

### 101.3 - Special Low Alloy Steels (chip and pin forms)

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

Description >>	<a href="#">361</a> AISI 4340 Steel (chip form)	<a href="#">363</a> Chromium-Vanadium Steel (Modified)	<a href="#">2160</a> Low Alloy Steel (pin form)	<a href="#">2161</a> Low Alloy Steel (chip form)	<a href="#">2162</a> Low Alloy Steel (chip form)	<a href="#">2163</a> Low Alloy Steel (chip form)	<a href="#">2164</a> Low Alloy Steel (chip form)	<a href="#">2165</a> Low Alloy Steel (chip form)	<a href="#">2166</a> Low Alloy Steel (chip form)	<a href="#">2167</a> Low Alloy Steel (chip form)	<a href="#">2168</a> High-Purity Iron (chip form)
Unit of Issue >>	150 g	150 g	200 g	150 g	150 g	150 g	150 g	150 g	150 g	150 g	150 g
Elemental Composition (mass fraction in % unless noted by an asterik * for mg/kg)											
Aluminum	0.021	0.24		0.0539	0.0681	0.0426	0.0098	(40 to 70*)	0.012	0.0045	(4*)
Antimony	0.0042	0.002		0.00548	0.00014	0.01033	0.00030	0.0010	0.0005	0.0020	(<3*)
Arsenic	0.017	0.010		0.0131	0.01804	0.0520	0.0110	0.0010	0.0035	0.0005	(<1*)
Bismuth	(0.0004)	(0.0008)		(0.2*)	(<0.1*)	(<0.1*)	(1*)	(1*)	(<0.0001)	(<0.0001)	(<3*)
Boron				0.00215	0.00470	0.00541	0.0012	9.44*	4.365*	9.72*	0.064*
Cadmium											(<1*)
Calcium	0.00010	0.00022		(1*)	(2*)	(2*)	(1*)				(<2*)
Carbon	0.383	0.62	0.584	1.02	0.360	0.1034	0.598	63*	0.015	0.051	10*
Cerium	0.0040	0.0030		(3*)	(1*)	(1*)	(1*)				
Chromium	0.694	1.31		0.2195	0.9252	0.5033	1.4700	0.050	0.024	0.0015	3*
Cobalt	0.032	0.048		0.0256	0.0589	0.0938	0.010	0.0012	0.0022	0.0050	6*
Copper	0.042	0.10		0.2973	0.1225	0.0432	0.5156	0.0013	0.015	0.0014	5*
Germanium	[0.006]	[0.010]									
Gold	(<0.00005)	0.0005									
Hafnium	(0.0002)	(0.0005)									
Hydrogen	(<0.0005)	(<0.0005)		(2*)	(2*)	(3*)	(3*)				
Iron	(95.8)	(94.4)		(95.0)	(93.6)	(94.8)	(95.1)				
Lanthanum	(0.001)	(0.002)									
Lead	0.000025	0.00186		(0.1*)	(0.1*)	(0.1*)	(<0.2*)	0.0003	0.003	(<0.0001)	(<1*)
Magnesium	0.00026	0.00062		(1*)	(1*)	(1*)	(1*)	(1*)	(<0.0001)	(<0.0001)	(<3*)
Manganese	0.66	1.50		0.680	2.095	1.623	1.219	0.144	0.066	0.022	6*
Molybdenum	0.19	0.028		0.1030	0.3545	0.4956	0.1982	0.0055	0.0035	0.020	(<7*)
Neodymium	0.00075	0.0012									
Nickel	2.00	0.30		1.999	1.1537	0.5095	0.2029	0.155	0.022	0.002	10*
Niobium	0.022	0.049		0.01978	0.0721	0.0989	0.0404	0.0004	0.005	0.0095	(<5*)
Nitrogen	(0.0037)	(0.0041)		0.0049	0.0035	0.0052	0.0027				6*
Oxygen	(0.0009)	(0.00066)		(150*)	(130*)	(130*)	(110*)				110*
Phosphorus	0.014	0.029		0.0407	0.0336	0.0126	0.02079	0.0052	0.0012	0.0031	14*
Praseodymium	(0.0003)	(0.0004)									
Selenium	(0.004)	(0.00016)		(2*)	(1*)	(4*)	(2*)	(35*)	[0.0035]		(<5*)
Silicon	0.222	0.74		0.1816	0.3532	0.6168	0.0575	(40*)	0.010	0.026	(<5*)
Silver	0.0004	0.0037						0.0002	0.0005	0.0007	
Strontium	(<0.0005)	(<0.0005)									
Sulfur	0.0143	0.0068	0.012	0.0347	0.03267	0.0225	0.0127	0.003643	0.002164	0.008731	10.7*
Tantalum	0.020	(0.53)		0.0522	0.02153	0.01187	0.02919		(0.011)	(0.002)	(<5*)
Tellurium	(0.0006)	(0.0009)		(2*)	(2*)	(2*)	(2*)		(0.003)	(0.0003)	(<1*)
Tin	0.010	0.104		0.0474	0.0467	0.0109	0.03087	0.002	0.0010	0.006	(<3*)
Titanium	0.020	0.050		0.180	0.0988	0.307	0.03820	0.0051	0.0007	0.010	(<3*)
Tungsten	0.017	0.046		(50*)	0.00030	0.00176	0.0009				(<10*)
Vanadium	0.011	0.31		0.0540	0.1996	0.3062	0.1059	0.0040	0.009	0.033	(<1*)
Zinc	(0.0001)	(0.0004)									(<5*)
Zirconium	0.009	0.049		0.0132	0.02928	0.0374	0.00171		(0.0004)	(0.004)	(<5*)

- Certified values are normal font.

- Non-certified and reference values are italicized.

- Values of potential interest and information values are within parentheses.