

Carbon and Low Alloy Steels

Dean Group No	Specification BS3146 PT1 1974	Grade	Type of Steel	Composition % MAX						UTS MIN N/mm2	0.2% PS MIN N/mm2	Hardness MIN HB	Comparable Specifications				Typical Applications
				C	Si	Mn	Ni	Cr	Mo				EN	AISI	Werkstoff	BS 970	
L13	CLA1	A	Carbon Steel	0.25	0.6	1	0.4*	0.3*	0.1*	430	195#	121	3	C1020	1.0443	050A22	Engineering steels for low and medium strength applications, eg brackets
L14	CLA1	B		0.35	0.6	1	0.4*	0.3*	0.1*	500	215#	143	5	C1030	1.0551	060A32	
L15	CLA1	C		0.45	0.6	1	0.4*	0.3*	0.1*	540	245#	163	8	C1040	1.0553	060A42	
L16	CLA2		1.5% Mn Steel	0.25	0.5	1.7	0.4*	0.3*	0.1*	550	310#	152	14A	C1027	1.506	150M19	Medium strength applications where a degree of shock resistance is required, e.g. links, levers.
L17	CLA3		700/850 N/mm2 alloy steel							700	495	201	19	9840	1.6582	816M40	Alloy steels for medium to high strength applications, where ductility and good shock and fatigue strengths are required, e.g. brackets, levers, air-frame parts, hydraulic machinery.
L18	CLA4		850/1000 Nmm2 alloy steel							850	585	248	24	4337	1.658	823M30	
L19	CLA5	A	High Tensile steel							1000	880	269				826M31(Z)	
L20	CLA5	B									1160	1000	341				
	CLA7		3% Cr Mo steel	0.25	0.8	0.6	0.4**	3.5	0.6	620	480	179			1.7273	722M24	Structural parts & parts operating at temperatures up to 400°C. Low to medium strength components requiring a high local surface hardness e.g. pawls, ratchets, triggers.
L21	CLA8		Carbon Steel Surf Hardning	0.45	0.6	0.8	0.4*	0.3*	0.1*	540	245#			C1040			
L22	CLA9		Carbon steel for case hard	0.18	0.6	1	0.4*	0.3*	0.1*	495	215#		3	C1016	1.1141	080A15	Components requiring good shock resistance with high surface hardness e.g. ratchets, and operating levers.
L08	CLA10		3% Ni Case Hard. Steel	0.18	0.6	0.6	3.5	0.3**	0.1**	700	350#		33		1.5637		Parts subject to reciprocating or intermittent loading, e.g. high speed connecting links and levers.
L09	CLA11		3% Cr Mo Nitriding Steel	0.3	0.8	0.6	0.4**	3.5	0.7	850	600	248	40		1.7365	722M24	Moving parts where abrasion or wear resistance are required e.g. crank-pins, crank-shafts, sewing machine loopers, etc..
L10	CLA12	A&B	1% Cr Abrasion	0.55	0.8	1	0.4**	1.2	0.1**	700		207		5147	1.7228		Hardened parts subject to wear and abrasion. Grades B and C are suitable for heavy duty conditions.
L11	CLA12	C	Resisting Steels	0.65	0.8	1	0.4**	1.5	0.4					4150	1.7229		
L12	CLA13		Ni Mo case hardening steel	0.2	0.6	0.7	2	0.3**	0.3	700	350#		34	4617		665H17	Parts subject to reciprocating or intermittent loading, e.g. high speed connecting links and levers.

Where indicated thus, 0.2% Proof Stress values are for information only

~ Registered trade mark and / or proprietary alloy. Similar material

* Residuals.

Please note The Dean Group do not guarantee the above information, please use for reference purposes only.

Ref Sales Pack / Cast material Tables.

Other Alloys

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				C	Si	Mn	Ni	Cr	Mo				EN	AISI	Werkstoff	BS 970	
O08	Cast Iron Type		Grey Iron	3.5	2.1	0.25											General cast iron applications with the benefits of good surface finishes with Investment Casting tolerances
L25	EN9		Carbon steel	0.55	0.35	0.9									070M55		Levers, cams, gears and pawls
O18	ZERON 100		DUPLEX ST/ST	0.03	1	1	8	26	4								Fire fighting, valve hardware and marine applications
O16	DUPLEX ST/ST		DUPLEX ST/ST	0.03	0.8	1	19	21	6.5		650	300#	210				Fire fighting, valve hardware and marine applications
O02	ST6		Stellite Type	1.4	1.5	1	3	31	1.5								Valve seats
X01	4820		Carbon steel	0.23	0.75	0.9	3.75	0.2	0.3								Levers, cams, gears and pawls
L07	8620		Carbon steel	0.25	0.75	0.9	0.03	0.6	0.25						1.6523	805 M 20	Levers, cams, gears and pawls
N23	316C12		Heat resistant Stainless Steel	0.03	1.5	2	10	20	3		500	210#			1.4404		Valve hardware

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