

CTS Fasteners & Metals Report No. 90

Summary of Chemical Analysis Results

Chemical Analysis of Nickel-based Alloy

Material: 718 alloy

Sample ID: J85

Element	Grand Mean	B-L Std Dev	Two Std Dev Range	Three Std Dev Range
Chromium	18.281	0.186	17.909 - 18.653	17.723 - 18.839
Nickel	53.476	0.278	52.920 - 54.032	52.642 - 54.310
Iron	17.787	0.098	17.591 - 17.983	17.493 - 18.081
Molybdenum	3.029	0.035	2.959 - 3.099	2.924 - 3.134
Aluminum	0.5092	0.0181	0.4730 - 0.5454	0.4549 - 0.5635
Silicon	0.0825	0.0106	0.0613 - 0.1037	0.0507 - 0.1143
Titanium	0.9158	0.0157	0.8844 - 0.9472	0.8687 - 0.9629
Niobium	5.328	0.061	5.206 - 5.450	5.145 - 5.511

Material: 718 alloy

Sample ID: J86

Element	Grand Mean	B-L Std Dev	Two Std Dev Range	Three Std Dev Range
Chromium	18.343	0.188	17.967 - 18.719	17.779 - 18.907
Nickel	53.381	0.312	52.757 - 54.005	52.445 - 54.317
Iron	18.045	0.102	17.841 - 18.249	17.739 - 18.351
Molybdenum	3.054	0.034	2.986 - 3.122	2.952 - 3.156
Aluminum	0.5254	0.0180	0.4894 - 0.5614	0.4714 - 0.5794
Silicon	0.0576	0.0125	0.0326 - 0.0826	0.0201 - 0.0951
Titanium	0.9450	0.0180	0.9090 - 0.9810	0.8910 - 0.9990
Niobium	5.147	0.076	4.995 - 5.299	4.919 - 5.375

Grand Means and Between-Lab Standard Deviations have been rounded to three or four decimal places.
 Statistics for samples J85 and J86 are based on the results of at least 22 labs.