

## Products Information

### Features

- Good electrical conductivity and strength
- Excellent stress relaxation resistance
- Excellent stress corrosion cracking resistance
- Excellent fatigue properties

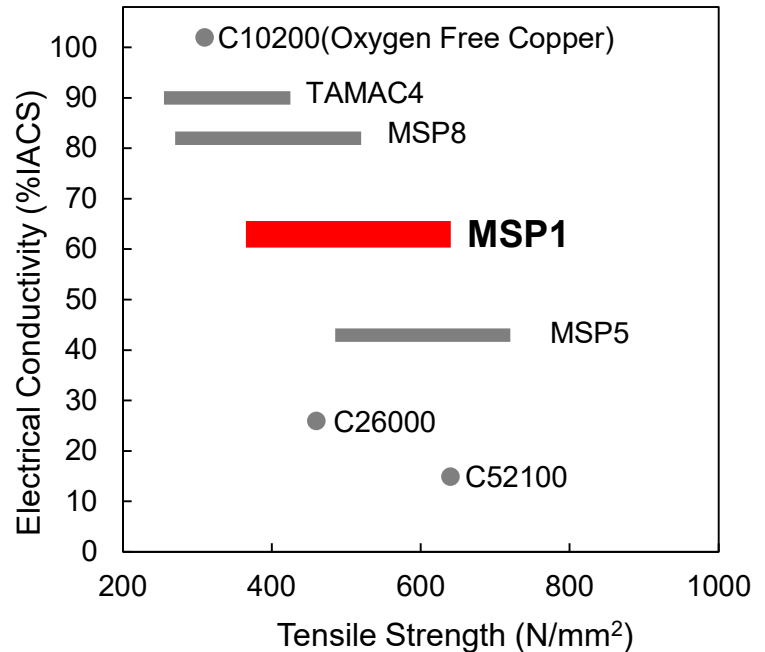
### Chemical composition

(mass%)

Mg	P	Cu
0.7	0.005	Rem.*

\* Including inevitable impurities and trace additive elements

### Positioning of Alloy



### Physical properties

Property	Representative Value
Specific Gravity (293 K)	8.8
Coefficient of Thermal Expansion (/K : 293~573 K)	$17.3 \times 10^{-6}$
Thermal Conductivity (W/(m·K) : 293 K)	264
Electrical Conductivity (%IACS : 293 K)	63
Modulus of Elasticity (kN/mm² : 293 K)	125
Poisson's ratio (293 K)	0.32

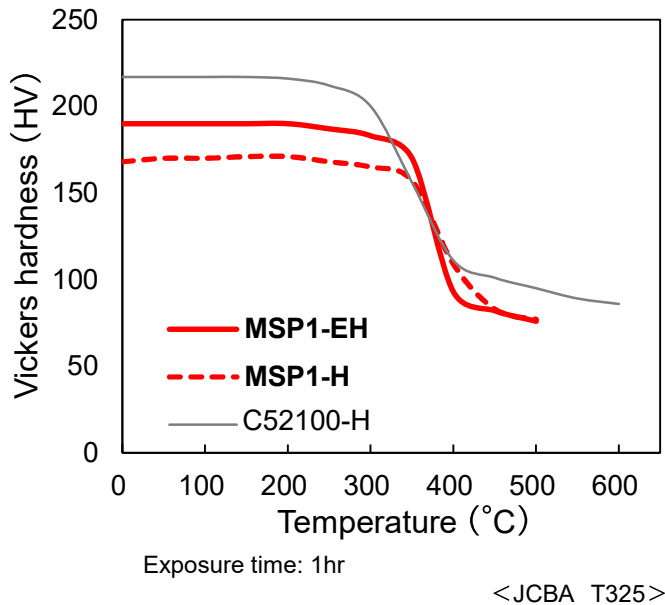
### Mechanical properties

	Temper					Typical Values			
	1/4H	1/2H	H	EH	SH	1/4H	1/2H	H	EH
Tensile Strength (N/mm²)	365~450	420~510	480~570	540~630	590 Min.	399	459	530	585
0.2% Yield Strength (N/mm²)	—	—	—	—	—	328	432	494	560
Elongation (%)	15 Min.	10 Min.	7 Min.	5 Min.	—	25	15	11	8
Vickers Hardness* (HV)	(90~140)	(120~170)	(150~190)	(170~210)	(180 Min.)	126	144	162	178

