

Grade: Austenitic stainless steel (UNS S20910 / Nitronic® 50 / XM19)

Type: Corrosion resistant stainless steel, usually delivered in the annealed condition though a high strength (HS) can be supplied*.

Nominal Composition	
Element	Weight %
Carbon	0.10 max
Silicon	3.5 – 4.5
Manganese	7.0 / 9.0
Phosphorus	0.04 max
Sulphur	0.010 max
Molybdenum	0.75 max
Chromium	16.0 – 18.0
Nickel	8.0 – 9.0
Nitrogen	0.08 – 0.18
Copper	0.75 max
Cobalt	0.20 max

Mechanical Properties:

annealed condition.

Property	Values
Ultimate Tensile Strength	104 min Ksi (717 N/mm ²)
0.2 % Yield Strength	57 min Ksi (393 N/mm ²)
Elongation	62 % min
Reduction of Area	
CVN impacts @ -196°C	217 Joules
Hardness	241 HBW max





Notes

The grade is readily weldable using conventional processes.
High strength material can be attained by proprietary processing. Corrosion tests are not normally carried out on high strength material.