

Steel Specification	Carbon (C)	Manganese (Mn)	Phosphorus (P)	Sulfur (S)	Silicon (Si)	Tensile	Yield	Elongation	R-Value	Hardness	Columbium (Cb)	Vanadium (V)	Copper (Cu)	Nickel (Ni)	Nitrogen (N)	Aluminum (Al)	Titanium (Ti)	Molybdenum (Mo)	Chromium (Cr)
	Maximum	Maximum	Maximum	Maximum	Maximum	Minimum - KSI	Minimum - KSI	Minimum		Maximum	Minimum	Minimum	Minimum	Maximum	Maximum	Maximum	Maximum	Maximum	Maximum
AISI 050XFM	0.15	1.65	0.02	0.025		60	50	22.00%		60-90	0.005	0.01							
AISI 050XKM	0.23	1.35	0.04	0.04		60	50	24.00%		60-90	0.005	0.01							
AISI 060XFM	0.15	1.65	0.04	0.025	0.55	71	60	19.00%											
AISI 060XKM	0.19	1.5	0.04	0.04	0.55	71	60	19.00%											
AISI 1008	0.1000	.30 ~ .50	0.0400	0.0500		49.0000	41.0000	20.00%		95									
AISI 1008M - MODIFIED	0.1000	0.5000	0.0250	0.0350		40.0000	33.0000		1.6000	44 ~ 65									
AISI 1010 - HOT ROLLED	.08 ~ .13	.30 ~ .60	0.0400	0.0500		53.0000	44.0000	20.00%											
AISI 1010 - COLD ROLLED	.08 ~ .13	.30 ~ .60	0.0400	0.0500		53.0000	44.0000	20.00%											
AISI 1020 - HOT ROLLED	.18 ~ .23	.30 ~ .60	0.0400	0.0500		57.0000	42.7500	36.50%		111.0000									
AISI 1020 - COLD ROLLED	.18 ~ .23	.30 ~ .60	0.0400	0.0500		57.0000	51.0000	36.50%		111.0000									
AISI 1010-1020 - HOT ROLLED	.08 ~ .23	.30 ~ .60	0.0400	0.0500		40 ~ 55	26 ~ 30	20.00%											
AISI 1010-1020 COLD ROLLED	.08 ~ .23	.30 ~ .60	0.0400	0.0500		53 ~ 61	44 ~ 51	20.00%											
AISI 1015 (S15C)	.13 ~ .18	.30 ~ .60	0.0400	0.0500		56.0000	41.2000	37.00%											
AISI 1035 (S35C)	.32 ~ .38	.60 ~ .90	0.0400	0.0500		70.3000	60.1900	10.00%											
AISI 1045 (S45C)	.43 ~ .50	.60 ~ .90	0.0400	0.0500		84.8000	73.2000	12.00%											
ASTM 1008M CS Type A	0.1000	0.6000	0.0300	0.0350		20 ~ 40	30% (Max)			0.0080	0.0080	0.2000	0.2000				0.0080	0.0600	0.1500
ASTM 1008M CS Type B	.02 ~ .15	0.6000	0.0300	0.0350		20 ~ 40	30% (Max)			0.0080	0.0080	0.2000	0.2000				0.0080	0.0600	0.1500
ASTM 1008M CS Type C	0.0800	0.6000	0.1000	0.0350		20 ~ 40	30% (Max)			0.0080	0.0080	0.2000	0.2000				0.0080	0.0600	0.1500
ASTM 1008M DS Type A	0.0800	0.5000	0.0200	0.0300		22 ~ 35	36% (Max)			0.0080	0.0080	0.2000	0.2000			.01 (Min)	0.0080	0.0600	0.1500
ASTM 1008M DS Type B	.02 ~ .08	0.5000	0.0200	0.0300		22 ~ 35	36% (Max)			0.0080	0.0080	0.2000	0.2000			.02 (Min)	0.0080	0.0600	0.1500
ASTM 101	.08 ~ .13	.60 ~ .90	0.0400	0.0500															
ASTM A1008M,C1 Grade 45	0.2300	1.6500	0.0400	0.0400		60.0000	45.0000	22.00%		0.0050	.01 (Min)	0.2000	0.2000				0.0600	0.1500	
ASTM A1008M,C1 Grade 50	0.2300	1.6500	0.0400	0.0400		61.0000	50.0000	20.00%		0.0050	.01 (Min)	0.2000	0.2000				0.0600	0.1500	
ASTM A1008M,C1 Grade 55	0.2500	1.6500	0.0400	0.0400		70.0000	50.0000	18.00%		0.0050	.01 (Min)	0.2000	0.2000				0.0600	0.1500	
