

High Performance Corson Alloy

NKC286S

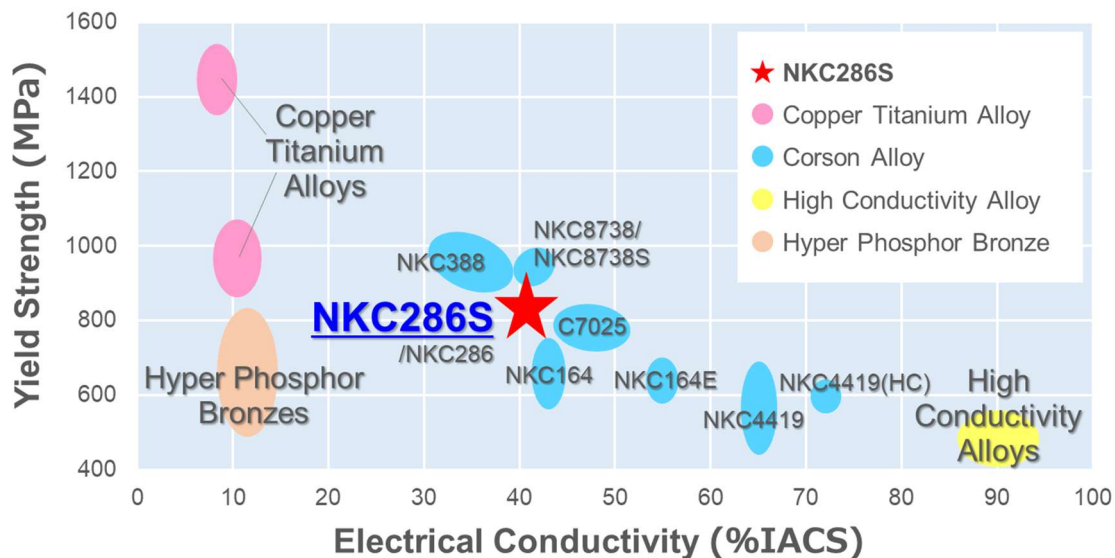
UNS C64728

※Data in this sheet are typical values (not specification).

Features

- NKC286S can provide higher strength, conductivity and better bend formability than phosphor bronze. So that NKC286S is suitable for small terminals that can handle large currents.
- NKC286S shows high stress relaxation resistance, so that NKC286S can maintain contact force at high temperatures.
- NKC286S has a lower Modulus of Elasticity and better bend formability in the good way direction than NKC286.

Our Copper Alloy Lineup



※Data are typical values (not specification).

Material Properties

1. Chemical Composition

Element	Cu	Ni	Si	Sn	Zn
Nominal Value (wt%)	Bal.	2.8	0.6	0.5	0.4

Material Properties

2. Physical Properties

Electrical Conductivity (%IACS) (@20°C)	41
Specific Resistance (nΩ·m) (@20°C)	42
Thermal Conductivity (W/(m·K))	165
Thermal Expansion Coefficient (×10 ⁻⁶ /K) (@20~200°C)	17.4
Modulus of Elasticity (GPa)	110
Specific Gravity	8.87

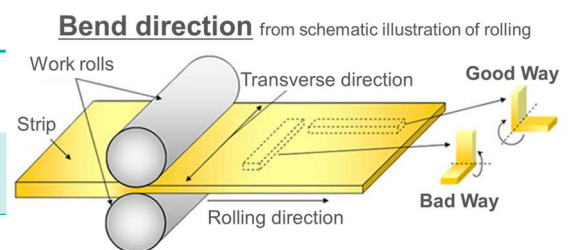
3. Mechanical Properties

Temper	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)	Hardness (Hv)
1/2H	800 (730 - 870)	765 (695 - 835)	7.0 (≥3.0)	250 (215 - 285)
H	880 (800 - 940)	845 (775 - 915)	2.0 (≥1.0)	285 (250 - 320)

Upper : Typical value, Lower : Standard range

4. W-Shaped 90 degree Bend Formability

Width (mm)	Temper	Thickness (mm)	Minimum Bend Radius / Thickness	
			Good Way	Bad Way
10	1/2H	≦0.15	0	0
	H	≦0.08	0	0
0.2	1/2H	≦0.15	0	0
	H	≦0.08	0	0

