Kormax 17-4 PH Stainless Steel — Material Data Sheet

17-4 PH (Grade 630 / UNS S17400) is a martensitic precipitation-hardening stainless steel, alloyed with chromium, nickel and copper. Strength is developed through heat treatment rather than cold work, allowing engineers to select the strength/toughness balance the application requires.

Chemical Composition (%)

Element		
Iron	Fe	Balance
Chromium	Cr	15.00 - 17.50
Nickel	Ni	3.00 - 5.00
Copper	Cu	3.00 - 5.00
Manganese	Mn	1.00 max
Silicon	Si	1.00 max
Carbon	C	0.070 max
Phosphorus	P	0.040 max
Sulfur	S	0.030 max
Niobium + Tantalum	Nb + Ta	0.15 - 0.45

Mechanical Properties

	Metric Values	Imperial Values
Tensile Strength Min	930 N/mm2	134,900 psi
Yield Strength Min	725 N/mm2	105,000 psi
Elongation Min	16%	16%
Hardness Max	302 HB	302 HB
Specific Gravity	7.75 g/cm^3	

Standard stock condition: H1150 (ex-stock)

Other heat-treat conditions are available on indent, with mechanical properties as follows:

Condition	Tensile Strength Min	Yield Strength Min	Elongation Min	Availability
A (solution annealed)	1,030 MPa / 149,000 psi	725 MPa / 105,000 psi	12%	Indent
H900	1,310 MPa / 190,000 psi	1,170 MPa / 170,000 psi	10%	Indent
H925	1,170 MPa / 170,000 psi	1,070 MPa / 155,000 psi	10%	Indent
H1025	1,070 MPa / 155,000 psi	1,000 MPa / 145,000 psi	12%	Indent
H1075	1,000 MPa / 145,000 psi	860 MPa / 125,000 psi	13%	Indent
H1100	965 MPa / 140,000 psi	795 MPa / 115,000 psi	14%	Indent
H1150	**930 MPa / 134,900 psi**	**725 MPa / 105,000 psi**	**16%**	**Ex-stock**

Standard reference: ASTM A564 Type 630 / AMS 5643. Confirm exact minimums against the current standard or mill certificates.