

BRIGHT MILD STEEL SUMMARY OF GRADES

Grade AISI/ASTM A276	CHEMICAL COMPOSITION LIMITS PERCENT						APPROXIMATE MINIMUM MECHANICAL PROPERTIES							
	C	Si	Mn	S	P	Pb	COLD DRAWN					TURNED & POLISHED		
							TENSILE MPa (N/mm ²)			ELONGATION % 5.65 √So			TENSILE MPa (N/mm) TO 260	ELONG'N % 5.65 √So
							mm under 16	mm 16-38	mm 38-63	mm under 16	mm 16-38	mm 38-63		

1004	-	0.10	0.25	-	-	-	MECHANICAL PROPERTIES NOT USUALLY REQUIRED (This grade is not included in AS1442)							
	0.06	0.35	0.50	0.04	0.04	-								

DESCRIPTION & TYPICAL APPLICATIONS

Low carbon steel with an excellent surface finish after cold rolling.

1020	0.15	-	0.30	-	-	-	480	460	430	12	12	13	410	22
	0.25	0.35	0.90	0.05	0.05	-								

DESCRIPTION & TYPICAL APPLICATIONS

Cold finished mild steel for machined parts 430-470 MPa. It can be case hardened, and welds readily.

1030	0.25	-	0.30	-	-	-	560	540	520	10	11	12	500	20
	0.35	0.35	0.90	0.05	0.05	-								

DESCRIPTION & TYPICAL APPLICATIONS

Cold finished medium tensile steel for machined parts, shafts and medium stressed parts. Can be welded.

1040	0.35	-	0.40	-	-	-	650	610	600	8	9	10	540	16
	0.45	0.35	0.90	0.05	0.05	-								

DESCRIPTION & TYPICAL APPLICATIONS

Medium tensile steel for shafts and studs requiring a 620 MPa tensile. Steel responds to heat treatment.

1045	0.43	0.10	0.60	-	-	-	690	650	640	8	8	9	600	14
	0.50	0.35	0.90	0.04	0.04	-								

DESCRIPTION & TYPICAL APPLICATIONS

Similar applications to 1040, steel is suitable for flame or induction heating. Steel can be welded with precautions.

1214	-	-	0.80	0.25	0.04	-	480	430	400	7	8	9	370	17
	0.15	0.10	1.20	0.35	0.09	-								

DESCRIPTION & TYPICAL APPLICATIONS

A resulphurised steel for enhanced machinability. Used for fine machining work or parts requiring high cutting rates. Welding produces a low strength result.

12L14	-	-	0.80	0.25	0.04	0.15	480	430	400	7	8	9	370	17
	0.15	0.10	1.20	0.35	0.09	0.35								

DESCRIPTION & TYPICAL APPLICATIONS

Lead has been added to 1214 Grade to create the highest machinability and is suitable for high volume and high speed machining.

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