

Equivalents of Carbon Steel Qualities

Europe			Germany	France	Italy	Belgium	Sweden
EN10025(93)	EN10025(90)	EN10113-2	DIN 17100	NFA 35-501	UNI7070	NBN21-101	MNC810E
S185	Fe 310-0		St 33	A 33	Fe 320	A 320	SS13,00,00
S235JR(G2)	Fe E360B(FN)		RSt 37-2	E24-2	Fe 360 B	AE235B	SS 13,11,00
S235 J0	Fe E 360 C		St37-3U	E 24-3	Fe 360 C	AE235 C	SS 13,12,00
S235J2G3	Fe E 360 D1		St 37-3 N	E24-4	Fe 360 D	AE 235 D	
S235J2G4	FeE360 D2						
						AE 255 A,B,C,D	
S275 JR	Fe430 B		ST 44-2	E 28-2	Fe430B	AE295 B	SS14,12,00
S 275 JO	Fe 430 C		St44-3U	E 28-3	Fe 430 C	AE 295C	
S275 J2G3	Fe430 D1	S 275N	St 44-3N	E 28-4	Fe 430D	AE 295 D	SS14,14,00
S275 J2G4	Fe430 D2	S 275NL				AE 295 DD	SS14,14,01
							SS26,32,00
							SS26,34,11
							SS21,72,00
							SS21,74,01
S 355 JR	Fe510 B			E 36-2	Fe 510 B	AE 355 B	SS21,32,01
S 355 JO	Fe 510 C		St 52-3 U	E 36-3	Fe 510C	AE 335 C	SS21,34,01
	Fe 510 D1						
	Fe 510 D2						
S 355 J2G3		S 355 N	St 52-3 N		Fe 510D	AE 355 D	SS 21,35,01
S 335J2G4	Fe 510 D D1	S 355 NL					SS 26,42,00
S 335K2G3				E 36 -4	Fe 510 DD	AE355DD	SS26,44,11
S 335K2G4	Fe 510 D D2						

High Yield Steel

Europe	Germany	France			Sweden	U.K.	Canada
EN 10028-3	DIN 17102	NFA 36201	NFA 35207		MNC 810E	BS 4360	CSA G40-21
	STE 380	E 375R			SS21,42,01		400 W, WT
	WSt E 380	E 375 FP			SS 21,44,01		
	T St E 380				SS 21,45,01		
	E St E 380						
			A 550 AP, FP	AE 410 DD			
	St E 420	E 420 R			SS 26,52, 00		
	W St E 420	E 420 FP			SS 26,54,11		
	T St E 420						
	E St E 420						
			A 590 AP, FP				
P 460 N	St E 460	E 460 R				55 C, EE	
P 460 NH	W St E 460	E 460 FP					
P 460 NL1	T St E 460						
P 460 NL 2	E St E 460						

Steel for Welded Tubes

Germany	U.S.A	EN
DIN 17,172	API 4L, 5L	
St E 210,7	A	
St E 240,7	B	
St E 290, 7 (TM)	X 42	
St E 320, 7 (TM)	X 48	
St E 360, 7	X 52	

(TM)		
St E 385, 7 (TM)	X 56	
St E 415, 7 (TM)	X 60	
St E 445, 7 (TM)	X 65	
St E 480, 7 (TM)	X 70	

Steel Resistant to Atmospherical Corrosion

Europe	UNI	Germany	France	U.K.	Canada	U.S.A	International
EN 10155	EU 155	WBL 087	NFA 35502	BS 4360	CSA G 4021	ASTM	ISO 4952
		WSt 37.2	E 24W 2				Fe 235W
S 235 JOW	Fe 360 CK1		E 24 W 3				
S 235 J2W	Fe 360 DK1	W St 37.3	E 24 W 4				
S 355 JOW	Fe 510 C2K1		E 36 WB 3	WR 50 B	gr 350 -A AT	A242 gr1	Fe 355 W
S 355 J2G 1W	Fe 510 D2K1	W St 52.3	E 36 WB 4	WR 50 C	gr 400-A AT	A 600 A,B,C	
S 355 J2G2W							
S 355 K2G1W							
S 366K2G2W							

Steel with Cr., Mo.,Cr-Mo.

