



Below mentioned program overview gives an impression of the possibilities of GNS. Given the enormous diversity in dimensions there is only mention made of available qualities. The products are available in DIN and ASME / ANSI qualities and in many cases with certificates according to EN 10204, additional PMI tests etc.

Are you curious about the possibilities? Do not hesitate to contact us. We are always willing to help and would like to think along with you about your material needs. Our options will surprise you.

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## 1 Hot rolled steel products; former and current description

### 1.1 Hot rolled products of structural steel:

Material number	Description according EN 10025	Description according EU 25 (expired)	Description according DIN 17100 (expired)
1.0035	S185	Fe 310-0	St 33
1.0037	S235JR	Fe 360 B	St 37-2
1.0036	S235JRG1	Fe 360 BFU	USt 37-2
1.0038	S235JRG2	Fe 360 BFN	RSt 37-2
1.0044	S275JR	Fe 430 B	St 44-2
1.0045	S355JR	Fe 510 B	-
1.0050	E295	Fe 490-2	St 50-2
1.0060	E335	Fe 590-2	St 60-2
1.0070	E360	Fe 690-2	St 70-2
1.0114	S235J0	Fe 360 C	St 37-3 U
1.0115	S235J0C	Fe 360 CKZ	ZSt 37-3 U
1.0115	S235J0C	Fe 360 CKQ	QSt 37-3 U
1.0116	S235J2G3	Fe 360 D1	St 37-3 N
1.0117	S235J2G4	Fe 360 D2	-
1.0118	S235J2G3C	Fe 360 D1KZ	ZSt 37-3 N
1.0118	S235J2G3C	Fe 360 D1KQ	QSt 37-3 N
1.0119	S235J2G4C	Fe 360 D2KZ	-
1.0120	S235JRC	Fe 360 BKZ	ZSt 37-2
1.0121	S235JRG1C	Fe 360 BFUKZ	UZSt 37-2
1.0121	S235JRG1C	Fe 360 BFUKQ	UQSt 37-2
1.0122	S235JRG2C	Fe 360 BFNKZ	RZSt 37-2
1.0122	S235JRG2C	Fe 360 BFNKQ	RQSt 37-2
1.0128	S275JRC	Fe 430 BKZ	ZSt 44-2
1.0128	S275JRC	Fe 430 BKQ	QSt 44-2
1.0140	S275J0C	Fe 430 CKZ	ZSt 44-3 U
1.0140	S275J0C	Fe 430 CKQ	QSt 44-3 U
1.0141	S275J2G3C	Fe 430 D1KZ	ZSt 44-3 N
1.0141	S275J2G3C	Fe 430 D1KQ	QSt 44-3 N
1.0142	S275J2G4C	Fe 430 D2KZ	-
1.0143	S275J0	Fe 430 C	St 44-3 U
1.0144	S275J2G3	Fe 430 D1	St 44-3 N
1.0145	S275J2G4	Fe 430 D2	-
1.0533	E295GC	Fe 490-2 KZ	ZSt 50-2
1.0543	E335GC	Fe 590-2 KZ	ZSt 60-2
1.0551	S355JRC	Fe 510 BKZ	-
1.0553	S355J0	Fe 510 C	St 52-3 U
1.0554	S355J0C	Fe 510 CKZ	ZSt 52-3 U
1.0554	S355J0C	Fe 510 CKQ	QSt 52-3 U
1.0569	S355J2G3C	Fe 510 D1KZ	ZSt 52-3 N
1.0569	S355J2G3C	Fe 510 D1KQ	QSt 52-3 N
1.0570	S355J2G3	Fe 510 D1	St 52-3 N
1.0577	S355J2G4	Fe 510 D2	-
1.0579	S355J2G4C	Fe 510 D2KZ	-



## 1.1 Hot rolled products of structural steel (continued):

Material number	Description according EN 10025	Description according EU 25 (expired)	Description according DIN 17100 (expired)
1.0593	S355K2G3C	Fe 510 DD1KZ	-
1.0594	S355K2G4C	Fe 510 DD2KZ	-
1.0595	S355K2G3	Fe 510 DD1	-
1.0596	S355K2G4	Fe 510 DD2	-
1.0633	E360GC	Fe 690-2 KZ	ZSt 70-2



