

INCONEL ALLOY 825

NICKEL ALLOY

HIGH TEMPERATURE RESISTING ALLOY

Inconel Alloy 825 are nickel-iron-chromium alloy with additions of molybdenum and copper. It has excellent resistance to both reducing and oxidizing acids, to stress-corrosion cracking, and to localized attack such as pitting and crevice corrosion. The alloy is especially resistant to sulfuric and phosphoric acids. Used for chemical processing, pollution-control equipment, oil and gas well piping, nuclear fuel reprocessing, acid production, and pickling equipment.

Chemical Properties

C	Mn	S	Si	Cr	Mo	Ni	Cu	Ti	Al	Fe
0.05 Max	1.0 Max	0.03 Max	0.5 Max	19.5-23.5	2.5-3.5	38.0-46.0	1.5-3.0	0.6-1.2	0.2 Max	22.0 Min

Mechanical Properties

Yield strength	Tensile strength	Elongation
Min 0.2% Mpa	Min Mpa	Min %
241	586	30

Physical Properties

Density	Elastic Modulus	Mean Coefficient of Thermal			Thermal Conductivity		Specific Heat	Electrical Resistivity
(Kg/m ³)	(Gpa)	Expansion(µm/m/°C)			(W/m.K)		0-100°C	(nΩ.m)
8.14	196	14.1	15.1	16.9	10.9	11.1	444	112

Heat Treatment

Solution Annealed @ 1177°C & Rapidly Liquid Quenched

Equivalent Designation

UNS N08825
 En Name NiCr21Mo
 W.Nr. 2.4858
 BS NA16
 AFNOR NC21FeDU

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