Europe	Germany	France	Italy	Sweden	Japan	U.K.	U.S.A
EN 10028-2	DIN 17155	AFNOR 36206	UNI 5869	MNC830E	JIS 3103	BS 1501 part 2	ASTM
16 Mo 3	16 Mo 3	15 D 3	16 Mo 3				
		18 MD 4.05	16 Mo 6	22.16.04	450M	271	A202 gr. A,B
		15 MDV 4.05		22.18.04	490 M		
		15 CD 2.05					A 204 gr.A,B,C
14 Cr Mo 45	13 Cr Mo 44	15 CD 4.05	14 Cr Mo 46			620	A 302 gr.A,B

							gr.27,31
							621 gr. A,B
							A 387 gr.2,11,12
							622 gr.31

General Construction Steel

Europe		Belgium	Germany	France	Sweden	International	Italy
EN 10025(93)	EN 10025 (90)	NBNA21201	DIN 17100	NFA35501	MNC 850 E	ISO 1052	UNI 7070
		A 330-1,2					
		A-360 1,2,3					
		A-410 1,2,3					
E 295	Fe 490-2	A 490-1,2	St 50-2	A 60-2	SIS 15,50,00	Fe E 490	Fe 490
					SIS 15,50,01	5	
E 335	Fe 590-2	A 590-1,2	St 60-2	A 60-2	SIS 16,50,00	Fe E 690	Fe 590
					SIS 16,50,01		
E 360	Fe 690-2	A 690-1,2	St 70-2	A 70-2	SIS 16,55,00	Fe E 690	Fe 690
					SIS 16,65,01		

Steel for Boilers and Pressure Vessels

Europe		Belgium	Germany				
EN 10028-2	EN 10028-3	EU 113	NBN629	NBN630	DIN 17135	DIN17165	DIN17102
P235 GH		Fe E255	D 37 1,2	E37 1,2	A St 35	HI	St E 255
		KG KW,KT					W St E 255
							T St E 255
							E St E 255
P 295 GH	P 275 N	Fe E285	D 42-1,2	E 42-1,2	A St 41	HII	St E 285

	P 275 NH	KG,KW,KT					W St 285
	P 275 NL 1						T St E 285
	P 275 NL 2						E St E 285
P296 GH		Fe E315	D 47-1,2	E47-1,2	A St 45	17 Mn 4	St E 315
		KG,KW,KT					W St E 315
							T St E 315
							E St E 315
P 355 GH	P 355 N	Fe E 355	D52-1,2	E52-1,2	A St 52	19 Mn 8	St E 355
	P 355 NH	KG,KW,KT					W St E 355
	P 355 NL1						T St E 355
	P 355 NL2						E St E 355

Steel For Ship Building

	Norske Lloyds	Germanischer Lloyds	Bureau Veritas	American Bureau of Shipping	USSR Register	Nippon Kaigi Kyoka
A	A	A	A	A	A	A
B	B	B	B	B	B	B
D	D	D	D	D	D	D
E	E	E	E	E	E	E

	NV A 27 S			CS		
	NV D 27 S					
	NV D 27 S					
AH 32	NV A 32	A 32	AH32	AH 32	A32	
DH 32	NV 32	D 32	DH 32	DH 32	D 32	
EH 32	NV E 32	E 32	EH 32	EH 32	E 32	
AH 34 S						
DH 34 S						
EH 34 S						
AH 35	NV A 36	A 36	AH 36	AH 36	A 36	
DH 36	NV D 36	D 36	DH 36	DH 36	D 36	
EH 36	NV E 36	E 36	EH 36	EH 36	E 36	
	NVA 40					
	NVD 40					
	NVE 40					
	NVA 420					
	NVD 420					
	NVE 420					