## 1.2 Steels for quenching and tempering:

Material number	Description according EN 10083	Description according EU 83 (expired)	Description according DIN 17200 (expired)
1.0402	C22	-	C22
1.1151	C22E	-	Ck22
1.1149	C22R	-	Cm22
1.0406	C25	1 C 25	C 25
1.1158	C25E	2 C 25	Ck 25
1.1163	C25R	3 C 25	Cm 25
1.0528	C30	-	C 30
1.1178	C30E	-	Ck 30
1.1179	C30R	-	Cm30
1.0501	C35	1 C 35	C 35
1.1181	C35E	2 C 35	Ck 35
1.1180	C35R	3 C 35	Cm 35
1.0511	C40	-	C 40
1.1186	C40E	-	Ck 40
1.1189	C40R	-	Cm 40
1.0503	C45	1 C 45	C 45
1.1191	C45E	2 C 45	Ck 45
1.1201	C45R	3 C 45	Cm 45
1.0540	C50	-	C 50
1.1206	C50E	-	Ck 50
1.1241	C50R	-	Cm 50
1.0535	C55	1 C 55	C 55
1.1203	C55E	2 C 55	Ck 55
1.1209	C55R	3 C 55	Cm 55
1.0601	C60	1 C 60	C 60
1.1221	C60E	2 C 60	Ck 60
1.1223	C60R	3 C 60	Cm 60
1.1170	28Mn6	28 Mn 6	28 Mn 6
1.7003	38Cr2	38 Cr 2	38 Cr 2
1.7023	38CrS2	-	38 CrS 2
1.7006	46Cr2	46 Cr 2	46 Cr 2
1.7025	46CrS2	-	46 CrS 2
1.7033	34Cr4	34 Cr 4	34 Cr 4
1.7037	34CrS4	-	34 CrS 4
1.7034	37Cr4	37 Cr 4	37 Cr 4
1.7038	37CrS4	-	37 CrS 4
1.7035	41Cr4	41 Cr 4	41 Cr 4
1.7039	41CrS4	-	41 CrS 4
1.7218	25CrMo4	A/B 25 CrMo 4	25 CrMo 4
1.7213	25CrMoS4	-	25 CrMoS 4
1.7707	30 CrMoV 9		
1.7220	34CrMo4	34 CrMo 4	34 CrMo 4
1.7226	34CrMoS4	-	34 CrMoS 4
1.7225	42CrMo4	42 CrMo 4	42 CrMo 4
1.7227	42CrMoS4	-	42 CrMoS 4



## 1.2 Steels for quenching and tempering (continued):

Material number	Description according EN 10083	Description according EU 83 (expired)	Description according DIN 17200 (expired)
1.7228	50CrMo4	-	50 CrMo 4
1.6511	36CrNiMo4	-	36 CrNiMo 4
1.6582	34CrNiMo6	35 CrNiMo 6	34 CrNiMo 6
1.6580	30CrNiMo8	30 CrNiMo 8	30 CrNiMo 8
1.6773	36NiCrMo16	36 CrNiMo 16	-
1.6959	35 NiCrMoV 12-5		
1.8159	51CrV4	50 CrV 4	50 CrV 4
1.5122	37 MnSi 5		
1.5530	20MnB5	-	-
1.5531	30MnB5	-	-
1.5532	38MnB5	-	-
1.5529	27MnCrB5	-	-
1.7185	33MnCrB5-2	-	-
1.7189	39MnCrB6-2	-	-