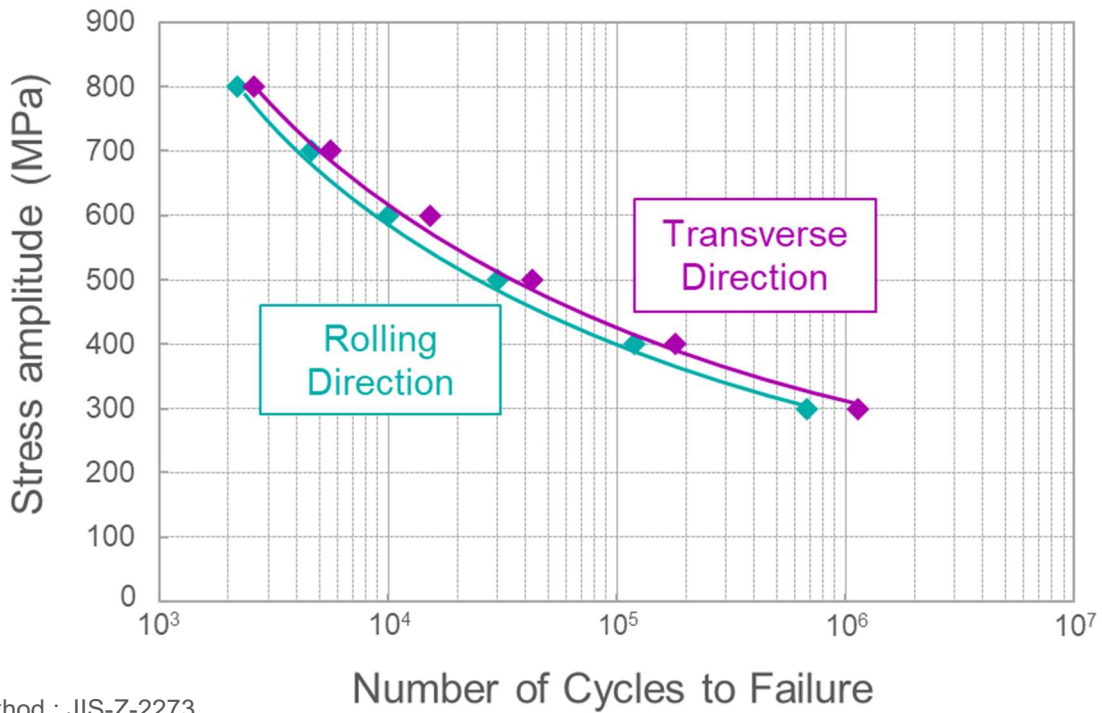


※In accordance with Japan Copper and Brass Association technical standard (JCBA T307)

Material Properties

5. Fatigue Property

- NKC286S has good fatigue properties among copper alloys.



