

Equivalent Specifications & Standards

Chemical & mechanical property comparisons between pressure vessel grade material. For more information about [pressure vessel steel](http://www.masteel.co.uk/index.htm) visit our website at www.masteel.co.uk/index.htm

Plates				Chemical Composition Maximum (unless stated)													Mechanical Properties			
BS	EN	ASTM ASME	DIN	C	Si	Mn	P	S	Al	Cr	Cu	Ni	Mo	Nb	Ti	V	Tensile N/mm ²	Yield N/mm ²	Flanges Grade A182	Pipe Grade A335
161-360A	P235GH	A285-C	H1	0.16	0.35	0.4/ 1.2	0.03	0.03	0.02	0.3	0.3	0.3	0.08	0.01	0.03	0.02	360/ 480	235		
161-430A	P265GH	A516-60	H11	0.2	0.4	0.5/ 1.40	0.03	0.03	0.02	0.3	0.3	0.3	0.08	0.01	0.03	0.02	410/ 530	265		
223-490A/B	-	-	-	0.2	0.4	0.5/ 1.40	0.03	0.03	0.02	0.3	0.3	0.3	0.08	0.01	0.03	0.02	410/ 530	265		
224-460A/B	P295GH	A516-65	17Mn4	0.08/ 0.20	0.4	0.9/ 1.5	0.03	0.03	0.02	0.3	0.3	0.3	0.08	0.01	0.03	0.02	460/ 580	295		
224-490A/B	P355GH	A516-70	-	0.10/ 0.22	0.6	1/ 1.7	0.03	0.03	0.02	0.3	0.3	0.3	0.08	0.01	0.03	0.02	510/ 650	355		
225-490A/B	P355N/NH	-	19Mn6	0.2	0.5	0.9/ 1.7	0.03	0.03	0.02	0.3	0.3	0.5	0.08	0.05	0.03	0.1	430/ 630	355		
243	16Mo3	A204-A	15Mo3	0.12/ 0.20	0.35	0.4/ 0.90	0.03	0.03	-	0.3	0.3	0.3	0.25/ 0.35	-	-	-	440/ 590	275	F1	P1
620 B	13CrMo45	A387-12-2	13CrMo44	0.08/ 0.18	0.35	0.4/ 1.00	0.03	0.03	-	0.7/ 1.15	0.3	-	0.4/ 0.60	-	-	-	450/ 600	300	F12-2	P12
621 B	-	A387-11-2	-	0.09/ 0.17	0.5	0.40/ 0.65	0.03	0.02	0.02	1/ 1.50	0.3	0.3	0.45/ 0.60	-	-	-	515/ 690	340	F11-2	P11
622-515B	10CrMo910	A387-22-2	10CrMo910	0.08/ 0.14	0.5	0.4/ 0.80	0.03	0.03	-	2/ 2.50	0.3	-	0.3/ 1.10	-	-	-	520/ 630	310	F22	P22
-	-	A387-5-2	-	0.15	0.5	0.3/ 0.60	0.04	0.03	-	4/ 6.00	0.3	-	0.45/ 0.65	-	-	-	515/ 690	310	F5	P5
-	-	A387-9-2	-	0.15	1	0.3/ 0.60	0.03	0.03	-	8/ 10.0	-	-	0.9/ 1.10	-	-	-	515/ 690	310	F9	P9

Please note: the above chart is for guidance only – for exact specifications please check with our sales team

Material Testing

All plates are supplied fully certified to EN10204 3.1 or 3.2 as required, with full traceability usually by hard stamping. Additional client or third party inspection is available at the request of the client. Where specific applications require materials complete with additional testing, Masteel can provide a complete testing service using independent NAMAS approved test houses. If testing requires EN10204 3.2 certification, tests would be witnessed by your nominated third party inspection agency.

Additional testing available includes: Charpy V Notch Impact Testing | Through Thickness Testing (TTT) | Ultrasonic Testing | Hardness Testing | Mechanical Testing after Simulated PWHT | Micro-structural Examination
HIC testing according to NACE | SSCC testing according to NACE