

Material overview

Aluminium

Designation	Material number	EN Standard	US Designation	BS1490
G-AlCu4Ti	EN AC-21100	EN 1706		
G-AlCu4MgTi	EN AC-21000	EN 1706		
G-AlSi10Mg(a)	EN-AC-43000	EN 1706	A360.2	
G-AlSi10Mg(Cu)	EN AC-43200	EN 1706	A360.1	
G-AlSi12(a)	EN AC-44200	EN 1706		
G-AlSi12(Cu)	EN AC-47000	EN 1706	A413.1	
G-AlSi12CuNiMg	EN AC-48000	EN 1706		
G-AlSi5Cu1Mg	EN AC-45300	EN 1706	C 355	LM16
G-AlSi5Cu3Mg	EN AC-45400	EN 1706		
G-AlSi5Mg				
G-AlSi6Cu4	EN AC-45000	EN 1706	A319	LM21
G-AlSi7Cu0,5Mg	EN AC-45500	EN 1706		
G-AlSi7Cu2	EN AC-46600	EN 1706		
G-AlSi7Cu3Mg	EN AC-46300	EN 1706	A320	
G-AlSi7Mg	EN AC-42000	EN 1706		
G-AlSi7Mg0,3	EN AC-42100	EN 1706	A356	LM25
G-AlSi7Mg0,6	EN AC-42200	EN 1706	A357	
G-AlSi8Cu3	EN AC-46200	EN 1706	A380	
G-AlSi9Cu1Mg	EN AC-46400	EN 1706		
G-AlSi9Mg	EN AC-43300	EN 1706		
G-AlSi9Cu2			A354	

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Cast Iron

Designation	Material number
Spheroidal graphite cast irons	
DIN EN 1563	
EN-GJS-350-22	5.3102
EN-GJS-400-18 LT	5.3103
EN-GJS-400-18	5.3105
EN-GJS-400-15	5.3106
EN-GJS-450-10	5.3107
EN-GJS-500-7	5.3200
EN-GJS-600-3	5.3201
EN-GJS-700-2	5.3300
EN-GJS-800-2	5.3301
solid-solution strengthened ferritic spheroidal graphite cast irons	
DIN EN 1563	
EN-GJS-450-18	5.3108
EN-GJS-500-14	5.3109
EN-GJS-600-10	5.3110
Austempered ductile irons (ADI)	
DIN EN 1564	
EN-GJS-800-10 (ADI 800)	5.3400
EN-GJS-900-8 (ADI 900)	5.3402
EN-GJS-1050-6 (ADI 1050)	5.3403
EN-GJS-1200-3 (ADI 1200)	5.3404
EN-GJS-1400-1 (ADI 1400)	5.3405
Low-alloyed ferritic spheroidal graphite cast irons for elevated temperature applications	
DIN EN 16124	
GJS-SiMo 25-5	5.3111
GJS-SiMo 40-6	5.3114
GJS-SiMo 40-10	5.3115
GJS-SiMo 45-6	5.3116
GJS-SiMo 45-10	5.3117
Low-alloyed ferritic vermicular graphite cast irons for elevated temperature applications	
DIN EN 16124	
GJV-SiMo 40-6	
GJV-SiMo 45-6	
GJV-XSiMoNi5-1-1	
Compacted (vermicular) graphite cast irons	
DIN EN 1561	
GJV-300	
GJV-350	
GJV-400	
GJV-450	
Grey cast irons	
DIN EN 1561	
GJL-100	5.1100
GJL-150	5.1200
GJL-200	5.1300
GJL-250	5.1301
GJL-300	5.1302
GJL-350	5.1303

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Abrasion resistant cast irons	DIN EN 12513	ASTM A 532
GJN-HV555	5.5605	Class I Typ D Ni-HiCr
GJN-HV555 (XC18)	5.5609	Class II Typ D 20%MoCr
GJN-HV555 (XC23)	5.5610	Class III Typ A 25%Cr
Austenitic cast irons	DIN EN 13835	ASTM A436
GJSA-XNi35	5.3504	D5
GJSA-XNiCr20-2	5.3500	D2
GJSA-XNiCr20-3		D2B
GJSA-XNiCr30-3	5.3507	D3
GJSA-XNiCr35-3	5.3509	D5B
GJSA-XNiSiCr35-5-2	5.3505	D5S
Austenitic grey cast irons	DIN EN 13835	ASTM A439
GJL-NiCr20.2	0.6660	Type 2
GJL-NiCr30.3	0.6676	Type 3

