15 CHROME

15 Chrome, or Super 15 Chrome, is a quenched and tempered martensitic-ferritic stainless steel intended for corrosion resistance in sweet (CO_2) environments with moderate chloride content, requiring high strength up to 400°F. 15 Chrome offers improved mechanical properties and increased resistance to the effects of CO_2, chlorides, pH, and temperatures when compared with standard 13 Chrome. The higher strength and temperature resistance, relative to Super 13 Chrome, allows it to be used in deeper wells with high-pressure and high-temperature (HPHT) conditions as downhole tubular components, packers, and other subsurface equipment.

15 Chrome may be considered a cost-effective alternative to duplex stainless steels such as 22 Chrome for higher pressure and temperature HPHT conditions. However, all environmental factors, including H_2S, CO_2, temperature, pH, and chloride concentration, should be considered before final material selection.

Super 15 Chrome, grade 125, is not recommended for sour service.

NOMINAL COMPOSITION

Chromium 15% Nickel 6.5% Molybdenum 2.1% Iron Balance

SPECIFIED MECHANICAL PROPERTIES

Yield Strength min. (ksi)	Yield Strength max. (ksi)	Tensile Strength min. (ksi)	Hardness max. (HRC)
125	150	135	37

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