### Explanation of abbreviations:

S	=	Structural steel
E	=	Engineering steel... followed by a three-digit number that represents the specified minimum Yield strength in N/mm <sup>2</sup> for the smallest thickness range
(+U)	=	Untreated
+N	=	Normalized or normalized rolled
+AR	=	As rolled, untreated
+NT	=	Normalized and tempered
+A	=	Annealed
+QT	=	Quenched and tempered
JR	=	27 J impact strength at room temperature (+ 20 °C)
J0	=	27 J impact strength at a temperature of 0 °C
J2	=	27 J impact strength at a temperature of -20 °C
K2	=	40 J impact strength at a temperature of -20 °C
L	=	27 J impact strength at a temperature of -50 °C
G1	=	Rimming steel (FU)
G2	=	Rimming steel not permitted (FN)
G3	=	Fully killed delivery condition normalized or normalized rolled
G4	=	Fully killed delivery condition as chosen by manufacturer



### 1.3 Case hardening steel:

Material number	Description according EN 10084	Description according EU 84 (expired)	Description according DIN 17210 (expired)
1.0301			C10
1.0401			C15
1.0471			21 MnSi 5
1.1133			20 Mn 5
1.1141	C15E		Ck15
1.5752	15 NiCr 13		14 NiCr 14
1.5918	17 CrNi 6-6		17 CrNi 6-6
1.5919			15 CrNi 6
1.5920	18 CrNi 8		18 CrNi 8
1.6523	20NiCrMo2-2		21 NiCrMo 2
1.6587	18 CrNiMo 7-6		17 CrNiMo 6
1.7131	16 MnCr 5		16 MnCr 5
1.7147	20 MnCr 5		20 MnCr 5
1.7160	16 MnCrB 5		16 MnCrB 5
1.7168	18 MnCrB 5		18 MnCrB 5

### 1.4 Nitriding steel:

Material number	Description according EN 10085	Description according EU 85 (expired)	Description according DIN 17211 (expired)
1.7735	14 CrMoV 6-9		14 CrMoV 6-9
1.6580	30 CrNiMo 8		30 CrNiMo 8
1.5755			31 NiCr 14
1.8519	31 CrMoV 9		31 CrMoV 9
1.8521	15 CrMoV 5-9		15 CrMoV 5-9
1.7765			32 CrMoV 12-10
1.6655			32 NiCrMo 12-5
1.7033	34 Cr 4		34 Cr 4
1.8504			34 CrAl 6
1.8507			34 CrAlMo 5
1.8550	34 CrAlNi 7-10		34 CrAlNi 7-10
1.7220	34 CrMo 4		34 CrMo 4
1.6582	34 CrNiMo 6		34 CrNiMo 6
1.5122			37 MnSi 5
1.8523			39 CrMoV 13-9
1.7035	41 Cr 4		41 Cr 4
1.7225	42 CrMo 4		42 CrMo 4
1.8159	51 Cr 4		50 CrV 4
1.5141			53 MnSi 4
1.8161			58 CrV 4
1.8159	51 CrV 4		50 CrV4
1.7176			55 Cr 3



### 1.5 Flat products made of high temperature structural steel:

Material number	Description according EN 10028 / 10083 / 10269	Description according EU 28 / 83 (expired)	Description according DIN 17155 / 17240 (expired)
1.0345	P235GH	Fe E 235 KWTD	H I
1.0425	P265GH	Fe E 265 KWTD	H II
1.0481	P295GH	Fe E 295 KWTD	17 Mn 4
1.0473	P355GH	FE E 355-2 KWTD	19 Mn 6
1.5415	16 Mo 3	16 Mo3 KWTD	15 Mo 3
1.7218	25CrMo4	25 CrMo 4	25 CrMo 4
1.7258	25CrMo5	25 CrMo 5	25 CrMo 5
1.7335	13CrMo4-5	14 CrMo45 KWTD	10 CrMo 44
1.7380	10CrMo9-10	10 CrMo 9 10 KWTD	10 CrMo 9 10
1.7709	21CrMoV5-7	21 CrMoV 5-7	21 CrMoV 5 7
1.7733	24CrMoV5-5	24 CrMoV 5-5	24 CrMoV 5 5