Material overview

Steel

Designation	Material number	ASTM
Steel castings for pressure purposes		
DIN EN 10213		
GP240GH	1.0619	
G20Mn5	1.6220	
GX5CrNi19-10	1.4308	ASTM 743 CF8
GX2CrNi19-11	1.4309	ASTM 743 CF3
GX4CrNi13-4	1.4317	ASTM 743 CA6NM
GX5CrNiMo19-11-2	1.4408	ASTM 743 CF8M
GX2CrNiMoN19-11-2	1.4409	ASTM 743 CF3M
GX5CrNiNb19-11	1.4552	
GX5CrNiMoNb19-11-2	1.4581	
GX2CrNiMoN26-7-4	1.4469	ASTM A890/A995 5A
GX2CrNiMoN22-5-3	1.4470	
GX2CrNiMoCuN25-6-3-3	1.4517	
GX10NiCrSiNb32-20	1.4859	
Steel castings for general engineering uses		
DIN EN 10293		
GE200 (GS-38)	1.0420	
GE240 (GS-45)	1.0446	
GE260 (GS-52)	1.0552	
GE300 (GS-60)	1.0558	
G20Mn5	1.6220	
G24Mn6	1.1118	
G35CrNiMo6-6	1.6579	
G20MnCr5	1.7150	
G26CrMo4	1.7221	
G42CrMo4	1.7225	
GX4CrNi13-4	1.4317	ASTM 743 CA6NM
GX4CrNiMo16-5-1	1.4405	
Corrosion resistant steel castings		
DIN EN 10283		
GX7CrNiMo12-1	1.4008	
GX5CrNi19-10	1.4308	ASTM 743 CF8
GX2CrNi19-11	1.4309	ASTM 743 CF3
GX4CrNi11-7		ASTM 743 CA6N
GX4CrNi13-4	1.4317	ASTM 743 CA6NM
GX4CrNiMo16-5-1	1.4405	
GX5CrNiMo19-11-2	1.4408	ASTM 743 CF8M
GX2CrNiMoN19-11-2	1.4409	ASTM 743 CF3M
GX5CrNiMo19-11-3	1.4412	
GX5CrNiCu16-4	1.4525	
GX4CrNiCuNb16-4	1.4549	
GX5CrNiNb19-11	1.4552	
GX7NiCrMoCuNb41-20	1.4559	
GX5CrNiMoNb19-11-2	1.4581	
GX2NiCrMoCuN29-25-5	1.4587	
GX2NiCrMoCuN25-20-6	1.4588	
GX2CrNiMoCuN20-18-6		ASTM 351 CK3MCuN
SEW 410		
GX22CrNi17	1.4059	

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Duplex steel	DIN EN 10283	
GX2CrNiMoN25-7-3	1.4417	
GX2CrNiMoN25-6-3	1.4468	
GX2CrNiMoN26-7-4	1.4469	ASTM A890/A995 5A
GX2CrNiMoN22-5-3	1.4470	
GX2CrNiMoCuN25-6-3-3	1.4517	
Heat resistant steel castings	DIN EN 10295	
GX40CrNiSi27-4	1.4823	ASTM A297 HD
GX25CrNiSi18-9	1.4825	
GX40CrNiSi22-10	1.4826	
GX25CrNiSi20-14	1.4832	
GX15CrNiSi23-14		ASTM A351 CH20
GX40CrNiSi25-12	1.4837	ASTM A297 HH
GX40CrNiSi25-20	1.4848	ASTM A297 HK40
GX30CrNiSi25-20		ASTM A297 HK30
GX40NiCrSiNb38-19	1.4849	
GX40NiCrSi35-26	1.4857	ASTM A297 HP
GX10NiCrSiNb32-20	1.4859	
GX40NiCrSi38-19	1.4865	ASTM A297 HU
GX40NiCrNb45-35	1.4889	
High-strength steel castings with improved weldability	SEW 520	
G24Mn6	1.1118	
GX4CrNi13-4	1.4317	
G22NiMoCr5-5	1.6760	
G14NiCrMo10-6	1.6779	
Steel castings for oil and gas plants	SEW 595	
GX40NiCrSi35-26	1.4857	
GX10NiCrSiNb32-20	1.4859	
GX50CrNi30-30	1.4868	
GNiCr28W	2.4879	
Steel castings for flame and induction hardening	SEW 835	
G C45	1.1196	
G42CrMo4	1.7225	
Non-magnetisable steel castings	SEW 395	
GX2CrNiMnMoNNb21-16-5-3	1.3967	

The following steels can be cast. However, they are not standardized as cast steel.

That means that the mechanical properties specified in the respective standardization do not apply to cast parts.

Stainless steels	DIN EN 10088-1	
X3CrNiMo13-4	1.4313	AISI A182 304
X5CrNi18-10	1.4301	
X2CrNi18-9	1.4307	
X5CrNiMo17-12-2	1.4401	AISI A182 316
X2CrNiMo17-12-2	1.4404	AISI A182 316L
X3CrNiMo17-13-3	1.4436	
X2CrNiMoN17-13-5	1.4439	
X2CrTiNb18	1.4509	
X3CrNb17	1.4511	
X6CrNiTi18-10	1.4541	AISI A182 321
X5CrNiCuNb16-4	1.4542	17-4PH

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Duplex steel	
X2CrNiMoCuWN25-7-4	1.4501
X3CrNiMoN27-5-2	1.4460
X2CrNiMoN22-5-3	1.4462
Heat-resistant rolled and forged steels	
	DIN EN 10095 / SEW 470
X15CrNiSi20-12	1.4828
X7CrNi23-13	1.4833
X15CrNiSi25-20	1.4841
X8CrNi25-21	1.4845
Quenched and tempered steels	
	DIN EN 10083
C22	1.0402
36 CrNiMo 4	1.6511
20 NiCrMo 2-2	1.6523
Case hardening steels	
	DIN EN 10084
16 NiCr 4	1.5714
16MnCr5	1.7131

Material overview

Other alloys

Designation	Material number
Nickel alloys	DIN EN 10295
G-NiCr50Nb	2.4680
G-NiCr 28W	2.4879

The following alloys can be cast. However, they are not standardized as castings.

That means that the mechanical properties specified in the respective standardization do not apply to cast parts.

Nickel alloys		
NiCr21Fe18Mo9	2.4665	Hastelloy X
NiCr22Mo9Nb	2.4856	Inconel 625

Designation	Material number
Copper alloys	DIN EN 1982
CuAl10Fe5Ni5	CB333G
CuZn35Mn2Al1Fe1-C	CC765S
CuSn12Ni2-C	CC484K

other alloys on request