ASTM A1008M,C1 Grade 60	0.2600	1.6500	0.0400	0.0400		75.0000	60.0000	16.00%		0.0050	.01 (Min)	0.2000	0.2000				0.0600	0.1500	
ASTM A1008M,C1 Grade 65	0.2600	1.6500	0.0400	0.0400		80.0000	65.0000	15.00%		0.0050	.01 (Min)	0.2000	0.2000	0.0120			0.0600	0.1500	
ASTM A1008M,C1 Grade 70	0.2600	1.6500	0.0400	0.0400		85.0000	70.0000	14.00%		0.0050	.01 (Min)	0.2000	0.2000	0.0120			0.0600	0.1500	
ASTM A1008M,C2 Grade 45	0.1500	1.6500	0.0400	0.0400		55.0000	45.0000	22.00%		0.0050	.01 (Min)	0.2000	0.2000				0.0600	0.1500	
ASTM A1008M,C2 Grade 50	0.1500	1.6500	0.0400	0.0400		60.0000	50.0000	20.00%		0.0050	.01 (Min)	0.2000	0.2000				0.0600	0.1500	
ASTM A1008M,C2 Grade 55	0.1500	1.6500	0.0400	0.0400		65.0000	55.0000	18.00%		0.0050	.01 (Min)	0.2000	0.2000				0.0600	0.1500	
ASTM A1008M,C2 Grade 60	0.1500	1.6500	0.0400	0.0400		70.0000	60.0000	16.00%		0.0050	.01 (Min)	0.2000	0.2000	0.0200			0.0600	0.1500	
ASTM A1008M,C2 Grade 65	0.1500	1.6500	0.0400	0.0400		75.0000	65.0000	15.00%		0.0050	.01 (Min)	0.2000	0.2000	0.0200			0.0600	0.1500	
ASTM A1008M,C2 Grade 70	0.1500	1.6500	0.0400	0.0400		80.0000	70.0000	14.00%		0.0050	.01 (Min)	0.2000	0.2000	0.0200			0.0600	0.1500	
ASTM A1008M,HSLAF Grade 50	0.1500	1.6500	0.0200	0.0250		60.0000	50.0000	22.00%				0.2000	0.2000				0.0600	0.1500	
ASTM A1008M,HSLAF Grade 60	0.1500	1.6500	0.0200	0.0250		70.0000	60.0000	18.00%				0.2000	0.2000				0.0600	0.1500	
ASTM A1008M,HSLAF Grade 70	0.1500	1.6500	0.0200	0.0250		80.0000	70.0000	16.00%				0.2000	0.2000				0.0600	0.1500	

<i>Steel Specification</i>	<i>Carbon (C)</i>	<i>Manganese (Mn)</i>	<i>Phosphorus (P)</i>	<i>Sulfur (S)</i>	<i>Silicon (Si)</i>	<i>Tensile</i>	<i>Yield</i>	<i>Elongation</i>	<i>R-Value</i>	<i>Hardness</i>	<i>Columbium (Cb)</i>	<i>Vanadium (V)</i>	<i>Copper (Cu)</i>	<i>Nickel (Ni)</i>	<i>Nitrogen (N)</i>	<i>Aluminum (Al)</i>	<i>Titanium (Ti)</i>	<i>Niobium (Nb)</i>	<i>Chromium (Cr)</i>	
	<i>Maximum</i>	<i>Maximum</i>	<i>Maximum</i>	<i>Maximum</i>	<i>Maximum</i>	<i>Minimum - KSI</i>	<i>Minimum - KSI</i>	<i>Minimum</i>		<i>Maximum</i>	<i>Minimum</i>	<i>Minimum</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Maximum</i>	<i>Maximum</i>	<i>Maximum</i>	<i>Maximum</i>	<i>Maximum</i>	
VOLVO 1111.42	0.120	0.600	0.045	0.045		39,000	40,000	30.00%												
VOLVO 1112.65	.07 ~ .13	.25 ~ .45	0.030	0.040	0.300															
VOLVO 1113.12	0.170	1.400	0.045	0.045											0.009					
VOLVO 1117.74	.60 ~ .95	.30 ~ .80	0.035	0.035	.15 ~ .40															
VOLVO 1121.32	0.200	1.650	0.035	0.030	0.500						0.12 (Max)	.35 (Max)	0.500	0.015	0.020	0.030	0.100	0.300		
VOLVO 1123.33	0.050	2.000	0.045	0.030	1.000	30,000				29,000				8 ~ 11						17 ~ 19
VOLVO 1126.62	0.180	1.800	0.030	0.030	0.500	79,000	70,000	18.00%							0.015					