

12L14 / 11SMnPb30 Equivalents - 6 free-machining steels across AISI, EN 10087, old DIN / AFNOR, BS 970, JIS G4804, GB/

12L14 = 11SMnPb30 / 1.0718 = SUM24L = Y15Pb = 9SMnPb28 = 230M07 leaded (EN1A Pb): S 0.26-0.35, Pb 0.15-0.35 %. Lead-free: 1215 = 11SMn30 / 1.0715 = 230M07 (EN1A) = SUM23 = Y15. 1144 (Stressproof) = 44SMn28 / 1.0762 = SUM43 = Y45Mn. 11SMnPb37 (S 0.34-0.40) has no SAE twin. None of these steels is through-hardened; all are plated. RoHS / ELV / food / drinking-water drawings take the lead-free twin. EKINSUN LTD - fittings, pins, spacers and studs turned in the drawing's grade from one piece, lead content named on quote and certificate - <https://www.ekinsun.com/materials/free-machining-steel-equivalents/>

Crosswalk

AISI / SAE	EN 10087 (number)	Old DIN / AFNOR	BS 970	JIS	GB/T 8731	Rating
Low-carbon resulphurised, leaded - the automatic-lathe steels						
12L14	11SMnPb30 (1.0718)	9SMnPb28 (AFNOR S250Pb)	230M07 leaded (EN1A Pb)	SUM22L / SUM24L	Y12Pb / Y15Pb	direct
1215	11SMn30 (1.0715)	9SMn28 (AFNOR S250)	230M07 (EN1A)	SUM23 (SUM22)	Y15 (Y12)	direct
1117	- (nearest 10S20 / 1.0721, std) (1.0721)	10S20	210M15 (std)	SUM31 (std)	Y20 (std)	nearest
12L13 / 12L14 (nearest)	11SMnPb37 (1.0737)	9SMnPb36	230M07 leaded (std)	SUM24L (nearest)	Y15Pb (nearest)	nearest
Medium-carbon resulphurised - the stressproof shafts						
1144 (Stressproof)	44SMn28 (1.0762)	45S20 (AFNOR 45MF4)	212M44 (std)	SUM43	Y45Mn (std)	direct
11L37 / 1137 (nearest)	36SMnPb14 (lead-free: 35S20) (1.0765 (1.0726))	35SPb20 / 35S20	212M36 (EN8M)	SUM41 (nearest)	Y35 (std)	nearest

Composition bands, mass % - US (SAE J403) | EN (EN 10087)

Grade	C US	C EN	Mn US	Mn EN	S US	S EN	Pb US	Pb EN
12L14 / 11SMnPb30	<=0.15	<=0.14 (std)	0.85-1.20	0.90-1.30 (std)	0.26-0.35	0.27-0.33 (std)	0.15-0.35	0.20-0.35 (std)
1215 / 11SMn30	<=0.09 (std)	<=0.14 (std)	0.75-1.05 (std)	0.90-1.30 (std)	0.26-0.35 (std)	0.27-0.33 (std)	-	-
1117 / -	0.14-0.20	0.07-0.13 (10S20, std)	1.00-1.30	0.70-1.10 (std)	0.08-0.13	0.15-0.25 (std)	-	-
12L13 / 12L14 / 11SMnPb37	<=0.13 (12L13, std)	<=0.14 (std)	0.70-1.00 (std)	1.00-1.50 (std)	0.24-0.33 (std)	0.34-0.40 (std)	0.15-0.35 (std)	0.20-0.35 (std)
1144 / 44SMn28	0.40-0.48	0.40-0.48 (std)	1.40-1.70	1.35-1.65 (std)	0.24-0.33	0.24-0.33 (std)	-	-
11L37 / 1137 / 36SMnPb14	0.32-0.39 (1137, std)	0.32-0.39 (std)	1.35-1.65 (std)	1.30-1.70 (std)	0.08-0.13 (std)	0.10-0.18 (std)	- (11L37: 0.15-0.35)	0.20-0.35 (std)

Sulphur 0.24-0.40 % breaks the chip, lead 0.15-0.35 % lubricates the cut: 2-3x the cutting speed of C45, lower toughness across the grain, poor weldability. 11SMn30 / 1215 cold-drawn Rm 380-570 MPa; 44SMn28 / 1144 cold-drawn stress-relieved Rm ~700-850 MPa. 'std' = band from the standard's table.