

101.8 - Low Alloy Steels (disk and rod forms)

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

Nominal Sizes for Solid Steel Steels:
 600 Series: 3.2 mm diameter and 15 mm long.
 1300 and 1300 Series: 11 mm diameter and 10 mm thick.
 1700 Series: 8 mm diameter and 10 mm thick.
 A "C" preceding the SMA number indicates a cold cast sample, 11 mm diameter and 10 mm thick.

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

Description	603	1134	1135	1218	1218	1225	1226	1227	1238	1364a	1205a	1209	1270a	1271	C1285	1286	1763a	1763b	1764a	1765	1766	1767	1768
Unit of Issue	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	0.207	0.0098	0.005	0.0098	0.004	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	0.001	0.001
Antimony	0.002																						
Arsenic	0.003																						
Bismuth	0.0005																						
Boron	0.0012																						
Calcium	0.0001	0.0011	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
Carbon	0.17	0.0161	0.027	0.0029	0.7538	0.274	0.045	0.97	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
Cerium	0.0018																						
Cobalt	0.04	0.0198	0.022	0.006	0.0720	0.91	0.467	0.010	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Copper	0.008	0.0707	0.054	0.003	0.0711	0.125	0.006	0.013	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
Chromium	0.0001																						
Hydrogen	0.0001																						
Iron	99.41																						
Lead	0.0005																						
Lead	0.0002																						
Magnesium	0.0001																						
Manganese	1.50	0.2761	0.094	0.014	0.4096	0.46	0.274	0.402	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
Molybdenum	0.001	0.0007	0.004	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	0.001	0.001	0.001	0.001	0.001
Nickel	0.0007																						
Niobium	0.04	0.0375	0.005	0.001	0.001	0.018	5.42	0.007	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018
Nitrogen	0.0001																						
Oxygen	0.0007																						
Phosphorus	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Phosphorus	0.0001																						
Selenium	0.0001																						
Silicon	0.76	2.889	3.19	0.21	0.1725	0.221	0.211	0.215	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
Silver	0.0001																						
Sulfur	0.0001	0.0005	0.004	0.001	0.0005	0.014	0.004	0.004	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018
Tantalum	0.0001																						
Tellurium	0.0001																						
Tin	0.0001	0.0014	0.004	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	0.001	0.001	0.001	0.001	0.001
Titanium	0.0001																						
Tungsten	0.04																						
Vanadium	0.31	0.0001	0.1	0.0001	0.0001	0.004	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	0.001	0.001
Zinc	0.0001																						
Zirconium	0.0001																						

* Certified values are normal font
 Non-certified or reference values are italicized
 Non-certified values in parentheses are for information only

*Values in mg/kg