

Westgate

X-750

(UNS N07750) W. Nr. 2.4669

Chemical composition	Ni+Co	Cr	Fe	Ti	Al	Nb+Ti	Mn	Si	Su	Cu	C	Co
% Present (Max)	70.00	14.0-17.0	5.0-9.0	2.25-2.75	0.40-1.00	0.70-1.20	1.00	0.50	0.01	0.50	0.08	1.00

Alloy X-750 is a precipitation-hardenable nickel-chromium alloy used for its corrosion and oxidation resistance and high strength at temperatures to 1300°F. Although much of the effect of precipitation hardening is lost with increasing temperature over 1300°F, heat-treated material has useful strength up to 1800°F. Alloy X-750 also has excellent properties down to cryogenic temperature's. Composition is shown in Table 1. The economics of alloy X-750 coupled with its availability in all standard mill forms has resulted in applications in a wide variety of industrial fields. In gas turbines, it is used for rotor blades and wheels, bolts, and other structural members. alloy X-750 is used extensively in rocket-engine thrust chambers. Airframe applications include thrust reversers and hot-air ducting systems. Large pressure vessels are formed from alloy X-750. Other applications are heat-treating fixtures, forming tools, extrusion dies, and test machine grips. For springs and fasteners, alloy X-750 is used from sub-zero to 1200°F. Depending on the application and the properties desired, various heat treatments are employed. For service above 1100°F, particularly where loads are to be sustained for long times, optimum properties are achieved by solution treating (2100°F) plus stabilization treating (1550°F) plus precipitation treating (1300°F). For service below 1100°F, the alloy may be strengthened by precipitation treating after hot or cold working or by precipitation treating after equalizing or solution treating. A furnace-cooling treatment is also used to develop optimum properties for some applications. The various heat treatments and the properties developed are described under the section on Mechanical Properties. Property values in this bulletin – the results of extensive testing – are typical of the alloy but, unless shown as limiting, should not be used as specification values.

Note: Values are in accordance with EN 10088 specifications. Actual mill certs available upon request.



sales@westgatestainless.com



01922 745664