Stamping and cold forming steels

Material #	EN 10111	DIN 1614/2	NFA 36-301	UNI 5867	BS 1449	UNE 36.093	ASTM - SAE
1.0332	DD11	StW 22	1 C	FeP 11	HR 3	AP 11	A 621 CQ - SAE 1010
1.0398	DD12	RRStW 23					A 621 DQ - SAE 1008
1.0335	DD13	StW 24	3 C	FeP 13	HR 1	AP 13	A 622 DQ - SAE 1006 AK
1.0389	DD14		3 CT				

Fine-grain structural steels, normalised rolled

1.049	S275N	StE 285		Fe E 275 KGN			A 572 Gr. 42
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1.0491	S275NL	TStE 285		Fe E 275 KTN	43 EE		A 633 Gr. A
1.0545	S355N	StE 355	E 355 R	Fe E 355 KGN	50 E	AE 355 KG	A 572 Gr. 50
1.0546	S355NL	TStE 355	E 355 FP	Fe E 355 KTN	50 EE	AE 355 KT	A 633 Gr. C, D / A 537 Cl. 1
1.8902	S420N	StE 420	E 420 R	Fe E 420 KGN		AE 420 KG	A 255 Gr. D
1.8912	S420NL	TStE 420	E 420 FP		50 F		A 633 Gr. E / A 572 Gr. 60 / A 738 Gr. C

High yield strength cold forming steels

Material #	EN 10149-2	SEW 092	NFA 36-231	UNI 8890	BS 1449	UNE	A 517 / A 607 / J 1392
1.0972	S315MC		E 315 D		HR 43F35		045 XLK
1.0974		QStE 340 TM					Gr. 50 / Gr. 50
1.0976	S355MC		E 355 D	Fe E 355 TM			050 XLK
1.0978		QStE 380 TM					Gr. 55
1.098	S420MC	QStE 420 TM	E 420 D	Fe E 420 TM	HR 50F45		Gr. 60 / Gr. 60 / 060 XLK
1.0982	S460MC	QStE 460 TM					Gr. 65
1.0984	S500MC	QStE 500 TM	E 490 D	Fe E 490 TM			Gr. 70 / Gr. 70 / 070 XLK
1.0986	S550MC	QStE 550 TM	E 560 D	Fe E 560 TM			/ Gr. 80 / 080 XLK
1.8969	S600MC		E 620 D		HR 68F62		
1.8976	S650MC						
1.8974	S700MC	QStE 690 TM	E 690 D				ASTM A514

High strength steels for cold-forming, normalised

Material #	EN 10149-3	SEW 092	NFA	UNI	BS 1149	UNE	ASTM
1.0971	S260NC	QStE 260 N			HR 40/30		
1.0973	S315NC				HR 43/35		
1.0977	S355NC				HR 46/40		
1.0981	S420NC	QStE 420 N			HR 50/45		

Structural steels with enhanced resistance to atmosphere corrosion

Material #	EN 10155	SEW 087	NFA 35-502	UNI	BS 4360	UNE	ASTM
1.8961	S235J2W	WTSst 37-3	E 24 W 4	Fe 360 DK 1			
1.8945	S355J0WP		E 36 WA 3	Fe 510 C1K1	WR 50 A		
1.8946	S355J2WP		E 36 WA 4	Fe 510 D1K1			A 242 Type 1
1.8959	S355J0W		E 36 WB 3	Fe 510 C2K1	WR 50 B		A 588 - A 242 Gr. 1
1.8963	S355J2G1W	WTSst 52-3		Fe 510 D2K1	WR 50 C		A 588 Gr. A
1.8965	S355J2G2W						
1.8966	S355K2G1W		E 36 WB 4				A 709 Gr. 50 W
1.8967	S355K2G2W						

