

Duplex

Type	Diameter, in. [mm]	Min. tensile strength	Max. Tensile strength
S32205	0.0055 [0.14] to 0.0079 [0.20], incl	312[2150]	341[2350]
	Over 0.0079 [0.20] to 0.012 [0.30], incl	305[2100]	334[2300]
	Over 0.012 [0.30] to 0.020 [0.50], incl	291[2000]	320[2200]
	Over 0.020 [0.50] to 0.031 [0.80], incl	276[1900]	305[2100]
	Over 0.031 [0.80] to 0.049 [1.25], incl	262[1800]	291[2000]
	Over 0.049 [1.25] to 0.079 [2.00], incl	247[1700]	276[1900]
	Over 0.079 [2.00] to 0.138 [3.50], incl	225[1550]	254[1750]
	Over 0.138 [3.50] to 0.197 [5.00], incl	211[1450]	240[1650]
S32205 HS	0.0079 [0.20] to 0.028 [0.70], incl	344[2370]	396[2730]
	Over 0.028 [0.70] to 0.031 [0.80], incl	324[2230]	372[2570]
	Over 0.031 [0.80] to 0.040 [1.00], incl	311[2140]	357[2460]
	Over 0.040 [1.00] to 0.059 [1.50], incl	303[2090]	349[2410]
	Over 0.059 [1.50] to 0.079 [2.00], incl	290[2000]	334[2300]
	Over 0.079 [2.00] to 0.098 [2.50], incl	276[1910]	318[2190]
	Over 0.098 [2.50] to 0.118 [3.00], incl	270[1860]	310[2140]
	Over 0.118 [3.00] to 0.138 [3.50], incl	263[1810]	303[2090]
	Over 0.138 [3.50] to 0.157 [4.00], incl	257[1770]	295[2030]
	Over 0.157 [4.00] to 0.177 [4.50], incl	249[1720]	287[1980]
	Over 0.177 [4.50] to 0.197 [5.00], incl	243[1670]	279[1930]

Tensile requirements for high strength cold drawn, as delivered wire. Tensile strength can be increased by 29 ksi [200 MPa] up to 65 ksi [450 MPa] by tempering depending on tensile and tempering conditions. Recommendations: 840°F[450°C]/1-3 h for batch tempering; 950°F [500°C] for 3-10 minutes in a continuous conveyor furnace. Shorter times may result in uneven tempering.

During storage, the tensile strength will increase somewhat due to aging. Depending on the storage conditions, the tensile strength can increase by 0 – 12 ksi [0 -80 MPa].

Chemical composition(ASTM A313)

UNS	Type	C	Mn	P	S	Si	Cr	Ni	Mo	N	Others
S32205	2205	0.030	2.00	0.030	0.020	1.00	22~23	4.5~6.5	3~3.5	0.14~0.2	-

Diameter tolerance

Specified Diameter, in. [mm]	Diameter Tolerances, in. [mm]
Under 0.3125 to 0.0440 [8.00 to 1.00], incl	±0.001 [0.03]
Under 0.0440 to 0.0330 [1.00 to 0.80], incl	±0.0008 [0.02]
Under 0.0330 to 0.0240 [0.80 to 0.60], incl	±0.0005 [0.015]
Under 0.0240 to 0.0120 [0.60 to 0.30], incl	±0.0004 [0.010]
Under 0.0120 to 0.0080 [0.30 to 0.20], incl	±0.0003 [0.008]