specific list of alloy CRMs selected for this set, and their typical chemistries.



Part of LGC Standards

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12-Piece Pre-Selected High-Temperature Steel Set

Analytical Reference Materials International's (ARMI) primary objective has been to develop and implement an industry acceptable system for the characterization and certification of metal alloy materials. The resulting Certified Reference Materials (CRMs) afford the scientific community an **unequivocal level of confidence**. Equally important is our desire that the final certified results be traceable to national and/or international certifying bodies with emphasis on NIST.

Grade	Al	B	C	Co	Cr	Cu	Mn	Mo	N	Nb
UNS#	Ni	O	P	S	Se	Si	Sn	Ti	V	W
13-8 PH Mo	1.04	---	0.038	0.020	12.32	0.032	0.059	2.11	0.0039	0.008
S13800	8.17	0.0010	0.006	0.003	---	0.047	0.002	0.012	0.011	0.01
15-5 PH	0.004	(0.0007)	0.045	0.08	14.29	3.25	0.53	0.35	0.012	0.301
S15500	4.81	0.001	0.022	0.001	---	0.41	0.01	0.003	0.054	0.028
17-4 PH	0.004	0.001	0.034	0.065	15.12	3.69	0.77	0.31	0.032	0.235
S17400	4.33	0.007	0.024	0.026	---	0.45	0.0081	0.001	0.066	0.05
17-7 PH	1.19	0.002	0.075	0.17	16.94	0.31	0.76	0.51	0.026	0.033
S17700	7.22	0.0011	0.0230	0.0019	---	0.361	0.0081	0.115	0.091	0.05
M-152 **	0.01	0.001	0.11	0.021	11.3	0.061	0.71	1.61	0.035	0.020
S64152	2.62	0.014	0.016	0.009	---	0.23	0.004	0.002	0.29	(0.01)
A286	0.25	---	0.050	0.24	14.76	0.038	0.19	1.24	0.0064	0.021
S66286	25.06	0.0032	0.013	0.002	---	0.16	0.003	2.03	0.28	0.068
Aermet 100	0.004	(0.0005)	0.24	13.5	3.00	0.007	0.018	1.21	0.0003	0.004
K92580	11.1	0.0006	0.002	0.0004	---	0.02	(0.001)	0.009	0.01	<0.01
Alloy C-250 **	0.098	0.0030	0.003	7.8	0.020	0.017	0.020	4.79	0.0014	0.004
K92890	18.5	0.001	0.003	0.0005	---	0.013	(0.002)	0.46	0.007	0.010
Alloy C-300	0.095	0.0026	0.005	9.24	0.081	0.094	0.036	4.88	0.0011	(0.005)
K93120	18.46	0.0015	0.005	0.0005	---	0.022	(0.003)	0.74	0.012	0.016
Alloy C-350 **	0.11	0.0033	0.006	12.2	0.04	0.023	0.02	4.72	0.0011	0.005
K93540	18.4	0.001	0.003	0.0006	---	0.02	---	1.5	(0.01)	(0.01)
Invar-36	0.002	(0.001)	0.053	0.036	0.121	0.052	0.82	0.011	0.0017	<0.01
K93601	35.86	0.003	0.009	0.0010	0.19	0.28	0.0018	0.002	<0.005	<0.04
Haynes 556	0.35	(0.002)	0.104	17.9	21.9	0.105	0.97	3.06	0.126	0.172
R30556	20.5	0.001	0.013	0.0005	---	0.441	0.003	0.013	0.039	2.49
() Indicates Non-Certified Value							** Certification in progress			
							Note: Chemistries listed are typical			

Certificates of Analysis, for each CRM, can be downloaded from the ARMI website: **www.ARM.com**.

Today, ARMI's inventory consists of more than 600 different CRMs that include carbon steels, low alloy steels, stainless and high temperature steels, nickel, cobalt, copper, aluminum, titanium, and hydrocarbon based materials. ARMI's CRMs (**IARMs**) can be found in the application laboratories of most of the major instrument manufacturers around the world.

ARMI will also create 'custom' alloy sets chosen from any of ARMI's CRMs to meet your specific needs.

Finally, one of the major factors contributing to the success of the ARMI/ILAP program over the years has been "you", the analytical consumer. You have voiced your opinions as well as your needs. The personnel at ARMI, as well as the ILAP members, wish to sincerely thank you for your continued suggestions and support.