

Created by QA Engineer	 New Zealand Tube Mills	Technical Information	Page: 1 of 1
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NZTM-Q04D:- Stainless Steel Coil Specification (S316L)

This internal specification covers the mechanical properties , chemical compositions & surface finish of type 316L Stainless Steel coil used by New Zealand Tube Mills for the manufacture of tubular product.

When forming stainless strip into tubular sections, the mechanical properties are affected. The extent of this effect depends on the specific dimensions of tube being produced and particularly the tube diameter to thickness ratio. In general during tube forming, the yield stress will be substantially increased, the tensile strength slightly increased and elongation reduced.

SPECIFIED MINIMUM MECHANICAL PROPERTIES OF STRIP

YIELD STRESS (min)	170 MPa (25KSI)
TENSILE STRESS (min)	485 MPa (70.KSI)
ELONGATION (min)	40%
HARDNESS (max)	95 Rockwell B (217 HB) (190 HV)

NORMAL RANGE OF MECHANICAL PROPERTIES OF STRIP

YIELD STRESS	269 to 345 MPa
TENSILE STRESS	582 to 648 MPa
ELONGATION	43% to 62%
HARDNESS (max)	79- 87 Rockwell B (148 - 176 HV)

SPECIFIED CHEMICAL COMPOSITION - (LADLE ANALYSIS)

CARBON	C	0.03 %	max
SILICON	Si	0.75 %	max
MANGANESE	Mn	2.00 %	max
PHOSPHORUS	P	0.045 %	max
SULPHUR	S	0.030 %	max
CHROMIUM	Cr	16 - 18 %	range
NICKEL	Ni	10 - 14 %	range
NITROGEN	N	0.10 %	max
MOLYBDENUM	Mo	2 - 3 %	range

SURFACE FINISH

FINISH	2B
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CONFORMANCE STANDARD

ASTM A240 / 480

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