

Table 1 — Chemical composition (cast analysis) (as a mass fraction in %)

	Designation		Elements										
	Name	Number	C	Si	Mn	P	S	Cr	Mo	Ni	Nb	Co	Others
						max.	max.						
Ferritic and austenitic – ferritic grades	GX30CrSi7	1.4710	0,20 to 0,35	1,00 to 2,50	0,50 to 1,00	- 0,035	- 0,030	6,00 to 8,00	Max. 0,15	max. 0,50	- -	- -	- -
	GX40CrSi13	1.4729	0,30 to 0,50	1,00 to 2,50	max. 1,00	- 0,040	- 0,030	12,00 to 14,00	Max. 0,50	max. 1,00	- -	- -	- -
	GX40CrSi17	1.4740	0,30 to 0,50	1,00 to 2,50	max. 1,00	- 0,040	- 0,030	16,00 to 19,00	Max. 0,50	max. 1,00	- -	- -	- -
	GX40CrSi24	1.4745	0,30 to 0,50	1,00 to 2,50	max. 1,00	- 0,040	- 0,030	23,00 to 26,00	Max. 0,50	max. 1,00	- -	- -	- -
	GX40CrSi28	1.4776	0,30 to 0,50	1,00 to 2,50	max. 1,00	- 0,040	- 0,030	27,00 to 30,00	Max. 0,50	max. 1,00	- -	- -	- -
	GX130CrSi29	1.4777	1,20 to 1,40	1,00 to 2,50	0,50 to 1,00	- 0,035	- 0,030	27,00 to 30,00	Max. 0,50	max. 1,00	- -	- -	- -
	GX160CrSi18	1.4743	1,40 to 1,80	1,00 to 2,50	max. 1,00	- 0,040	- 0,030	17,00 to 19,00	Max. 0,50	max. 1,00	- -	- -	- -
	GX40CrNiSi27-4	1.4823	0,30 to 0,50	1,00 to 2,50	max. 1,50	- 0,040	- 0,030	25,00 to 28,00	Max. 0,50	3,00 to 6,00	- -	- -	- -
Austenitic grades	GX25CrNiSi18-9	1.4825	0,15 to 0,35	0,50 to 2,50	max. 2,00	- 0,040	- 0,030	17,00 to 19,00	Max. 0,50	8,00 to 10,00	- -	- -	- -
	GX40CrNiSi22-10	1.4826	0,30 to 0,50	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	21,00 to 23,00	Max. 0,50	9,00 to 11,00	- -	- -	- -
	GX25CrNiSi20-14	1.4832	0,15 to 0,35	0,50 to 2,50	max. 2,00	- 0,040	- 0,030	19,00 to 21,00	Max. 0,50	13,00 to 15,00	- -	- -	- -
	GX40CrNiSi25-12	1.4837	0,30 to 0,50	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	24,00 to 27,00	Max. 0,50	11,00 to 14,00	- -	- -	- -
	GX40CrNiSi25-20	1.4848	0,30 to 0,50	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	24,00 to 27,00	Max. 0,50	19,00 to 22,00	- -	- -	- -
	GX40CrNiSiNb24-24	1.4855	0,30 to 0,50	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	23,00 to 25,00	Max. 0,50	23,00 to 25,00	0,80 to 1,80	- -	- -
	GX35NiCrSi25-21	1.4805	0,20 to 0,50	1,00 to 2,00	max. 2,00	- 0,040	- 0,030	19,00 to 23,00	Max. 0,50	23,00 to 27,00	- -	- -	- -
	GX40NiCrSi35-17	1.4806	0,30 to 0,50	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	16,00 to 18,00	Max. 0,50	34,00 to 36,00	- -	- -	- -
	GX40NiCrSiNb35-18	1.4807	0,30 to 0,50	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	17,00 to 20,00	Max. 0,50	34,00 to 36,00	1,00 to 1,80	- -	- -
	GX40NiCrSi38-19	1.4865	0,30 to 0,50	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	18,00 to 21,00	Max. 0,50	36,00 to 39,00	- -	- -	- -
	GX40NiCrSiNb38-19	1.4849	0,30 to 0,50	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	18,00 to 21,00	max. 0,50	36,00 to 39,00	1,20 to 1,80	- -	- -
	GX10NiCrSiNb32-20	1.4859	0,05 to 0,15	0,50 to 1,50	max. 2,00	- 0,040	- 0,030	19,00 to 21,00	max. 0,50	31,00 to 33,00	0,50 to 1,50	- -	- -
	GX40NiCrSi35-26	1.4857	0,30 to 0,50	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	24,00 to 27,00	max. 0,50	33,00 to 36,00	- -	- -	- -
	GX40NiCrSiNb35-26	1.4852	0,30 to 0,50	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	24,00 to 27,00	max. 0,50	33,00 to 36,00	0,80 to 1,80	- -	- -
	GX50NiCrCo20-20-20	1.4874	0,35 to 0,65	max. 1,00	max. 2,00	- 0,040	- 0,030	19,00 to 22,00	2,50 to 3,00	18,00 to 22,00	0,75 to 1,25	18,50 22,00	W:2,00 to 3,00
	GX50NiCrCoW35-25-15-5	1.4869	0,45 to 0,55	1,00 to 2,00	max. 1,00	- 0,040	- 0,030	24,00 to 26,00	- -	33,00 to 37,00	- -	14,00 16,00	W:4,00 to 6,00
	GX40NiCrNb45-35 <sup>a</sup>	1.4889	0,35 to 0,45	1,50 to 2,00	1,00 to 1,50	- 0,040	- 0,030	32,50 to 37,50	- -	42,00 to 46,00	1,50 to 2,00	- -	- -
Nickel and cobalt base alloys	G-NiCr28W	2.4879	0,35 to 0,55	1,00 to 2,00	max. 1,50	- 0,040	- 0,030	27,00 to 30,00	max. 0,50	47,00 to 50,00	- -	- -	Fe:bal W:4,00 to 6,00
	G-CoCr28	2.4778	0,05 to 0,25	0,50 to 1,50	1,50 max.	- 0,040	- 0,030	27,00 to 30,00	0,50 max.	4,00 max.	0,50 max.	48,0 to 52,0	Fe:bal
	G-NiCr50Nb	2.4680	max. 0,10	max. 1,00	max. 0,50	- 0,020	- 0,020	48,00 to 52,00	max. 0,50	bal.	1,00 to 1,80	- -	Fe:max: 1,00 N:max: 0,16
	G-NiCr15	2.4815	0,35 to 0,65	1,00 to 2,50	max. 2,00	- 0,040	- 0,030	12,00 to 18,00	max. 1,00	58,00 to 66,00	- -	- -	Fe:bal