General purpose structural steels

Material #	EN 10025	DIN 17100	NFA 35-501	UNI 7070	BS 4360	UNE 36.080	ASTM
1.0035	S185	St 33	A 33	Fe 320		A 310-0	A 283 B - A 569 CQ
1.0037	S235JR	St 37-2	E 24-2	Fe 360 B	40 A		A 283 C - A 570 Gr. 33
1.0038	S235JRG2	RSt 37-2	E 24-2 NE		40 B	AE 235 B-FN	
1.0116	S235J2G3	St 37-3 N	E 24-4	Fe 360 D	40 D	AE 235 D	
1.0117	S235J2G4						
1.0044	S275JR	St 44-2	E 28-2	Fe 430 B	43 B	AE 275 B	A 283 D - A 36
1.0143	S275JO	St 44-3 U	E 28-3	Fe 430 C	43 C	AE 275 C	A 578 Gr. 70
1.0144	S275J2G3	St 44-3 N	E 28-4	Fe 430 D	43 D	AE 275 D	A 633 Gr. A
1.0145	S275J2G4						
1.0045	S355JR		E 36-2	Fe 510 B	50 B	AE 355 B	A 572 Gr. 50 - A 678 Gr. A
1.0553	S355JO	St 52-3 U	E 36-3	Fe 510 C	50 C	AE 355 C	A 441
1.057	S355J2G3	St 52-3 N		Fe 510 D	50 D	AE 355 D	
1.0577	S355J2G4						
1.0595	S355K2G3		E 36-4		50 DD		
1.0596	S355K2G4						
1.005	E295	St 50-2	A 50-2	Fe 490		A 490	
1.006	E335	St 60-2	A 60-2	Fe 590		A 590	
1.007	E360	St 70-2	A 70-2	Fe 690		A 690	

Fine-grain structural steels, thermomechanically rolled

Material #	EN 10113-3	SEW 083	NFA 36-201	UNI 7382	BS 4360	UNE	ASTM
1.8818	S275M	StE 275 TM		Fe E 275 KGTM			
1.8819	S275ML	TStE 275 TM		Fe E 275 KTTM			
1.8823	S355M	StE 355 TM	E 355 R	Fe E 355 KGTM			A 572 Gr. C

1.8834	S355ML	TStE 355 TM	E 355 FP	Fe E 355 KTTM	50 EE		A 633 Gr. C
1.8825	S420M	StE 420 TM	E 420 R				A 572 Gr. 60
1.8836	S420ML	TStE 420 TM	E 420 FP				A 633 Gr. E
1.8827	S460M	StE 460 TM	E 460 R	Fe E 460 KGTM			A 572 Gr. 65
1.8838	S460ML	TStE 460 TM	E 460 FP	Fe E 460 KGTM	55 EE		A 572 Gr. 65

Boiler steels

Material #	EN 10028-2	DIN 17155	NFA 36-205	UNI 5869	BS 1501	UNE 36087	ASTM
1.0345	P235GH	HI	A 37 CP	Fe 360 - 1KW	161 Gr. 360 / 164 Gr. 360	A 37 RCI	A 285 Gr. C-A 414 Gr. C / A 516 Gr. 55
1.0425	P265GH	HI	A 42 CP	Fe 410 - 1KW	161 Gr. 400 / 164 Gr. 400 / 224 Gr. 400	A 42 RCI	A 414 Gr. E / A 516 Gr. 60
1.0481	P295GH	17 Mn 4	A 48 CP	Fe 460 - 1KW	224 Gr. 490	A 47 RCI	A 414 Gr. F / A 516 Gr. 65
1.0473	P355GH	19 Mn 6	A 52 CP	Fe 510 - 1KW		A 52 RCI	A 414 Gr. G
1.5415	16Mo3	15 Mo 3	15 D3	15 Mo 3	1503 - 243 B	16 Mo 3	A 204 Gr. B
1.7335	13CrMo4-5	13CrMo 4 4	15 CD 4-05	14 CrMo 4.5	620 Gr. 27	14 CrMo 4.5	A 387 Gr. 12
1.738	10CrMo9-10	10CrMo 9 10	10 CD 9.10		622 Gr. 31		A 387 Gr. 22
1.7383	11CrMo9-10			12 CrMO 9.10		12 CrMo 9.10	