Material number	Description according EN 10028	Description according EU 113 (expired)	Description according DIN 17155 (expired)
1.0486	<i>P275N</i>	FeE285KGTD	WStE285
1.0487	P275NH	FeE285KWTD	WStE285
1.0488	P275NL1	FeE285KTTD	TStE285
1.1104	P275NL2	-	EStE285
1.0562	P355N	FeE355KGTD	StE355
1.0565	P355NH	FeE355KWTD	WStE355
1.0586	P355NL1	FeE355KTTD	TStE355
1.1106	P355NL2	-	EStE355
1.8905	<i>P460N</i>	FeE460KGTD	EStE460
1.8935	P460NH	FeE460KWTD	WStE460
1.8915	P460NL1	FeE460KTTD	TStE460
1.8918	P460NL2	-	EStE460

#### Explanation of abbreviations:

P	=	Steel for pressure purposes
P...GH	=	For use at high temperatures
P...N	=	For use at temperatures from -20° C until + 20 °C
P...NH	=	resistant to high temperatures
P...NL1	=	resistant to low temperatures
P...NL2	=	resistant to ultra low temperatures
(+U)	=	Untreated
+N	=	Normalized or normalized rolled



## 2 Tool steel

### 2.1 Tool steel:

Material number	Description according DIN	Description according AISI / SAE	Cold work	Warm work	Plastics	Case h
1.1730	C45W / C45U	SAE 1045	X			
1.2067	102 Cr 6	AISI L3	X			
1.2080	X 210 Cr 12	AISI D3	X			
1.2083	X 42 Cr 13	AISI 420			X	
1.2085	X 33 CrS 16	-	X			
1.2101	62 SiMnCr 4	AISI S4	X			
1.2162	21 MnCr 5	AISI 5120				X
1.2201	X 165 CrV 12	-	X			
1.2210	115 CrV 4	AISI L6	X			
1.2307	29 CrMoV 9		X			
1.2311	40 CrMnMo 7	AISI P20			X	
1.2312	40 CrMnMoS 8-6	AISI P20+S			X	
1.2316	X 38 CrMo 16	-			X	
1.2343	X 37 CrMoV 5-1	AISI H11		X		
1.2344	X 40 CrMoV 5-1	AISI H13		X		
1.2345	X 50 CrMoV 5-1	-	X			
1.2363	X 100 CrMoV 5-1	AISI A2	X		X	
1.2365	32 CrMoV 12-28	~ AISI H11		X		
1.2367	X 38 CrMoV 5-3	AISI H10 +Cr		X		
1.2379	X 155 CrVMo 12-1	AISI D2	X	X	X	
1.2436	X 210 CrW 12	AISI D6	X			
1.2510	100 MnCrW 4	AISI O1	X			
1.2542	45 WCrV 7	~ AISI S1	X			
1.2550	60 WCrV 7	AISI S1	X			
1.2601	X 165CrMoV 12	~ AISI D2	X			
1.2606	X 37CrMoW 5-1	AISI H21	X			
1.2622	X 60 WCrMoV 9-4	-		X		
1.2711	54 NiCrMoV 6	~ AISI L6		X		
1.2713	55 NiCrMoV 6	-		X		
1.2714	55 NiCrMoV 7	~ AISI L6		X		
1.2721	50 NiCr 13	-	X			
1.2738	40 CrMnNiMo 8-6-4	AISI P20	X			
1.2764	X 19 NiCrMo 4	-				X
1.2767	X 45 NiCrMo 4	AISI 6F7	X		X	
1.2826	60 MnSiCr 4	AISI S4	X			
1.2842	90 MnCrV 8	AISI O2	X	X	X	
1.2885	X32 CrMoCoV 3-3-3	-		X		
1.2886	X 15 CrCoMoV 10-10-5	-		X		
1.2990	X 100 CrMoV 8-1-1 +A	-	X		X	
1.3401	X120 Mn 12	ASTM A128 75	X			
1.3505	100 Cr 6	AISI L1	X			





