

L80 Type 13Cr

L80-13CR is a quenched and tempered martensitic stainless steel, used for downhole tubulars components, packers and other subsurface equipment in sweet (CO₂) environments. NACE MR0175/ISO15156 Table A19 provides a recommended limit of 1.5 psi partial pressure H₂S with pH>3.5. API 5CT classifies it as Group 2, Grade L80, Type 13Cr.

NOMINAL COMPOSITION

Chromium 13% Carbon 0.19% Manganese 0.75% Nickel 0.050% max Iron Balance

SPECIFIED MECHANICAL PROPERTIES - API 5CT Group 2 Grade L80 Type 13Cr

Yield Strength min. (ksi)	Yield Strength max. (ksi)	Tensile Strength min. (ksi)	Hardness max (HRC)	NACE MR0175/ISO 15156 Reference
80	95	95	23	Table A.19

TYPICAL PHYSICAL PROPERTIES

		70°F	250°F
Density	lbs/cu ³ .	0.28	0.28
Thermal Expansion	X10 ⁻⁶ /deg F	--	5.9
Elastic Modulus	psi x 10 ⁶	29.6	29.3
Poisson Ratio		0.3	0.3
Yield Strength De-Rating	%	100	91