SPECIFICATION	CHEMICAL ANALYSIS						PROPERTIES				SIMILAR GRADES	MAX CSA
	% C	% Si	% Mn	% P	% S	ALLOYS /OTHER ELEMENTS	Yield Re N/mm2	Tensile Rm N/mm2	Elong'n. A % min.			
MILD STEELS / STEELS FOR COLD FORMING										**180°Bend mandrel size**		
EN10111:DD11	0.12 max	0.040 max	0.60 max	0.045 max	0.045 max		170-340	440 max	28	R=t		900mm2
BS1449 Pt.1:HS4	0.12 max	0.040 max	0.60 max	0.050 max	0.050 max		(170 min)	(280 min)	(25)	D=2t		900mm2
BS1449 Pt.1:HS15	0.20 max	0.040 max	0.90 max	0.050 max	0.050 max		(170 min)	(280 min)	-	D=3t		900mm2
STRUCTURAL STEELS EN10025							**min**			**Impact Test 27J min at:-**		
S235JR	0.17 max		1.40 max	0.040 max	0.040 max	See full specification	235	360-510	26	+20 °C	DIN 17100 St37-2	900mm2
S235J0	0.17 max		1.40 max	0.035 max	0.035 max	See full specification	235	360-510	26	0 °C		900mm2
S275JR	0.25 max		1.50 max	0.040 max	0.040 max	See full specification	275	410-560	22	+20 °C	BS4360 43A	900mm2
S275J0	0.25 max		1.50 max	0.035 max	0.035 max	See full specification	275	410-560	22	0 °C		900mm2
S355JR	0.24 max		1.60 max	0.040 max	0.040 max	See full specification	355	470-630	21	+20 °C	BS4360 50B	900mm2
S355J0	0.20- max		1.60 max	0.035 max	0.035 max	See full specification	355	470-630	21	0 °C	BS4360 50C	900mm2
S355J2	0.20 max		1.60 max	0.030 max	0.030 max	See full specification	355	470-630	21	-20 °C	BS4360 50D	900mm2
CARBON STEELS EN10083							**min**	**min**				
C35	0.32-0.39	0.040 max	0.50-0.80	0.035 max	0.040 max		300	550	18		C35E; C35R; E295; BS970 070M36; SAE1035	800mm2
C40	0.37-0.44	0.040 max	0.50-0.80	0.035 max	0.040 max		320	580	16		C40E; C40R; BS970 080M40; EN8; SAE1040	800mm2
C45	0.42-0.50	0.040 max	0.50-0.80	0.035 max	0.040 max		340	620	14		C45E; C45R; E335; BS970 080M46; SAE1045	800mm2
C55	0.52-0.60	0.040 max	0.60-0.90	0.035 max	0.040 max		370	680	11		C55E; C55R; E360; BS970 070M55; EN9; SAE1055	800mm2
C60	0.57-0.62	0.040 max	0.60-0.90	0.035 max	0.040 max		380	710	10		C60E; C60R; SAE1060	800mm2
BS970 Pt.1												
150M36	0.32-0.40	0.040 max	1.30-1.70	0.050 max	0.050 max		385	620	14		Bromford BCS67	800mm2
BORON STEELS												
Proprietary grades										**Hardness**		
Bromford 20CCrB	0.18-0.23	0.040 max	0.85-1.05	0.030 max	0.030 max	Cr 0.20-0.25; B 0.001-0.005				(229 HB max)		800mm2
Bromford 30CCrB	0.28-0.33	0.15-0.35	1.00-1.40	0.025 max	0.035 max	Cr 0.30-0.60; B 0.001-0.005				(285 HB max)	(EN10083 27MnCrB5-2, 30MnCrB5-2)	800mm2
Bromford 43CMnB	0.40-0.45	0.15-0.35	1.30-1.50	0.030 max	0.015 max	Cr 0.15-0.30; B 0.002-0.005				(285 HB max)		750mm2
SPRING STEELS										**Hardness**		
(DIN17222) C75	0.75-0.80	0.15-0.35	0.60-0.80	0.040 max	0.040 max	-		(950-1100)			BS970 070A78; BS1449 Pt.1 HS80	750mm2
BS970 Pt.2 251A58	0.55-0.60	1.80-2.10	0.80-1.00	0.035 max	0.035 max	Cr 0.15-0.30; Al 0.0150-.045				321 HB max	EN10089 56SiCr7; BS970:1955 EN45; SAE 9260	700mm2

Note. Data in (brackets) is for information only. For full definitive data always consult the original specification.