



## Section 1. General Product Material Specifications

Element	%	A106 Gr B	A234 WPB	A333 Gr 6	A420 WPL6	API 5L X52	WPHY 52	A182 F316L	A519 4130	A182 F51
Columbium (Cb)	Max	–	0.02	–	0.02	–	0.04	–	–	–
	Min	–	–	–	–	–	–	–	–	–
Titanium (Ti)	Max	–	–	–	–	–	0.05	–	–	–
	Min	–	–	–	–	–	–	–	–	–
Vanadium (V)	Max	0.08	0.08	–	0.05	–	0.10	–	–	–
	Min	–	–	–	–	–	–	–	–	–
Aluminium (Al)	Max	–	–	–	–	–	0.06	–	–	–
	Min	–	–	–	–	–	–	–	–	–
Tensile Strength	Min PSI	60,000	60,000	60,000	60,000	66,000	66,000	70,000	105,000	90,000
	MPa	415	415	415	415	455	455	485	724	620
Yield Strength	Min PSI	35,000	35,000	35,000	35,000	52,000	52,000	25,000	>80,000	65,000
	MPa	240	240	240	240	359	359	170	551	450
Hardness	Max HB	–	197	–	–	–	–	–	237	237
Impact Values Deg C	J	–	–	18J min av -45	17.6J min av -45	27Jmin av -50	27Jmin av -50		42Jmin av -50	27J -50

This data represents the standard material stocked and supplied by GonPetro product range with other material specifications available upon request.