Alloy 690 **High Temperature Alloy**

Trade name	UNS	DIN	EN
Inconel 690	N06690	W2.4642	NiCr29Fe
Nickel 690			
Nicrofer 6030			

Chemical Composition %

Cr	Ni	Fe	Cu	C	Mn	Si	S
27-31	58min	7-11	0.5max	0.05max	0.5max	0.5max	0.015max

Recommended Welding Consumables

Wire ER NiCrFe-15 / ER NiCrFe-7
Rod E NiCrFe-15 / E NiCrFe-7

Form	Smls Pipe/Tub	Weded Pipe	Welded Tube	Fittings	Plate	Bar	Forgings
Standard	ASTM B622	ASTM B 619	ASTM B 626	ASTM B 366	ASTM B333	ASTM B335	ASTM B564

Properties

Very good resistance to fluoride containing hot nitric acid
Good resistance to stress corrosion cracking caused by alkaline environments
Good resistance to oxidation, sulphidation and metal dusting in hot gases

Applications

Boilers and steam generators components
Heat Exchangers
Combustion unit components

Physical Properties

Density	8.2 g/cm3	
Specific Heat (0-100°C)	450 J.kg-1.°K-1	
Thermal Conductivity	13.5 W.m -1.°K-1	
Thermal Expansion	14 mm/m/°C	
Modulus Elasticity	211 GPa	
Electrical Resistivity	1.26 µohm/cm	
Tensile Rm	86	ksi (min)
Tensile Rm	590	MPa (min)
R.p. 0.2% Yield	35	ksi (min)
R.p. 0.2% Yield	240	MPa (min)
Elongation	≥30 %	