

101.8 - Low Alloy Steels (disk and rod forms)

Steel and iron SMMs described here are furnished in various forms (disk, rod, and disk) for optical emission and X-ray fluorescence spectrometric methods and for other methods of chemical analysis.

Approximate Size for Solid Steel SMMs (SMM certificate is the official source):
 600 Series: 3.2 mm diameter and 51 mm long.
 1300 and 1305 Series: 31 mm diameter and 19 mm thick.
 1700 Series: 38 mm diameter and 19 mm thick.

A "C" preceding the SMM number indicates a chill cast sample; 31 mm diameter and 19 mm thick.

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

Description	663	1134	1135	1218	1224	1225	1226	1227	1228	1264a	1265a	1269	1270a	1271	1286	1761a	1762b	1763b	1764a	1765	1766	1767	1768
Unit of base	5 rods	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk	disk

Elemental Composition (mass fraction in % unless noted by an asterisk * for mg/kg)

Aluminum	0.24	0.029	0.0038	0.005	0.0098	0.054	0.022	0.006	0.0007	0.016	0.000	0.109	0.055	0.0897	0.0422	0.0098	0.012	0.004	0.0024					
Antimony	0.002								0.004															
Arsenic	0.002								0.0019				0.0172	0.019	0.011	0.0173	0.0110	0.0100	0.0010	0.0015	0.0005	0.0005	0.0005	0.0005
Bismuth	0.0002								0.000029	0.0001					0.0061	0.0013	0.00030	0.00035	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001
Boron	0.0014									0.0011		0.0001	0.0048		0.0061	0.0013	0.00030	0.00035	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001
Calcium	0.0001									0.0004														
Carbon	0.17	0.021	0.027	0.0029	0.7118	0.274	0.085	0.97	0.0744	0.875	0.298	0.0794	0.064	0.196	1.05	0.1982	0.201	0.180	0.006	0.015	0.012	0.010	0.010	0.010
Chromium	0.0018								0.0022															
Chromium	1.31	0.038	0.022	0.006	0.0750	0.91	0.407	0.0178	0.006	0.0072	0.201	2.317	0.552	1.33	0.222	0.932	0.939	1.468	0.91	0.934	0.9015	0.915	0.915	0.915
Cobalt	0.008								0.0017															
Copper	0.008	0.0707	0.006	0.003	0.0711	0.129	0.006	0.0128	0.006	0.0018	0.005	0.1168	0.040	0.298	0.12014	0.01170	0.01170	0.01170	0.01170	0.01170	0.01170	0.01170	0.01170	0.01170
Germanium	0.001									0.001														
Gold	0.0001									0.0001														
Hydrogen	0.0001									0.0001														
Iron	99.46									99.71														
Lanthanum	0.0006									0.0007														
Lead	0.0017								0.0014			0.00015	0.005	0.00204	0.0001									
Magnesium	0.0001									0.00015														
Manganese	1.30	0.2751	0.004	0.014	0.4098	0.40	0.214	0.801	0.389	0.0017	1.30	0.008	0.71	0.112	0.079	1.387	1.301	1.301	1.301	1.301	1.301	1.301	1.301	1.301
Molybdenum	0.001	0.0007	0.001	0.001	0.001	0.001	0.001	0.001	0.0002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Niobium	0.001									0.0007														
Nickel	0.14	0.0375	0.001	0.001	0.0017	0.018	0.42	0.007	0.0184	0.01	0.108	0.172	1.34	2.81	1.981	1.170	0.075	0.2006	0.14	0.011	0.012	0.012	0.012	0.012
Niobium	0.001									0.137														
Nitrogen	0.001									0.001														
Oxygen	0.001									0.001														
Phosphorus	0.001	0.0276	0.006	0.002	0.0084	0.007	0.0022	0.014	0.0044	0.001	0.012	0.00401	0.005	0.008	0.042	0.0214	0.01233	0.01210	0.0012	0.002	0.0011	0.0011	0.0011	0.0011
Platinum	0.0001									0.0001														
Selenium	0.001									0.001														
Silicon	0.34	3.889	3.39	0.21	0.1125	0.221	0.231	0.0068	0.006	0.0080	0.237	0.334	0.382	0.340	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330
Silver	0.001									0.0001														
Sulfur	0.001	0.0005	0.006	0.0011	0.0005	0.004	0.0044	0.006	0.0005	0.001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Tantalum	0.001									0.001														
Tellurium	0.001									0.0004														
Tin	0.001	0.0014	0.004							0.0001														
Titanium	0.001									0.001														
Tungsten	0.001									0.001														
Vanadium	0.11									0.108														
Zinc	0.0001									0.0001														
Zirconium	0.001									0.001														

*Certified values are normal font.
 -Non-certified and reference values are italicized.
 -Values of potential interest and information values are within parentheses.
 *Values are in mg/kg.