

**TECHNICAL DATA SHEET**

**ASTM A193 GR.B8C & B8CA - 347 (1, 1A, 1D, 2)**

**CHEMICAL COMPOSITION**

Elements	C %	Mn %	P %	S %	Si %	Cr %	Mo %	Ni %	Nb%
Min						17.00	-	9.00	-
Max	0.08	2.00	0.045	0.030	1.00	19.00	-	12.00	10 x C to 1.10

**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)
B8C CL.1	All Diameters	515	205	30	50	223 HBW or 96 HRB	Carbide Solution Treated
B8C CL.2	M20 & Under	860	690	12	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M20 to M24 incl	795	550	15	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M24 to M30 incl	725	450	20	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M30 to M36 incl	690	345	28	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8CA 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)
B8C CL.1	All Diameters	75	30	30	50	223 HBW or 96 HRB	Carbide Solution Treated
B8C CL.2	3/4" & Under	125	100	12	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	3/4" to 1" Incl	115	80	15	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over 1" to 1 1/4" incl	105	65	20	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over 1 1/4" to 1 1/2" incl	100	50	28	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8CA 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.B8C & B8CA

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: