

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 >>	361 AISI 4340 Steel (chip form)	363 Chromium-Vanadium Steel (Modified)	2160 Low-Alloy Steel (pin form)	2161 Low Alloy Steel (chip form)	2162 Low Alloy Steel (chip form)	2163 Low Alloy Steel (chip form)	2164 Low Alloy Steel (chip form)	2165 Low Alloy Steel (chip form)	2166 Low Alloy Steel (chip form)	2167 Low Alloy Steel (chip form)	2168 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 asterisk * for mg/kg)											
Aluminum	0.021	0.24		0.0539	0.0681	0.0426	0.0098	(0.006)	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*)	(<0.0001)	(<0.0001)	(<0.0001)	(<3*)
Boron				0.00215	0.00470	0.00541	0.0011	0.000944	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	0.1934	0.598	0.0063	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	(95.6)	(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*)	(<0.0001)	(<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	0.0051	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*)	(0.0035)	(0.0035)		(<5*)
Silicon	0.222	0.74		0.1816	0.3532	0.6168	0.0575	(0.004)	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	(0.004)	(0.011)	(0.002)	(<5*)
Tellurium	(0.0006)	(0.0009)		(2*)	(2*)	2*	(2*)	(0.003)	(0.003)	(0.0003)	(<1*)
Tin	0.010	0.104		0.0474	0.0467	0.0109	0.02087	0.002	0.0010	0.006	(<3*)
Titanium	0.020	0.050		0.180	0.0988	0.307	0.02820	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 or reference values are italicized
 - Non-certified values in parentheses are for information only