



Strength Class System 強度區分系統

JIS B1051

拉力N/mm ²	300	400	500	600	700	800	900	1000	1200	1400
7										
8										
9										
10										
12										
14										
16										
18										
20										
22										
25										
30										

破裂後伸張度最小值
Minimum value of elongation
after fracture
(%)

3.6, 4.6, 4.8, 5.6, 5.8, 6.8, 8.8, 9.8, 10.9, 12.9

Mechanical Properties 機械特性

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Mechanical properties		性能等級												
		3.6	4.6	4.8	5.6	5.8	6.8	8.8		9.8	10.9	12.9		
								d<16	d>16					
抗拉強度 N/mm ² {kgf/mm ² }	Nominal	300	400		500		600	800	800	900	1000	1200		
	Min	{33.7}	{40.8}	{42.8}	{51.0}	{53.0}	{61.2}	{81.6}	{84.6}	{91.8}	{106}	{124}		
硬度	Vickers hardness 維氏 HV	Min	95	120	130	155	160	190	250	255	290	320	385	
		Max	250						320	335	360	380	435	
	Brinell 布氏 hardness HB	Max	90	114	124	147	152	181	238	242	276	304	366	
		Min	238						304	318	342	361	414	
	Rockwell hardness 洛氏	HRB	Max	52	67	71	79	82	89	—				
			Min	99.5						—				
	HRC	Max	—					22	23	28	32	39		
	Min	—					32	34	37	39	44			
表面硬度	HV	Max	—						表面硬度比芯硬度不應高過HV30					
Yield point 屈服點 N/mm ² {kgf/mm ² }	Min	180	240	320	300	400	480	—						
	Nominal Min	190/240 {19.4}	340 {24.5}	300 {34.7}	420 {30.6}	480 {42.8}	480 {48.9}	—						
Proof stress 屈服強度 N/mm ² {kgf/mm ² }	Nominal	—						640	640	720	900	1080		
	Min	—						{65.3}	{67.3}	{73.4}	{95.9}	{112}		
Proof load stress 保証應力		0.94	0.94	0.91	0.93	0.9	0.92	0.91	0.91	0.90	0.88	0.88		
	Stress ratio N/mm ²	180 {18.4}	225 {22.9}	310 {31.6}	280 {28.6}	380 {38.7}	440 {44.9}	580 {59.1}	600 {61.2}	650 {66.3}	830 {84.6}	970 {98.9}		
Elongation After fracture 屬伸延率	{kgf/mm ² }	25	22	14	20	10	8	12	12	10	9	8		
	Min													