MULTIAlloys

ADDING VALUE THROUGH EXPERIENCE

ALLOY 600

ALLOY INFORMATION SHEET | UNS N06600 W Nr 2.4816

HEAT AND/OR CREEP RESISTANT | CORROSION RESISTANT | OTHER

Alloy 600 is a well established nickel - chromium alloy for use in applications which require resistance to heat and corrosion and in applications extending from cryogenic temperatures to 1100 deg C. The alloy's strength and oxidation resistance at high temperatures make it useful for many applications in the heat treating industry. It is used for retorts, muffles, roller hearths, and other furnace components and for heat treating baskets and trays. It is often used for thermocouple protection sheaths. In the chemical industry, Alloy 600 may be used in applications requiring resistance to chloride stress corrosion cracking, caustic corrosion and corrosion by high purity water. It has been used for the manufacture of heat exchangers, distillation column components and vessels. The alloy also has excellent mechanical properties and presents a desirable combination of high strength and good workability.

NOTE : Elevated temperature mechanical property data available upon request

NOMINAL COMPOSITION (%)						
Ni	Cr	Fe	Mn	Si	C	Other
72,0	15,5	8,0	0,75	0,25	0,10	

APPLICABLE SPECIFICATIONS	
PLATE, SHEET	ASTM B168
PIPE, TUBE	ASTM B163,167,516,517,751
BAR	ASTM B166
FASTENERS	
FORGINGS	ASTM B564
FITTINGS	
WELDING PRODUCTS	

TYPICAL MECHANICAL PROPERTIES #	
UTS (MPa)	655
0.2% PROOF STRENGTH (MPa)	310
ELONGATION	40%
HARDNESS (Brinell)	

TYPICAL PHYSICAL PROPERTIES #	
DENSITY (kg / cu m.)	8470
YOUNGS MODULUS (GPa)	214
THERMAL CONDUCTIVITY (w/ m.C)	14,9
THERMAL EXPANSION (per Deg C)	0,000013

 # - At room temperature

FABRICATION

Alloy 600 is readily fabricated by either hot or cold working. Heavy lubricants may be used to prevent die wear and galling during cold forming. Sulphur and chlorine containing lubricants must be fully removed prior to any further processing. Hot working can be carried out in the temperature range 1230 to 870 deg C whilst full annealing requires heating into the temperature range 1090 to 1150 deg C followed by rapid cooling. Alloy 600 is readily welded using shielded metal arc, gas tungsten arc and gas metal arc processes. For best results do not preheat, keep interpass temperatures low and use reinforced bead contours. Machinability is slightly better than that of 304 stainless steel.

Please call for details of Stock, Delivery and Price

Detailed technical data available upon request

Note: Data shown are typical and full research should be done to determine the usefulness in any application or design. No warranty is expressed or implied and we assume no responsiblity for the accuracy, completeness or usefulness of the content.

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