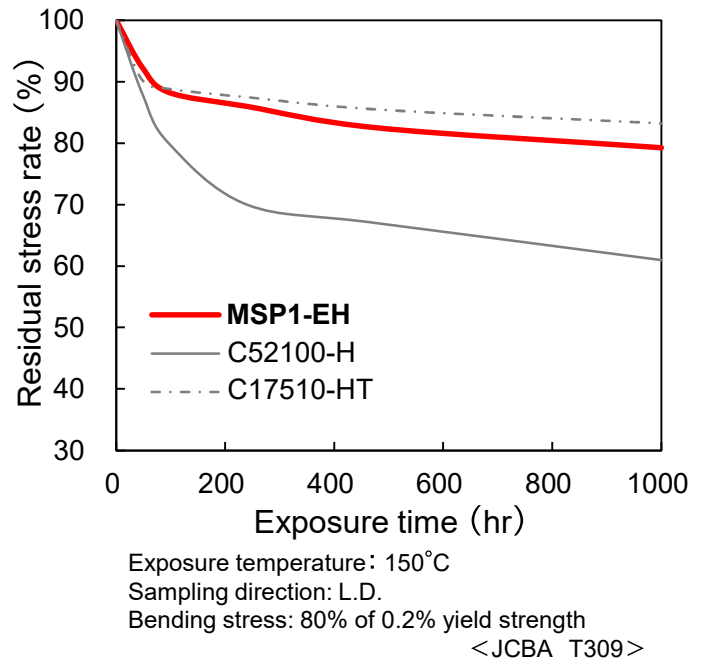
\* Reference values

### Products Information

#### ➤ Heat resistance



#### ➤ Stress relaxation resistance



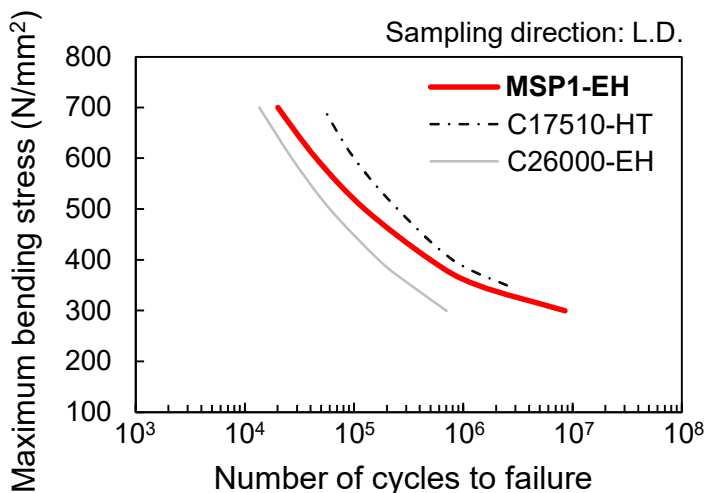
#### ➤ Bendability

90° W-Bend, Specimen width=10mm, Load=9.8kN <JCBA T307>

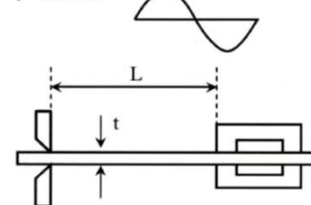
Temper	Sampling direction (to the L.D.)	Bending radius (mm) R										R/t
		0.0	0.1	0.125	0.15	0.2	0.25	0.4	0.6	0.8	1.0	
1/2H	0°: Good Way	○	○	○	○	◎	◎	◎	◎	◎	◎	0.0
	90°: Bad Way	△	△	○	○	○	○	◎	◎	◎	◎	0.0
H	0°: Good Way	△	○	○	○	○	○	◎	◎	◎	◎	0.0
	90°: Bad Way	▲	△	△	△	○	○	◎	◎	◎	◎	0.3
EH	0°: Good Way	△	△	△	△	△	○	○	◎	◎	◎	0.0
	90°: Bad Way	▲	▲	▲	▲	▲	△	△	◎	◎	◎	0.8

Criteria of evaluation: ◎Good(Acceptable), ○ Minor rough surface(Acceptable), △Rough surface(Acceptable),  
▲Minor crack(Unacceptable), ×Major crack(Unacceptable)

#### ➤ Fatigue properties



$$y = \delta \sin \omega t$$



(Drive side) (Stationary side)

Calculation of formula of Bending stress

$$\sigma = 3/2 \cdot [(E \cdot t) / L^2] \cdot \delta$$

E: Modulus of Elasticity of specimen (N/mm<sup>2</sup>)

t: Thickness of specimen (mm)

L: Length of specimen (mm)

δ: Half amplitude on specimen (mm) ※ δ = 2mm

<JCBA T308>