

Standards

Material No.	EN Designation	AISI/SAE	UNS
1.4539	X1NiCrMoCu25-20-5	904 L	N08904

Description

1.4539 / AISI 904L is a high-alloy austenitic stainless steel with a high molybdenum content, additional copper content and very low carbon content.

Special properties

Excellent corrosion resistance to sulfuric and phosphoric conditions. High resistance to localized corrosion such as pitting and crevice corrosion, as well as to stress-corrosion.

Chemical Composition

C %	Si ≤ %	Mn ≤ %	P ≤ %	S ≤ %
≤ 0.02	0.70	2.00	0.03	0.01
Cr %	Mo %	Ni %	N %	Cu %
19.0-21.0	4.00-5.00	24.0-26.0	≤ 0.15	1.20-2.00

Mechanical Properties 20°C

Hardness HB 30 ≤ HB	0.2% Yield strength R _p ≥ N/mm ²	Tensile strength R _m N/mm ²	Elongation A ₅ ≥ %	Modulus of elasticity kN/mm ²
230	230	530-730	35/30	195

Physical Properties 20°C

Density g/cm ³	Specific heat capacity J/kg K	Thermal conductivity W/m K	Electrical resistivity Ω mm ² /m
8	450	12	1

Suitable welding filler materials

1.4539; 1.4519

Application

Cellulose industry, offshore, refineries, seawater technology, hot sulphuric and phosphoric environment

Available forms for 1.4539 / AISI 904 L

Sheets/Plates	Bars	Wire	Tubes/Pipes	Fittings	Forged / cast parts	Finished part (drawing)
						