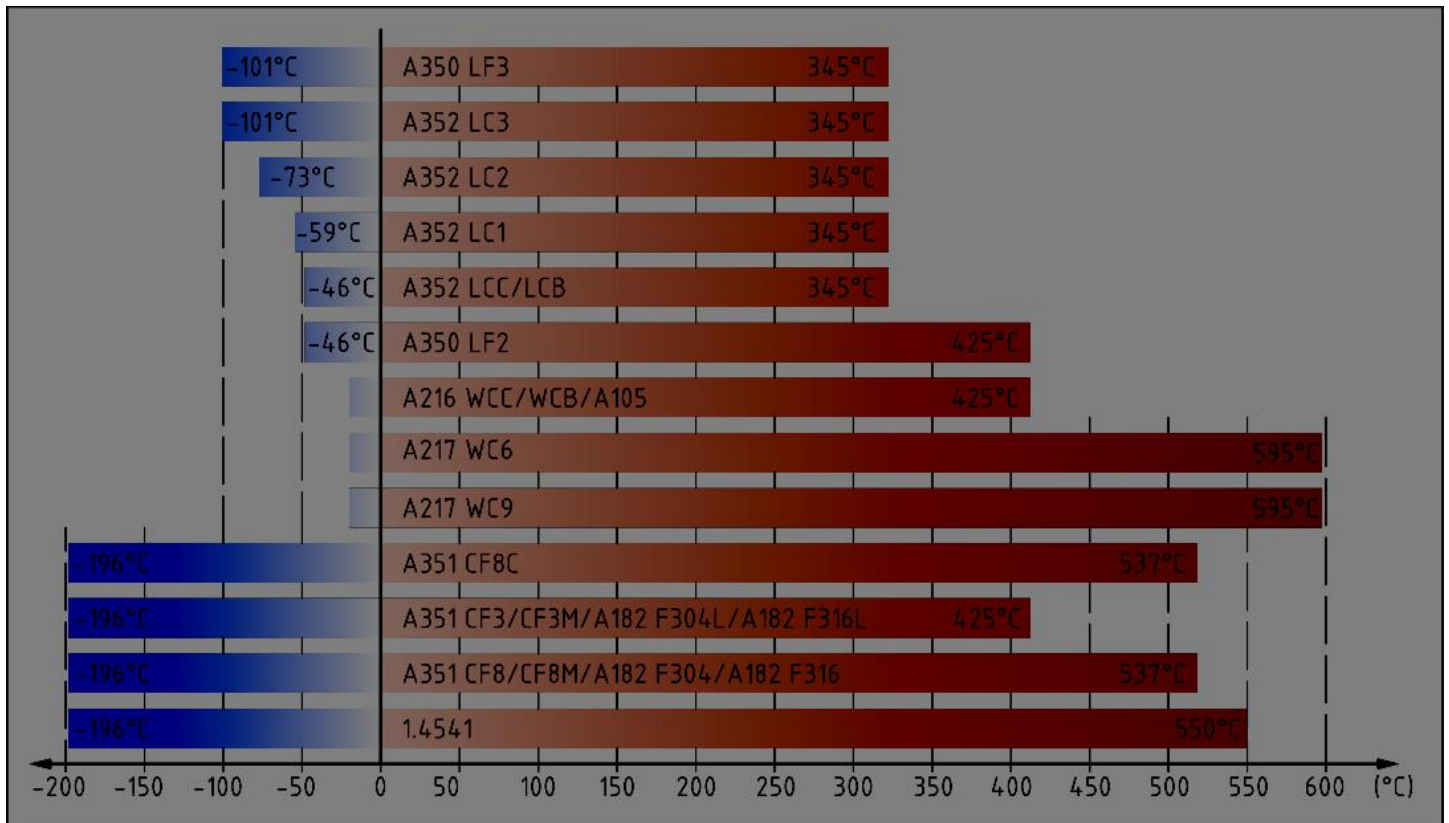


# Chemical composition and mechanical properties

## Applicability of materials depending on temperature



## Trim

Trim	1	2	5	8	9	10	12	13	16	20
Seat	13Cr	304	Stelit 6	Stelit 6	Monel	316	Stelit 6	Alloy20	Stelit 6	Bronze
Wedge / Disk	13Cr	304	Stelit 6	13Cr	Monel	316	316	Alloy20	Stelit 6	Bronze
Stud/ Pin	F6a	F304	F6a	F6a	Monel	F316	F316	B473	F316	Bronze
Backward Shut off	410	304	410	410	Monel	316	316	B473	316	Bronze

