

CTS Fasteners & Metals Report No. 90

Summary of Chemical Analysis Results

Chemical Analysis of Corrosion Resistant Steel
 Material: AISI 316
 Sample ID: M85

Element	Grand Mean	B-L Std Dev	Two Std Dev Range	Three Std Dev Range
Carbon	0.0442	0.0031	0.0476 - 0.0560	0.0455 - 0.0581
Manganese	1.658	0.024	1.610 - 1.706	1.586 - 1.730
Phosphorus	0.0278	0.0016	0.0246 - 0.0310	0.0230 - 0.0326
Cobalt	0.3259	0.0086	0.3087 - 0.3431	0.3001 - 0.3517
Silicon	0.2722	0.0156	0.2410 - 0.3034	0.2254 - 0.3190
Copper	0.3798	0.0100	0.3598 - 0.3998	0.3498 - 0.4098
Nickel	10.425	0.096	10.233 - 10.617	10.137 - 10.713
Chromium	17.497	0.088	17.321 - 17.673	17.233 - 17.761
Molybdenum	2.035	0.026	1.983 - 2.087	1.957 - 2.113
Vanadium	0.0826	0.0047	0.0732 - 0.0920	0.0685 - 0.0967

Material: AISI 316L
 Sample ID: M86

Element	Grand Mean	B-L Std Dev	Two Std Dev Range	Three Std Dev Range
Carbon	0.0238	0.0031	0.0176 - 0.0300	0.0145 - 0.0331
Manganese	1.705	0.024	1.657 - 1.753	1.633 - 1.777
Phosphorus	0.0328	0.0016	0.0296 - 0.0360	0.0280 - 0.0376
Cobalt	0.1969	0.0056	0.1857 - 0.2081	0.1801 - 0.2137
Silicon	0.4861	0.0155	0.4551 - 0.5171	0.4396 - 0.5326
Copper	0.3910	0.0094	0.3722 - 0.4098	0.3628 - 0.4192
Nickel	10.044	0.071	9.902 - 10.186	9.831 - 10.257
Chromium	16.347	0.099	16.149 - 16.545	16.050 - 16.644
Molybdenum	2.038	0.026	1.986 - 2.090	1.960 - 2.116
Vanadium	0.0599	0.0037	0.0525 - 0.0673	0.0488 - 0.0710

Grand Means and Between-Lab Standard Deviations have been rounded to three or four decimal places.
 Statistics for samples M85 and M86 are based on the results of at least 46 labs except for Cobalt.