<sup>a</sup> This grade is a new alloy. For example, for service temperatures below 1 000 °C, it can be advisable to restrict the limits for Cr from 29,00 to 32,00 % by mass and for Si from 1,00 to 1,50 % by mass, because unfavourable conditions can result in embrittlement.

Table 2 — Mechanical properties at room temperature

	Designation		Heat treatment		Tensile test			Hardness	
			Symbol	Temperature °C	$R_{po,2}$	$R_m$	A		
	Name	Number			MPa <sup>a</sup> min.	MPa <sup>a</sup> min.	% min.	HB max.	
Ferritic and austenitic – ferritic grades	GX30CrSi7 <sup>b</sup>	1.4710	+ A <sup>c</sup>	800 to 850	-	-	-	300	
	GX40CrSi13	1.4729	+ A <sup>c</sup>	800 to 850	-	-	-	300	
	GX40CrSi17	1.4740	+ A <sup>c</sup>	800 to 850	-	-	-	300	
	GX40CrSi24	1.4745		No heat treatment	-	-	-	d	
	GX40CrSi28	1.4776			-	-	-	d	
	GX130CrSi29	1.4777			-	-	-	d	
	GX160CrSi18	1.4743			-	-	-	d	
	GX40CrNiSi27-4	1.4823			250	550	3	d	
GX25CrNiSi18-9	1.4825	230			450	15	-		
GX40CrNiSi22-10	1.4826	230			450	8	-		
GX25CrNiSi20-14	1.4832	230			450	10	-		
Austenitic grades	GX40CrNiSi25-12	1.4837			220	450	6	-	
	GX40CrNiSi25-20	1.4848			220	450	8	-	
	GX40CrNiSiNb24-24	1.4855			220	450	4	-	
	GX35NiCrSi25-21	1.4805			220	430	8	-	
	GX40NiCrSi35-17	1.4806			220	420	6	-	
	GX40NiCrSiNb35-18	1.4807			220	420	4	-	
	GX40NiCrSi38-19	1.4865			220	420	6	-	
	GX40NiCrSiNb38-19	1.4849			220	420	4	-	
	GX10NiCrSiNb32-20	1.4859			180	440	20	-	
	GX40NiCrSi35-26	1.4857			220	440	6	-	
	GX40NiCrSiNb35-26	1.4852			220	440	4	-	
	GX50NiCrCo20-20-20	1.4874			320	420	6	-	
	GX50NiCrCoW35-25-15-5	1.4869			270	480	5	-	
	GX40NiCrNb45-35	1.4889			240	440	3	-	
	Nickel and cobalt base alloys	G-NiCr28W	2.4879			240	440	3	-
		G - CoCr28	2.4778			235	490	6	-
G-NiCr50Nb		2.4680			230	540	8	-	
G-NiCr15		2.4815			200	400	3	-	

<sup>a</sup> 1MPa = 1 N/mm<sup>2</sup>

<sup>b</sup> If this grade is used for wear-resistant castings, then they can be delivered without heat treatment.

<sup>c</sup> + A means : Annealing

<sup>d</sup> Castings may be also supplied in the annealed condition in which case a maximum hardness value may be agreed.