# Chemical composition and mechanical properties

## Chemical composition and mechanical properties

Material	Chemical composition										Mechanical properties					
	C	Mn	P	Si	Cr	Mo	Ni	Cu	V	Nb	Mez pevnosti (MPa)	Mez kluzu (MPa)	Prodloužení (%)	Zúžení (%)	Brinell (HB)	Vrubová houževnatost (J)
A105	0.35≤	0.60-1.05≤	0.035≤	0.10-0.35≤	0.30≤	0.120≤	0.40≤	0.40≤	0.08≤	0.02≤	485	250	30	30	187	-
A182 F11	0.05-0.15≤	0.30-0.60≤	0.03≤	0.50-1.0≤	1.00-1.50≤	0.44-0.65≤	-	-	-	-	415	205	20	45	121-174	-
A182 F22	0.05-0.15≤	0.30-0.60≤	0.04≤	0.50≤	2.00-2.50≤	0.87-1.13≤	-	-	-	-	415	205	20	35	170	-
A182 F304	0.08≤	2.00≤	0.045≤	1.00≤	18.0-20.0≤	-	8.0-11.0≤	-	-	-	515	205	30	50	-	-
A182 F304L	0.03≤	2.00≤	0.045≤	1.00≤	18.0-20.0≤	-	8.0-13.0≤	-	-	-	485	170	30	50	-	-
A182 F316	0.08≤	2.00≤	0.045≤	1.00≤	16.0-18.0≤	2.00-3.00≤	10.0-14.0≤	-	-	-	515	205	30	50	-	-
A182 F316L	0.03≤	2.00≤	0.045≤	1.00≤	16.0-18.0≤	2.00-3.00≤	10.0-15.0≤	-	-	-	485	170	30	50	-	-
A182 F51	0.03≤	2.00≤	0.03≤	1.00≤	21.0-23.0≤	2.50-3.50≤	4.5-6.5≤	-	-	-	620	450	25	45	-	-
A182 F6a	0.15≤	1.00≤	0.04≤	1.00≤	11.5-13.5≤	-	0.50≤	-	-	-	585	380	18	35	167-229	-
A193 B7	0.37-0.49≤	0.65-1.10≤	0.035≤	0.15-0.35≤	0.75-1.20≤	0.15-0.25≤	-	-	-	-	860	720	16	50	321	-
A193 B7M	0.37-0.49≤	0.65-1.10≤	0.035≤	0.15-0.35≤	0.75-1.20≤	0.15-0.25≤	-	-	-	-	690	550	18	50	235	-
A193 B8	0.08≤	2.00≤	0.045≤	1.00≤	18.0-20.0≤	-	8.0-11.0≤	-	-	-	515	205	30	50	223	-
A193 B8M	0.08≤	2.00≤	0.045≤	1.00≤	16.0-18.0≤	2.00-3.00≤	10.0-14.0≤	-	-	-	515	205	30	50	223	-
A193 B16	0.36-0.47≤	0.45-0.70≤	0.035≤	0.15-0.35≤	0.80-1.15≤	0.50-0.65≤	-	-	0.25-0.35≤	-	860	720	18	50	321	-
A194 2H	≥0.40	1.00≤	0.04≤	0.04≤	-	-	-	-	-	-	-	-	-	-	248-352	-
A194 2HM	≥0.40	1.00≤	0.04≤	0.04≤	-	-	-	-	-	-	-	-	-	-	159-237	-
A194 8	0.08≤	2.00≤	0.045≤	1.00≤	18.0-20.0≤	-	8.0-11.0≤	-	-	-	-	-	-	-	126-300	-
A194 8M	0.08≤	2.00≤	0.045≤	1.00≤	16.0-18.0≤	2.00-3.00≤	10.0-14.0≤	-	-	-	-	-	-	-	126-300	-
A216 WCB	0.30≤	1.00≤	0.04≤	0.60≤	0.50≤	0.20≤	0.50≤	0.30≤	0.03≤	-	485-655	250	22	35	-	-
A216 WCC	0.25≤	1.20≤	0.04≤	0.60≤	0.50≤	0.20≤	0.50≤	0.30≤	0.03≤	-	485-655	275	22	35	-	-
A217 C5	0.20≤	0.40-0.70≤	0.04≤	0.75≤	4.00-6.50≤	0.45-0.65≤	0.50≤	0.50≤	-	-	620-795	415	18	35	-	-
