

TECHNICAL DATA SHEET
ASTM A193 GR.B8MN & B8MNA - 316N (1A, 1B, 1D, 2)
CHEMICAL COMPOSITION

Elements	C %	Mn %	P %	S %	Si %	Cr %	Mo %	Ni %	N%
Min						16.00	2.00	10.00	0.10
Max	0.08	2.00	0.045	0.030	1.00	18.00	3.00	13.00	0.16

MECHANICAL PROPERTIES (METRIC PRODUCT)

GRADE	DIAMETER (mm)	TENSILE STRENGTH MPa (Min)	YIELD STRENGTH 0.2% Mpa (Min)	ELONGATION IN % (Min)	REDUCTION AREA% (Min)	HARDNESS HRC/HBW/HRB	HT Tempering Temp °c (Min)
B8MN CL.1B & 1D	All Diameters	550	240	30	40	223 HBW or 96 HRB	Carbide Solution Treated
B8MN CL.2	M20 & Under	760	655	15	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M20 to M24 incl	690	550	20	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M24 to M30 incl	655	450	25	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M30 to M36 incl	620	345	30	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8MNA CL.1A	All Diameters	515	205	30	50	192 HBW or 90 HRB	Carbide Solution Treated in the Finish Condition

MECHANICAL PROPERTIES (INCH PRODUCT)

GRADE	DIAMETER (mm)	TENSILE STRENGTH Ksi (Min)	YIELD STRENGTH 0.2% Ksi (Min)	ELONGATION IN % (Min)	REDUCTION AREA% (Min)	HARDNESS HRC/HBW/HRB	HT Tempering Temp °c (Min)
B8N CL.1B & 1D	All Diameters	80	35	30	40	223 HBW or 96 HRB	Carbide Solution Treated
B8MN CL.2	3/4" & Under	110	95	15	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	3/4" to 1" Incl	100	80	20	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over 1" to 1 1/4" incl	95	65	25	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over 1 1/4" to 1 1/2" incl	90	50	30	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8MNA CL.1A	All Diameters	75	30	30	50	192 HBW or 90 HRB	Carbide Solution Treated in the Finish Condition

NOTE:

Material Spec : ASTM A193 GR.B8MN & B8MNA

Dimension STD : As per approved DRG.

Heat Treatment type : Carbide Solution Treated / Carbide Solution Treated & Strain Hardened / Carbide Solution Treated in the Finish Condition

Prepared by:

Approved by: