

High Performance Corson Alloy

NKC286

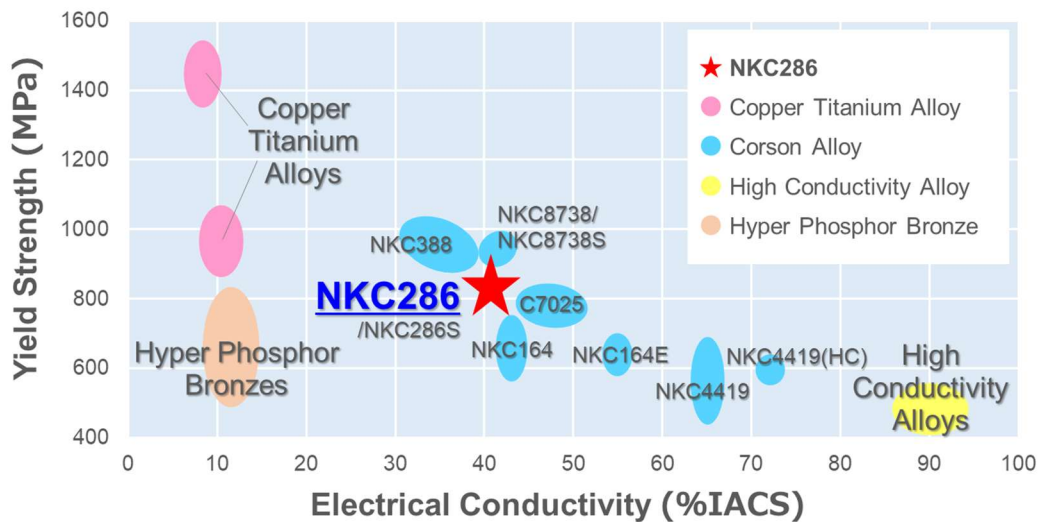
UNS C64728

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

Features

- NKC286 is a well-balanced alloy with higher strength and better bend formability than C7025, a standard Corson alloy (Cu-Ni-Si alloy). So NKC286 is suitable for small terminals.
- NKC286 has high stress relaxation resistance and can maintain contact force at high temperatures.

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

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)	127
Specific Gravity	8.87

Material Properties

3. Mechanical Properties

Temper	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)	Hardness (Hv)
1/2H	780 (710 - 840)	760 (690 - 830)	6.0 (≥ 3.0)	230 (200 - 270)
H	830 (760 - 890)	810 (740 - 880)	4.0 (≥ 2.0)	245 (210 - 280)
EH	880 (810 - 940)	860 (790 - 930)	2.0 (≥ 1.0)	260 (230 - 300)

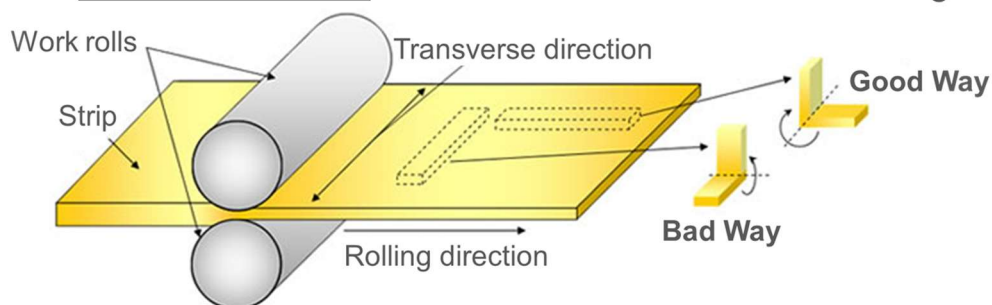
Upper : Typical value, Lower : Standard range

4. W-Shaped 90 degree Bend Formability

Width (mm)	Temper	Thickness (mm)	Minimum Bend Radius / Thickness	
			Good Way	Bad Way
10	1/2H	$t \leq 0.15$	0	0
		$t \leq 0.10$	0	0
	H	$0.10 < t \leq 0.15$	1.0	0.5
		$0.15 < t \leq 0.20$	3.0	1.0
	EH	$t \leq 0.10$	0	3.0
		$0.10 < t \leq 0.20$	3.0	5.0
0.2	1/2H	≤ 0.15	0	0
	H	≤ 0.20	0	0
	EH	≤ 0.20	0	0

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

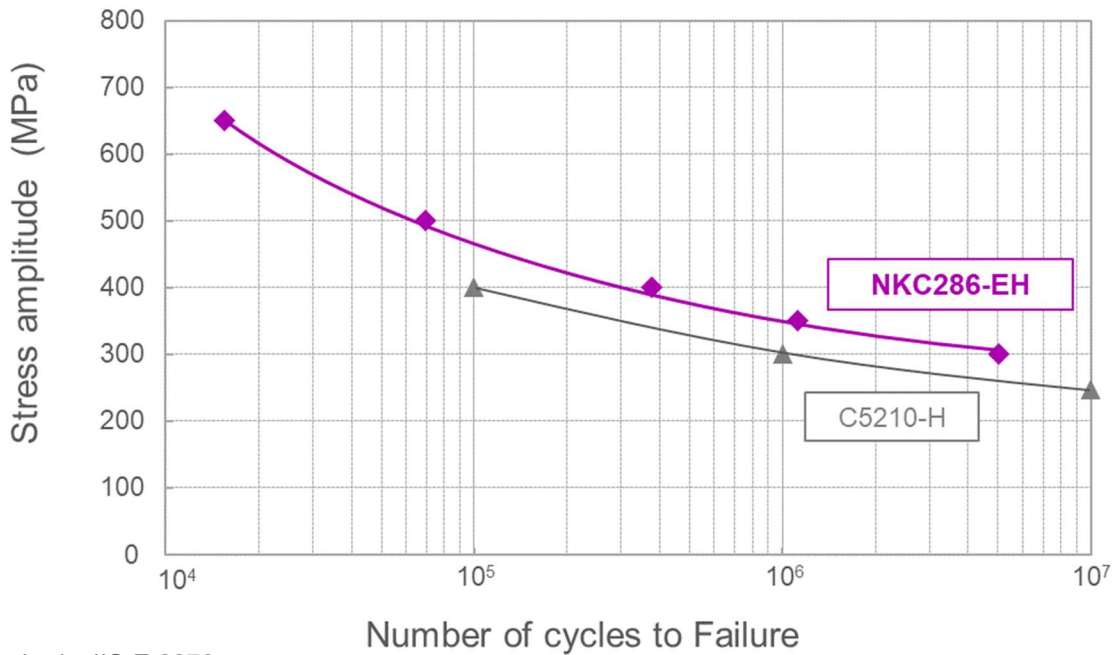
Bend direction from schematic illustration of rolling



Material Properties

5. Fatigue Property (Rolling Direction)

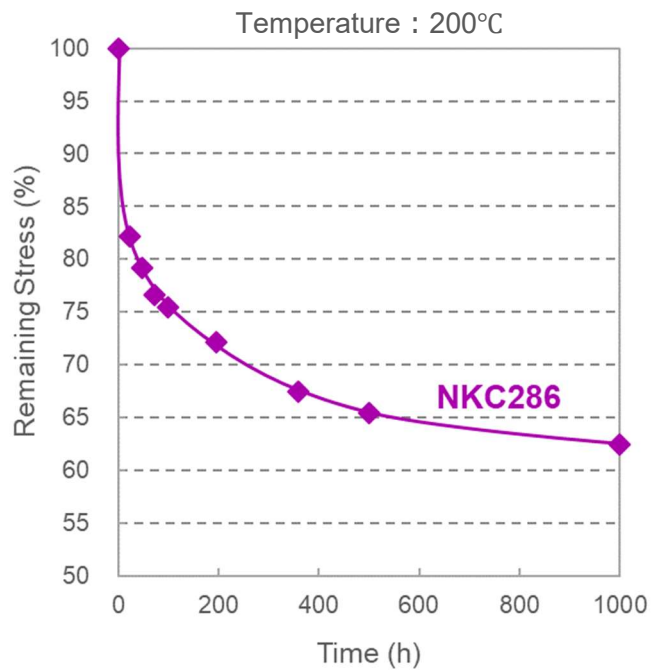
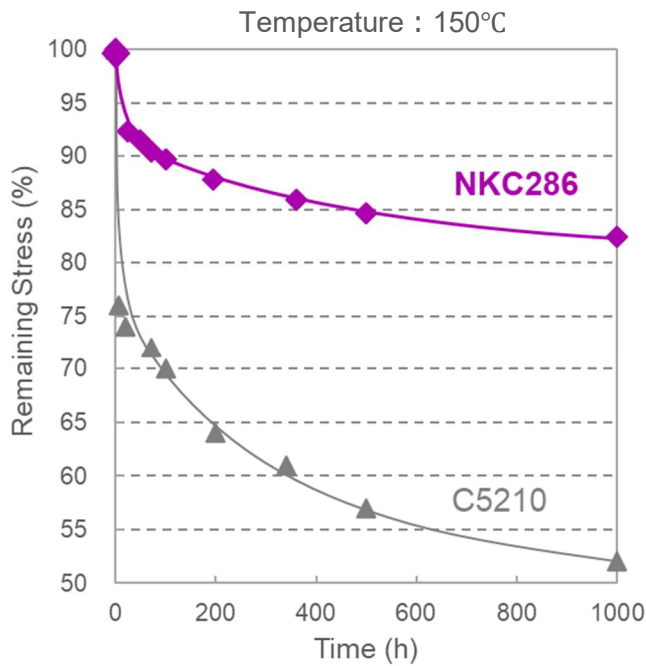
● NKC286 has better fatigue properties than phosphor bronze C5210.



※Test method : JIS-Z-2273

6. Thermal Stress Relaxation Resistance

● NKC286 has superior stress relaxation resistance compared to phosphor bronze C5210. High remaining stress is maintained even in a high-temperature atmosphere of 200 °C.



※Test method : JCBA T309

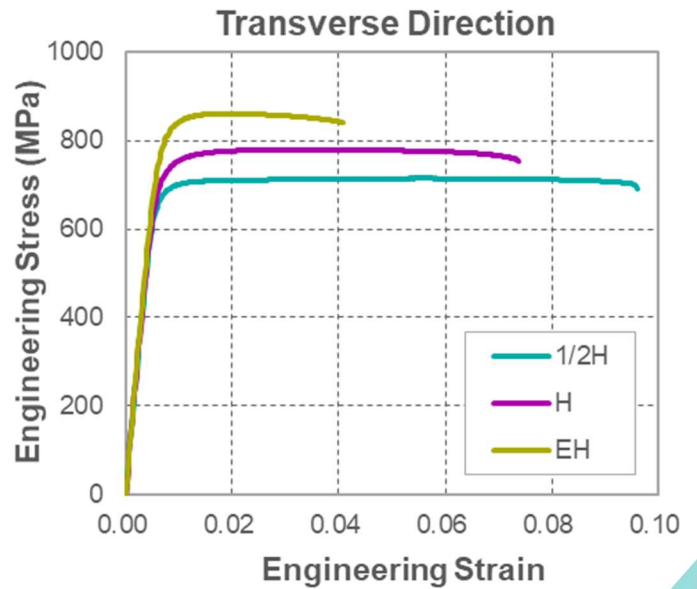
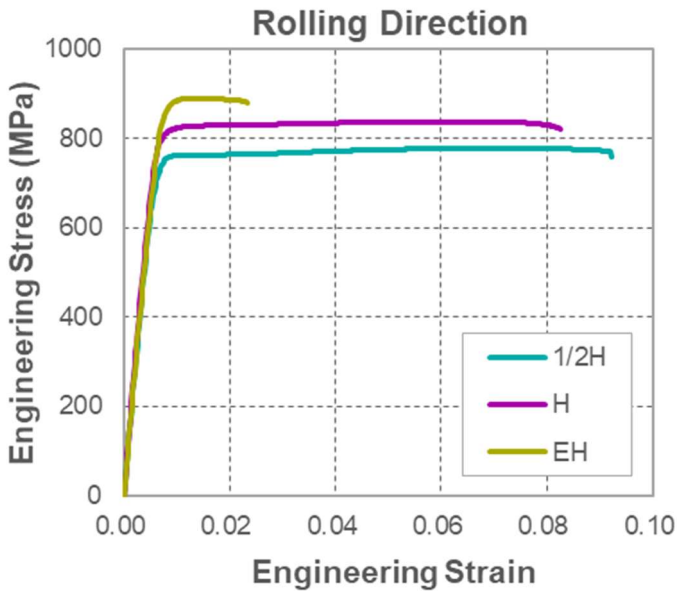
※Applied stress : Yield strength × 80%

Material Properties

7. Stress-Strain Curve

- Engineering Stress-Strain Curves for each temper of NKC286 can be downloaded from our official website.

Download : https://www.jx-nmm.com/english/products/copper_foil_and_alloy/03corson/excel/NKC286_S-S_Curve.xlsx



Production Thickness Range

Temper	Thickness Range (mm)
1/2H	0.10 ~ 0.40
H	0.06 ~ 0.30
EH	0.04 ~ 0.30

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

Contact Address

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

NKC286 introduction URL : https://www.jx-nmm.com/english/products/copper_foil_and_alloy/03corson/nkc286.html

JX Advanced Metals Corporation

Functional Materials Division

Advanced Materials Group

10-4, Toranomom 2-chome, Minato-ku, Tokyo 105-8417, Japan

Call : +81-3-6433-6000



JX Advanced Metals Corporation