

alloy 59 (UNS N06059) having a typical chemical composition of 59% nickel, 23% chromium, 16% molybdenum and iron levels of less than 1%, appears to have fulfilled this need.

alloy 59 have shown excellent resistance to localized corrosion, hydrogen embrittlement and stress corrosion cracking while possessing very high strength, ductility, fracture toughness, high-cycle fatigue resistance and very low crack growth rate both in air and sea-water.

Alloy 59 Specifications

Grade	UNS	W.Nr
Alloy 59	N06059	2.4605

Alloy 59 Chemical Composition

Grade	%	Ni	Cr	Mo	Fe	Mn	Co	Al	Si	P	C	S	Cu
Alloy 59	Min	Bal	22	15				0.1					
	Max		24	16.5	1.5	0.5	0.3	0.4	0.1	0.015	0.01	0.01	0.5

Alloy 59 Mechanical properties: (Minimum value at 20°C)

Tensile Strength σ_b /MPa	Yield Strength $\sigma_{p0.2}$ /MPa	Elongation σ_5 /%
≥690	≥340	≥40

Alloy 59 Size Range

- Wire: Dia 0.08-12mm
- Bar: Dia 1.0-300mm
- Strip(Coil): 0.2-20mm TCK x 10-300mm W
- Sheet: min.0.7mm TCK x 1200mm W max.
- Tube & Forging & Machine Parts: customized
- Welding wire: 0.8mm,1.0mm,1.2mm,2.0mm,2.4mm,3.2mm,3.8mm,4.0mm etc
- Welding Strip: 0.4-0.7mm TCK x 25-60mm W