

HOWAT GROUP

S13Cr

Grade: Can be supplied as UNS S41425, UNS S41426, S41427, 1.4415 ISO 10088-1, 13-5-2, ASTM A479

This grade is a supermartensitic stainless steel grade. Compared to other martensitic grades it has low carbon content and additions of titanium and vanadium. The steel has high strength, impact strength, weldability and abrasion resistance, and is resistant to corrosion in mild corrosive environments.

The low carbon improves weldability whilst maintaining a martensitic microstructure. Available in bar and tube form.

Nominal Composition	
Element	Weight %
Carbon	0.03% max
Silicon	0.50% max
Manganese	1% max
Phosphorus	0.04% max
Sulphur	0.015 % max
Chromium	11-14% max
Nickel	4.5-7% max
Molybdenum	2.5% max
Vanadium	0.5% max
Copper	1% max
Nitrogen	0.12% max

Mechanical Properties (Quenched and tempered condition)

Supplied either single or double temper

Property	Values
Ultimate Tensile Strength	105KSI
0.2 % Yield Strength	95KSI
Elongation	15% min
Charpy Impact Toughness	At -10C 60J min
Hardness Range	27HRC max-32 HRC max

Can also be supplied at 110 KSI minimum yield strength, for non-NACE application.

Applications

Downhole tubular and casing components, packers and subsurface equipment.