## 2.2 High speed steel:

Material number	Description according DIN	Description according AISI / SAE
1.2369	81 MoCrV 42-16	AISI M50
1.3207	HS 10-4-3-10	AISI T42
1.3243	HS 6-5-2-5	AISI M35
1.3244	HS 6-5-3-8	-
1.3247	HS 2-9-1-8	AISI M42
1.3302	HS 12-1-4	AISI T15 No Co
1.3325	HS 0-4-1	AISI M50
1.3326	HS 1-4-2	AISI M52
1.3343	HS 6-5-2	AISI M2
1.3344	HS 6-5-3	AISI M3/2
1.3345	HS 6-5-3C	AISI M3
1.3346	HS 2-9-1	AISI M1
1.3348	HS 2-9-2	AISI M7
1.3351	HS 6-5-4	~ AISI M4
1.3355	HS 18-0-1	AISI T1
1.3551	80 MoCrV 42-16	AISI M50



## 3 Bright steel; former and current description

### 3.1 Bright steel:

Material number	Current description	Current stnd	Former description	Former stnd (expired)
1.0037	S235JRG2C+C	EN 10277-2	St 37-2 K	DIN 1652
1.0401	C15+C(+SH)	EN 10277-2	C15 K (SH)	DIN 1652-4
1.0501	C35+C(+SH)	EN 10277-2	C 35 K (SH)	DIN 1652-4
1.0501	C35+C+SL	EN 10277-2	C 35 K ground	DIN 1652-4
1.0503	C45+C(+SH)	EN 10277-2	C 45 K (SH)	DIN 1652-4
1.0503	C45+C+SL	EN 10277-2	C 45 K ground	DIN 1652-4
1.0570	S355J2G3C+C	EN 10277-2	St 52-3 K	DIN 1652
1.0715	11SMn30+C(+SH)	EN 10277-3	9 SMn 28 K (SH)	DIN 1651
1.0718	11SMnPb30+C(+SH)	EN 10277-3	9 SMnPb 28 K (SH)	DIN 1651
1.0736	11SMn37+C(+SH)	EN 10277-3	9 SMn 36 K (SH)	DIN 1651
1.0737	11SMnPb37+C(+SH)	EN 10277-3	9 SMnPb 36 K (SH)	DIN 1651
1.6582	34CrNiMo6+QT+SH	EN 10277-5	34CrNiMo 6 V SH	DIN 1652-4
1.7225	42CrMoS4+QT+SH	EN 10277-5	42 CrMoS 4 V SH	DIN 1652-4
1.7225	42CrMoS4+QT+SH+SL	EN 10277-5	42 CrMoS 4 V ground	DIN 1652-4
1.7131	16MnCr5+C	EN 10277-4	16 MnCr 5 K	DIN 1652-3

#### Explanation of abbreviations:

+C	=	Cold drawn
+SH	=	Peeled
+SL	=	Ground
+A	=	Soft annealed
+N	=	Annealed
+ PL	=	Polished
+QT	=	Quenched and tempered

For example:	S355J2G3C+C
For example:	S355J2G3C+SH
For example:	S355J2G3C+SH+SL
For example:	S355J2G3C+A+SH
For example:	S355J2G3C+N
For example:	S355J2G3C+A+SL+PL
For example:	42CrMo4+QT+SH



## 4 Spring steel; former and current description

### 4.1 Spring steel:

Material number	Description according EN 10132-4	Description according DIN 17222 (expired)	Description according AISI / ASTM
1.0535	-	C55	1055
1.0601	-	C60	1060
1.0603	-	C67	1070
1.0605	-	C75	1074
1.1203	-	Ck55	1055
1.1204	C55S	-	1055
1.1211	C60S	-	1060
1.1217	C90S	-	-
1.1221	-	Ck60	1060
1.1224	C125S	-	-
1.1231	C67S	Ck67	1070
1.1248	C75S	Ck75	1078
1.1269	C85S	Ck85	1086
1.1274	C100S	Ck101	1095
1.2002	125Cr2	125 Cr 1	-
1.2067	102Cr6	100 Cr 6	52100
1.2235	-	80 CrV 2	-
1.5026	56Si7	55 Si 7	9255
1.5634	75Ni8	-	-
1.8159	51CrV4	50 CrV 4	-

#### Explanation of abbreviations:

+A	=	Soft annealed
+LC	=	Annealed and lightly rolled
+AC	=	Annealed for the formation of spherical carbides
+CR	=	Cold rolled
+QT	=	Quenched and tempered