Weldable normalized fine grained pressure vessel steels

Material #	EN 10028-3	DIN 17102	NFA 36-207	UNI 7382	BS 1501	UNE 36081	ASTM
1.0486	P275N	StE 285			224 Gr. 400		
1.0487	P275NH	WStE 285			224 Gr. 430		A 516 Gr. 60
1.0488	P275NL1	TStE 285					A 662 Gr. A
1.1104	P275NL2	EStE 285					
1.0562	P355N	StE 355	A 510 AP	Fe E 355 KG	223 Gr. 490	AE 355 KG	A 537 CL 1
1.0565	P355NH	WStE 355	A 510 AP	Fe E 355-2	224 Gr. 490		A 662 Gr. C

1.0566	P355NL1	TStE 355	A 510 FP 1	Fe E 355-3	224 Gr. 490		A 737 Gr. B
1.1106	P355NL2	EStE 355					

Simple pressure vessels steel

Material #	EN 10207	DIN EN 10207	NFA 36-205	UNI 5869	BS 1501	UNE 36080	ASTM
1.0112	P235S	SPH 235	A 37 AP	Fe 360-2KW	164-360B LT20	AE 235 C	
1.013	P265S	SPH 265	A 42 AP	Fe 410-2KW	164-400B LT20	SPH 265	
1.11	P275SL	SPH 275					

Steel for gas cylinders and gas vessels

Material #	EN 10120	DIN 17155	NFA 36-211	UNI 7355	BS 5045	UNE 36129	ASTM
1.0111	P245NB	H I	BS 1	Fe E 24 KR	Type A	AE 235 KR	
1.0243	P265NB	H II	BS 2	Fe E 27 KR	Type B	AE 265 KR	
1.0437	P310NB	17 Mn 4	BS 3	Fe E 31 KR	Type C	AE 345 KR	
1.0557	P355NB	19 Mn 6	BS 4	Fe E 35 KR	Type E		

Steel for large diameter pipes

Material #	EN 10208-2	DIN 17172	NFA	UNI	BS	UNE	API 5L
1.0457	L 245NB	StE 240.7					Gr. B
1.0484	L 290NB	StE 290.7					X 42
1.0582	L 360NB	StE 360.7					X 52
1.8972	L 415NB	StE 415.7					X 60
1.0418	L 245MB	StE 240.7 TM					Gr. B

1.0429	L 290MB	StE 290.7 TM					X 42
1.0578	L 360MB	StE 360.7 TM					X 52
1.8973	L 415MB	StE 415.7 TM					X 60
1.8975	L 450MB	StE 445.7 TM					X 65
1.8977	L 485MB	StE 480.7 TM					X 70
1.8978	L 555MB						X 80

High carbon Steel

Material #	EN 10083-2	DIN 17200	NFA 33-101	UNI 7846	BS 970	UNE 36011	SAE J 403-AISI
1.0501	C35	C 35	AF55-C35	C 35	070 M 36	C 35 k	1035
1.0511	C40	C 40	AF60-C45	C 40	070 M 40		1038 / 1040
1.0503	C45	C 45	AF65-C45	C 45	070 M 46	C 45 k	1042 / 1045
1.054	C50	C 50			070 M 50		1049 / 1050
1.0535	C55	C 55	AF70-C55	C 55	070 M 55	C 55 k	1055
1.0601	C60	C 60			070 M 60		1060
1.0603	1 C 67	C 67	XC 68	C 67	080A67		1070
1.0605	1 C 75	C 75	XC 75	C 75	080A72		1074