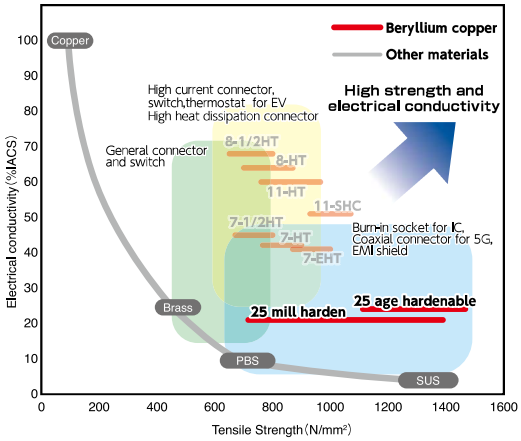
Mechanical Properties of High Strength Material

Alloy 25



Properties of Strip

Alloy		Temper	Designation[8]	Tensile test[1]			Hardness test[2]	Electrical conductivity[3]	Heat treatment
				Tensile strength (N/mm²)	Yield strength 0.2% offset (N/mm²)	Elongation (%)	Vickers hardness HV	(%IACS)	
25	Age Hardenable[6]	O	C1720$^{P}_{R}$—O	410-540	—	min. 35	90-160	—	—
		OT	C1720$^{P}_{R}$—OT	1100-1380[4]	min. 960	min. 3	350-400	min. 22	3hr.at 315℃
		1/4H	C1720$^{P}_{R}$—1/4H	510-620	—	min. 10	145-220	—	—
		1/4HT	C1720$^{P}_{R}$—1/4HT	1180-1400[4]	min. 1030	min. 2	360-430	min. 22	2.5hr.at 315℃
		1/2H	C1720$^{P}_{R}$—1/2H	590-695	—	min. 5	180-240	—	—
		1/2HT	C1720$^{P}_{R}$—1/2HT	1240-1440[4]	min. 1100	min. 2	370-440	min. 22	2hr.at 315℃
		H	C1720$^{P}_{R}$—H	685-835	—	min. 2	210-270	—	—
		HT	C1720$^{P}_{R}$—HT	1270-1480[4]	min. 1140	min. 1	380-450	min. 22	2hr.at 315℃
	Mill haddened (Standard)[6]	OM	C1720$^{P}_{R}$—OM	685-885[5]	min. 480	min. 18	220-270	min. 20	—
		1/4HM	C1720$^{P}_{R}$—1/4HM	735-930[5]	min. 550	min. 10	235-285	min. 17	—
		1/2HM	C1720$^{P}_{R}$—1/2HM	815-1010[5]	min. 650	min. 8	260-310	min. 17	—
		HM	C1720$^{P}_{R}$—HM	910-1110[5]	min. 750	min. 6	295-345	min. 17	—
		XHM	C1720$^{P}_{R}$—XHM	1100-1290[5]	min. 930	min. 2	340-390	min. 17	—
		XHMS	C1720$^{P}_{R}$—XHMS	1210-1400[5]	min. 1030	min. 2	360-410	min. 17	—
	Mill haddened Type B (Good formability)[6]	OMB	C1720$^{P}_{R}$—OMB	640-760[5]	480-660	min. 16	190-250	min. 16	—
		1/4HMB	C1720$^{P}_{R}$—1/4HMB	760-860[5]	550-760	min. 15	215-280	min. 16	—
		1/2HMB	C1720$^{P}_{R}$—1/2HMB	830-930[5]	660-860	min. 12	255-310	min. 16	—
		HMB	C1720$^{P}_{R}$—HMB	930-1030[5]	760-930	min. 9	280-340	min. 17	—
		XHMB	C1720$^{P}_{R}$—XHMB	1070-1210[5]	930-1170	min. 4	330-390	min. 17	—
	Mill haddened Type S (Excellent formability)[6][7]	HM-TypeS	C1720$^{P}_{R}$—HM—TypeS	min. 960	790-940	9-25	285-370	min. 17	—
		XHM-TypeS	C1720$^{P}_{R}$—XHM—TypeS	min. 1060	930-1070	6-22	315-395	min. 17	—

1) Values are applicable to thickness 0.1mm and over. 2) Values are applicable to thickness 0.1mm and over. 3) Electrical conductivity is for design guidance only
4) The upper limits of tensile strength after age hardening are for design guidance only. 5) The upper limits of tensile strength of mill hardened strip are for design guidance only
6) See page 12 for bending formability. 7) Contact us for purchase instructions. 8) P and R in column "Designation" represent "strip cut to length" and "strip in coils".

Tolerances

Thickness tolerance (mm)

Specified thickness		Tolerance
Over	Up to and including	
from 0.050	0.08	±0.004
0.08	0.1	±0.005
0.1	0.15	±0.006
0.15	0.2	±0.008
0.2	0.25	±0.010
0.25	0.4	±0.015
0.4	0.55	±0.020
0.55	0.7	±0.025
0.7	0.9	±0.030
0.9	1.2	±0.035
1.2	1.5	±0.045
1.5	2.0	±0.050

note) In case of strip cut to length tolerance shall be determined individually.

Width tolerance (mm)

Specified width / Specified thickness		Tolerance		
		Strip cut to length	Strip in coils	
Over	Up to and including	max. 200	max. 100	Over 100 up to and including 200
from 0.050	0.55	+2 −0	±0.1	±0.2
0.55	1.0	+2 −0	±0.2	±0.3
1.0	2.0	–	±0.2	±0.3

note) When the tolerance is specified either plus or minus side only, the sama range of tolerance shall be applied.
Please contact us for special thickness.

Length tolerance (mm)

Specified length / Specified thickness		Tolerance
Over	Up to and including	max. 1000
from 0.05	0.55	+ 8 − 0
0.55	1.0	+10 − 0

Camber tolerance (mm)

Specified width		Maximum value
Over	Up to and including	Over 1000 length
from 4	13	4
13	50	3
50	100	2
100	200	1