

Minimum proof strength $R_{p0,2}$ at elevated temperatures for stainless steel pipes and tubes

Minimum proof strength $R_{p0,2}$ at elevated temperatures for wall thicknesses up to 60 mm^a of austenitic steels in the solution annealed condition (+AT) and guideline for the limit temperature for intergranular corrosion
According to EN10217-2

Steel grade		$R_{p0,2}$, min MPa at a temperature (°C) of											Limit temp. ^b °C
Steel name	Steel number	50	100	150	200	250	300	350	400	450	500	550	
X2CrNi118-9	1.4307	165	147	132	118	108	100	94	89	85	81	80	350
X2CrNi19-11	1.4306	165	147	132	118	108	100	94	89	85	81	80	350
X2CrNiN18-10	1.4311	255	205	175	157	145	136	130	125	121	119	118	400
X5CrNi18-10	1.4301	180	157	142	127	118	110	104	98	95	92	90	300
X6CrNiTi18-10	1.4541	190	176	167	157	147	136	130	125	121	119	118	400
X6CrNiNb18-10	1.4550	195	177	167	157	147	136	130	125	121	119	118	400
X2CrNiMo17-12-2	1.4404	182	166	152	137	127	118	113	108	103	100	98	400
X5CrNiMo17-12-2	1.4401	193	177	162	147	137	127	120	115	112	110	108	300
X6CrNiMoTi17-12-2	1.4571	202	185	177	167	157	145	140	135	131	129	127	400
X2CrNiMo17-12-3	1.4432	182	166	152	137	127	118	113	108	103	100	98	400
X2CrNiMoN17-13-3	1.4429	260	211	185	167	155	145	140	135	131	129	127	400
X3CrNiMo17-13-3	1.4436	195	177	162	147	137	127	120	115	112	110	108	300
X2CrNiMo18-14-3	1.4435	180	165	150	137	127	119	113	108	103	100	98	400
X2CrNiMoN17-13-5	1.4439	260	225	200	185	175	165	155	150	-	-	-	400
X2CrNiMo18-15-4	1.4438	200	172	157	147	137	127	120	115	112	110	108	400
X1NiCrMoCu31-27-24	1.4563	210	190	175	160	155	150	145	135	125	120	115	400
X1NiCrMoCu25-20-5	1.4539	216	205	190	175	160	145	135	125	115	110	105	400
X1CrNiMoCuN20-18-7	1.4547	267	230	205	190	180	170	165	160	153	148	-	400
X1NiCrMoCuN25-20-7	1.4529	270	230	210	190	180	170	165	160	130	120	105	400

^a For wall thicknesses greater than 60 mm the proof strength values are subject to agreement at the time of inquiry and order. **Option 10:** Agreed proof strength values at elevated temperature for wall thicknesses greater than 60 mm apply.

^b Up to these temperatures, the material should, within 100 000 h, not have changed so as to show susceptibility to intergranular corrosion, when tested in conformity with EN ISO 3651-2. See also Table 6.

Minimum proof strength $R_{p1.0}$ at elevated temperatures for stainless steel pipes and tubes

Minimum proof strength $R_{p1.0}$ at elevated temperatures for wall thicknesses up to 60 mm^a of austenitic steels in the solution annealed condition (+AT) and guideline for the limit temperature for intergranular corrosion
According to EN10217-2

Steel grade		$R_{p1.0}$, min MPa at a temperature (°C) of											Limit temp. ^b °C
Steel name	Steel number	50	100	150	200	250	300	350	400	450	500	550	
X2CrNi118-9	1.4307	200	181	162	147	137	127	121	116	112	109	108	350
X2CrNi19-11	1.4306	200	181	162	147	137	127	121	116	112	109	108	350
X2CrNi18-10	1.4311	282	240	210	187	175	167	161	156	152	149	147	400
X5CrNi18-10	1.4301	218	191	172	157	145	135	129	125	122	120	120	300
X6CrNiTi18-10	1.4541	222	208	196	186	177	167	161	156	152	149	147	400
X6CrNiNb18-10	1.4550	232	211	196	186	177	167	161	156	152	149	147	400
X2CrNiMo17-12-2	1.4404	217	199	181	167	157	145	139	135	130	128	127	400
X5CrNiMo17-12-2	1.4401	230	211	191	177	167	156	150	144	141	139	137	300
X6CrNiMoTi17-12-2	1.4571	232	218	206	196	186	175	169	164	160	158	157	400
X2CrNiMo17-12-3	1.4432	217	199	181	167	157	145	139	135	130	128	127	400
X2CrNiMoN17-13-3	1.4429	290	246	218	198	183	175	169	164	160	158	157	400
X3CrNiMo17-13-3	1.4436	228	211	191	177	167	156	150	144	141	139	137	300
X2CrNiMo18-14-3	1.4435	217	200	180	165	153	145	139	135	130	128	127	400
X2CrNiMoN17-13-5	1.4439	290	255	230	210	200	190	180	175	-	-	-	400
X2CrNiMo18-15-4	1.4438	232	2069	188	177	167	156	148	144	140	138	136	400
X1NiCrMoCu31-27-24	1.4563	240	220	205	190	185	180	175	165	155	150	145	400
X1NiCrMoCu25-20-5	1.4539	244	235	220	205	190	175	165	155	145	140	135	400
X1CrNiMoCuN20-18-7	1.4547	306	270	245	225	212	200	195	190	184	180	-	400
X1NiCrMoCuN25-20-7	1.4529	310	270	245	225	215	205	195	190	160	150	135	400

^a For wall thicknesses greater than 60 mm the proof strength values are subject to agreement at the time of inquiry and order. **Option 10:** Agreed proof strength values at elevated temperature for wall thicknesses greater than 60 mm apply.

^b Up to these temperatures, the material should, within 100 000 h, not have changed so as to show susceptibility to intergranular corrosion, when tested in conformity with EN ISO 3651-2