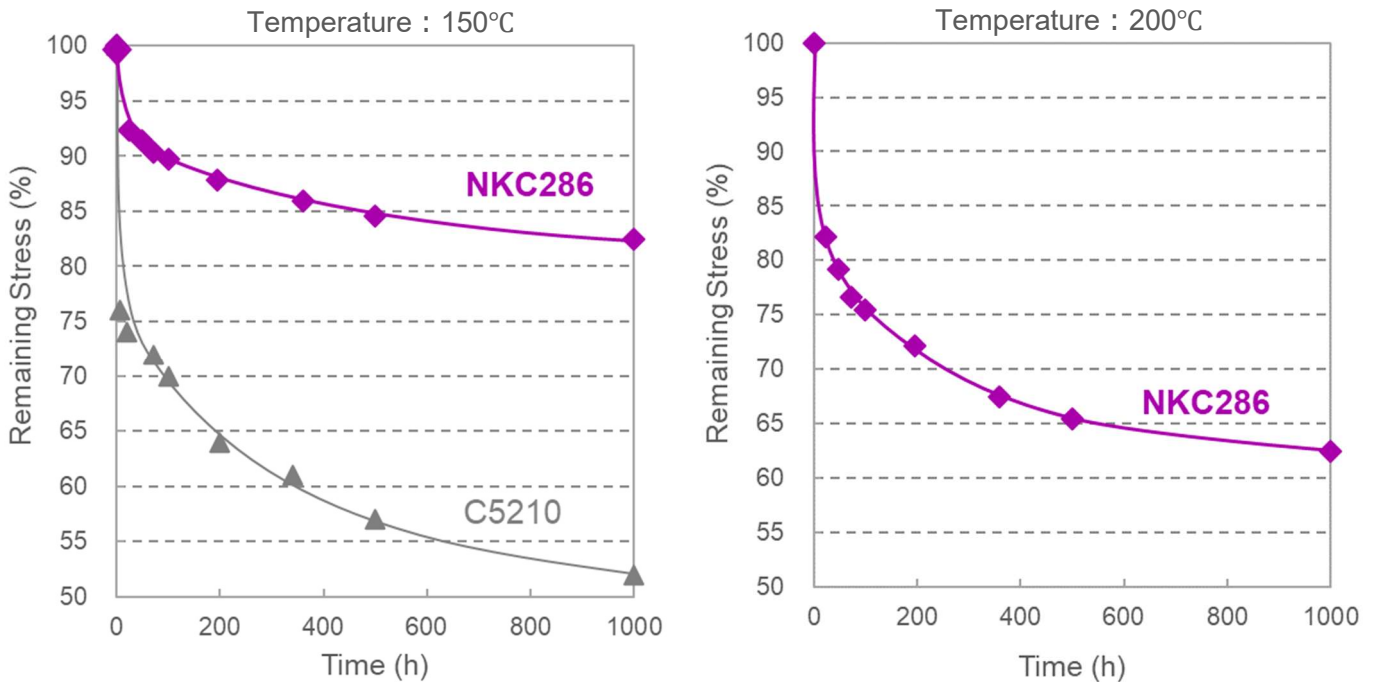
※Test method : JIS-Z-2273

6. Thermal Stress Relaxation Resistance

- NKC286S has superior stress relaxation resistance compared to phosphor bronze C5210.

High remaining stress is maintained even in a high-temperature atmosphere of 200 °C.

※The stress relaxation resistance of NKC286 and NKC286S are the same.
The figure below is taken from the technical data of NKC286.



※Test method : JCBA T309

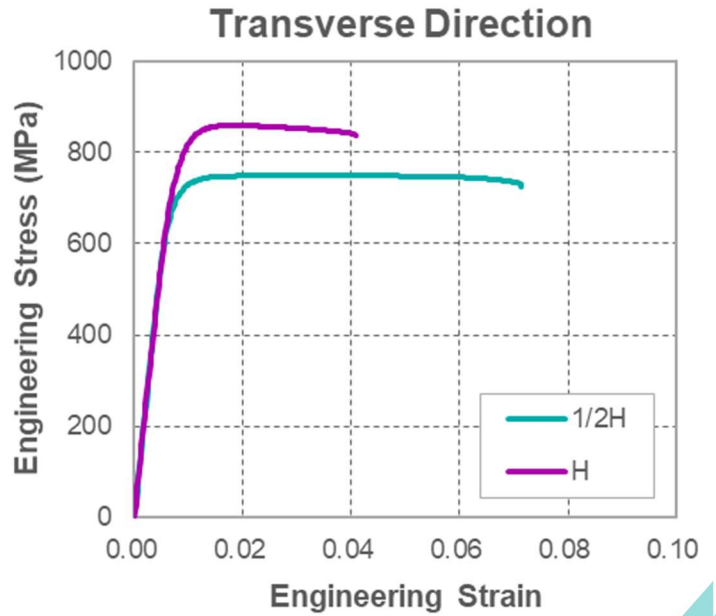
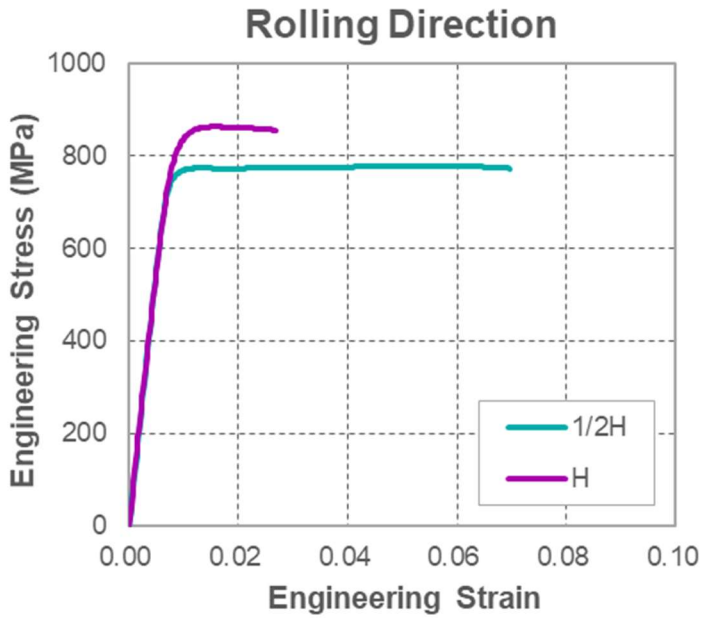
※Applied stress : Yield strength ×80%

Material Properties

7. Stress-Strain Curve

- Engineering Stress-Strain Curves for each temper of NKC286S can be downloaded from our official website.

Download : https://www.jx-nmm.com/english/products/copper_foil_and_alloy/03corson/excel/NKC286S_S-S_Curve.xlsx



Production Thickness Range

Temper	Thickness Range (mm)
1/2H	0.12 ~ 0.15
H	0.08 ~ 0.15

- Please contact us for the latest stock status and inquiry of other thicknesses.

Contact Address

Web Site : <https://www.jx-nmm.com/english/>

NKC286S introduction URL : https://www.jx-nmm.com/english/products/copper_foil_and_alloy/03corson/nkc286s.html

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