

Steel Grades, Properties and Global Standards
Mechanical Properties, High Temperatures

Product Name	EN-min R _{p0.2} MPa					Max. design stress for pressure equipmentØ, MPa									
	No.	RT	100	200	400°C	RT	100	200	400°C	No.	RT	100	200	400°C	
CR strip/sheet	1.4016	260	220	210	190					S43000	128	126	120	108	
HR Plate	1.4021	450	420	400	365					S42010					
HR Plate	1.4028	600								S42000					
HR Plate	1.4313	650	590	560	530					S41500					
HR Plate	1.4162	450	380	330		253				S32101 ¹⁾	198				
HR Plate	1.4362	400	330	280		263	220	187		S32304	172	164	150		
HR Plate	1.4462	460	360	315		267	240	210		S31803	187	176	165		
HR Plate	1.4501	530	450	400						S32760					
HR Plate	1.4410	530	450	400		304	300	267		S32750	228	226	208		
CR strip/sheet	1.4310	250	210	190						S30100					
CR strip/sheet	1.4318	350	265	185		217	177	153		S30153					
CR strip/sheet	1.4372	350	295	230						S20100					
HR Plate	1.4301	210	157	127	98	173	150	131	104	S30400	138	137	127	107	
HR Plate	1.4307	200	147	118	89	167	137	120		S30403	115	115	109	92	
HR Plate	1.4311	270	205	157	125	183	163	143		S30453	138	137	127	107	
HR Plate	1.4541	200	176	157	125	167	147	130	125	S32100	138	137	129	119	
HR Plate	1.4550	200	176	157	125					S34700					
CR Narrow strip	1.4303	220	155	127	98					S30500	138	137	127	107	
HR Plate	1.4306	200	147	118	89	167	137	120		S30403	115	115	109	92	
HR Plate	1.4401	220	177	147	115	173	150	133		S31600	138	138	133	111	
HR Plate	1.4404	220	166	137	108	173	143	130	113	S31603	115	115	109	91	
HR Plate	1.4436	220	177	147	115	177	153	140		S31600	138	138	133	111	
HR Plate	1.4432	220	166	137	108	173	143	130	113	S31603	115	115	109	91	
HR Plate	1.4406	280	211	167	135	193	173	153		S31653	138	138	131	105	
HR Plate	1.4429	280	211	167	135	193	173	153		S31653	138	138	131	104	
HR Plate	1.4571	220	185	167	135	173	147	131	125	S31635	138	138	131	105	
HR Plate	1.4435	220	165	137	108	173	140	127		S31603	115	115	109	91	
HR Plate	1.4438	220	172	147	115	173	143	130		S31703	138	138	131	109	
HR Plate	1.4439	270	225	185	150	193	173	153		S31726	157	157	155		
HR Plate	1.4466	250	195	160	135					S31050					
HR Plate	1.4539	220	205	175	125	173	157	137		N08904	140	114	95		
HR Plate	1.4529	300	230	190	160	217	183	173		N08926					
HR Plate	1.4547	300	230	190	160	217	205	187	158	S31254	185	184	168	156	
HR Plate	1.4565	420	350	270	210					S34565					
	EN Rp1.0 /10 000h, MPa					EN Rm /100 000h, Mpa				ASME max. design stressØ, MPa					
	No.	600	700	800	900°C	600	700	800	900°C	No.	600	700	800	900°C	
HR Plate	1.4948					89	28			S30409 ²⁾	64	27	11		
HR Plate	1.4878	85	30	10		65	22	10	-	S32109 ²⁾	59	23	9		
HR Plate	1.4818	126	42	15	5	88	35	14	5	S30415					
HR Plate	1.4833	70	25	10	5	65	16	7.5	3	S30909 ²⁾	49	16	6		
CR strip/sheet	1.4828	80	25	10	4	65	16	7.5	3	S30900					
HR Plate	1.4835	126	45	19	10	88	35	15	8	S30815 ²⁾	59	22	10	5	
HR Plate	1.4845	90	30	10	4	80	18	7	3	S31009 ²⁾	49	16	6		
HR Plate	1.4841	95	35	10	4	80	18	7	3	S31400					
HR strip / sheet	1.4854	88	34	15	8	80	36	18	9.2	S35315					

1) Values according to code case no: 2418

2) Creep resisting grades for pressure purposes listed in EN 10028-7 and

3) EN / ASME values: For HR plate from EN 10028-7, EN 10088, EN 10095, ASME IID and Code Cases

Maximum allowed values of the nominal design stress

Steel type	EN13445	ASME VIII
Ferritic Mart Duplex	min $\frac{[Rp0.2T]}{1.5}$; $\frac{[RmRT]}{2.4}$	min $\frac{[Rp0.2RT]}{1.5}$; $\frac{[RmRT]}{3.5}$ or min $\frac{[Rp0.2T]}{1.5}$; $\frac{[RmT]}{3.5}$
Austentic A>30%	$Rp1.0T$	min $\frac{[Rp0.2RT]}{1.5}$; $\frac{[RmRT]}{3.5}$ or min $\frac{[Rp0.2T]}{1.1}$; $\frac{[RmT]}{3.5}$
Austentic A>35%	min $\frac{Rp1.0T}{1.2}$; $\frac{[RmT]}{3}$ Or	