A217 CA15	0.15≤	1.00≤	0.04≤	1.50≤	11.5-14.0≤	0.50≤	1.00≤	-	-	-	620-795	450	18	30	-	-
A217 WC6	0.05-0.20≤	0.50-0.80≤	0.04≤	0.60≤	1.00-1.50≤	0.45-0.65≤	0.50≤	0.50≤	-	-	485-655	275	20	35	-	-
A217 WC9	0.05-0.18≤	0.40-0.70≤	0.04≤	0.60≤	2.00-2.75≤	0.90-1.20≤	-	0.50≤	-	-	485-655	275	20	35	-	-
A276 410	0.08-0.15≤	1.00≤	0.04≤	1.00≤	11.5-13.5≤	-	-	-	-	-	480	275	20	45	-	-
A276 420	≥0.15	1.00≤	0.04≤	1.00≤	12.0-14.0≤	-	-	-	-	-	-	-	-	-	241	-
A320 L7	0.38-0.048≤	0.75-1.00≤	0.035≤	0.15-0.35≤	0.80-1.10≤	0.15-0.25≤	-	-	-	-	560	725	16	50	-	Avg:27;min:20
A320 L7M	0.38-0.048≤	0.75-1.00≤	0.035≤	0.15-0.35≤	0.80-1.10≤	0.15-0.25≤	-	-	-	-	690	550	18	50	235	Avg:27;min:20
A336 F22	0.05-0.15≤	0.30-0.60≤	0.025≤	0.50≤	2.00-2.50≤	0.90-1.10≤	-	-	0.08≤	-	515-690	310	19	40	-	-
A350 LF1	0.30≤	0.60-1.35≤	0.035≤	0.15-0.30≤	0.30≤	0.12≤	0.40≤	0.40≤	0.08≤	0.02≤	415-585	205	28	38	-	Avg:18;min:14
A350 LF2	0.30≤	0.60-1.35≤	0.035≤	0.15-0.30≤	0.30≤	0.12≤	0.40≤	0.40≤	-	0.02≤	485-655	250	30	30	-	Avg:20;min:16
A351 CF3	0.03≤	1.50≤	0.04≤	2.00≤	17.0-21.0≤	0.50≤	8.0-12.0≤	-	-	-	485	205	35	-	-	-
A351 CF3M	0.03≤	1.50≤	0.04≤	1.50≤	17.0-21.0≤	2.00-3.00≤	9.0-13.0≤	-	-	-	485	205	30	-	-	-
A351 CF8	0.08≤	1.50≤	0.04≤	2.00≤	18.0-21.0≤	0.50≤	8.0-11.0≤	-	-	-	485	205	35	-	-	-
A351 CF8M	0.08≤	1.50≤	0.04≤	1.50≤	18.0-21.0≤	2.00-3.00≤	9.0-12.0≤	-	-	-	485	205	30	-	-	-
A351 CF8C	0.08≤	1.50≤	0.04≤	2.00≤	18.0-21.0≤	0.50≤	9.0-12.0≤	-	-	-	485	205	30	-	-	-
A351 CN7M	0.07≤	1.50≤	0.04≤	1.50≤	19.0-22.0≤	2.00-3.00≤	27.5-30.5≤	3.0-4.0≤	-	-	425	180	35	-	-	-
A352 LC1	0.25≤	0.50-0.80≤	0.04≤	0.60≤	-	0.45-0.65≤	-	-	-	-	450-620	240	24	35	-	Avg:18;min:14
A352 LC2	0.25≤	0.50-0.80≤	0.04≤	0.60≤	-	-	2.00-3.00≤	-	-	-	485-655	275	24	35	-	Avg:20;min:16
A352 LC3	0.15≤	0.50-0.80≤	0.04≤	0.60≤	-	-	3.00-4.00≤	-	-	-	485-655	275	24	35	-	Avg:20;min:16
A352 LCB	0.30≤	1.00≤	0.04≤	0.60≤	0.50≤	0.20≤	0.50≤	0.30≤	0.03≤	-	450-620	240	24	35	-	Avg:18;min:14
A352 LCC	0.25≤	1.20≤	0.04≤	0.60≤	0.50≤	0.20≤	0.50≤	-	0.03≤	-	485-655	275	22	35	-	Avg:20;min:16
A439 D2	3.00≤	0.7-1.25≤	0.08≤	1.50-3.00≤	1.75-2.75≤	-	18.0-22.0≤	-	-	-	400	207	8	-	139-202	-