1. Product Overview

C28000 is Muntz Metal - a wrought copper-zinc alloy containing nominally 60% copper and 40% zinc, patented by Fredrick Muntz in 1832 as a cheaper, stronger alternative to copper sheathing for ship hulls. The 60/40 Cu/Zn ratio places the alloy across the alpha / beta phase boundary of the Cu-Zn system: the microstructure at room temperature is a two-phase alpha-plus-beta mixture, where alpha is the ductile face-centred-cubic solid solution and beta is the ordered body-centred-cubic (B2 / CsCl-type) phase. The beta phase is harder, stronger, and - critically - becomes highly ductile at hot-working temperatures, giving C28000 outstanding hot formability that single-phase alpha brasses (C26000, C27000) cannot match.

This dual-phase character is the defining feature of C28000. At room temperature the beta phase limits cold formability - C28000 cannot be deep-drawn or severely cold-headed like C26000 - but at elevated temperature the beta phase softens dramatically, enabling hot rolling, hot forging, hot extrusion and hot stamping with minimal flow stress and excellent die-fill. The result is a brass that is primarily hot-worked into structural sheet, plate, bar, extrusions and forgings rather than cold-formed into thin drawn parts. C28000 also has a long history as a brazing spelter (filler metal): its melting range (899-905 C) is close to that of many copper brazing alloys, and it wets steel and copper surfaces effectively in torch, furnace and induction brazing.

C28000 is supplied in wrought product forms - sheet, strip, plate, rod, bar, wire, tube and extruded profiles - in both as-hot-worked and cold-finished tempers. It conforms to ASTM B36 (sheet / plate / strip) and related EN / JIS specifications, and is traceable by heat lot with EN 10204 mill test certificates. Its good corrosion resistance in rural, urban and marine atmospheres (it was, after all, originally developed for ship sheathing) makes it a popular choice for architectural and marine hardware, though - like all plain (non-inhibited) brasses - it is susceptible to dezincification in aggressive waters and should not be used for potable-water tube service without an inhibited grade (C44300 / C68700).

1.1 Key Features

- 60/40 Cu-Zn brass - two-phase alpha + beta microstructure at room temperature.
- Patented by Fredrick Muntz (1832); the original low-cost, high-strength brass for ship sheathing and structural hardware.
- Excellent hot formability - beta phase softens at forging temperature, enabling hot rolling, forging, extrusion and stamping.
- Limited cold formability - beta phase is brittle at room temperature; not suitable for deep drawing or severe cold heading.
- Higher strength than C26000 / C27000: annealed ~380 MPa UTS; cold-finished ~540-620 MPa.
- Good corrosion resistance in rural, urban and marine atmospheres; good biofouling resistance.
- Solders and brazes readily; widely used as a brazing spelter (filler metal) for steel-to-copper joints.
- Fair machining (Type I chip, ~40% machinability rating); free-cutting C36000 preferred for high-speed turning.
- Susceptible to dezincification in aggressive waters - use inhibited brass (C44300, C68700) for water service.
- Full heat-lot traceability with EN 10204 3.1 mill test certificates.

1.2 Typical Applications

Application	Description
Architectural sheet & trim	Facade panels, roofing, gutters, flashings, decorative cladding, handrails
Condenser & heat-exchanger plates	Tube plates, flat plates for shell-and-tube exchangers (non-inhibited, non-marine critical)
Hot-forged hardware	Forged fittings, valve bodies, cock plugs, pump components, marine hardware
Brazing spelter (filler metal)	Torch, furnace and induction brazing of steel and copper assemblies
Structural & engineering	Name plates, brackets, linkage, wear plates, machinery guards
Marine hardware	Non-critical hull fittings, railings, cleats, fairleads (mild marine, non-submerged)
Electrical & electronic	Terminal blocks, contact carriers, non-precision connectors
Decorative & ornamental	Furniture trim, lamp bodies, plaques, emblems, cast-look components
Condenser tube (limited)	Limited use; for inhibited marine tube service use C44300 / C68700 / C70600

1.3 At-a-Glance Specification

Attribute	Value
UNS designation	C28000 (Muntz Metal, 60/40 Brass)
Also known as	Muntz Metal, 60/40 Brass, Yellow Brass 280
Alloy system	Cu-Zn, two-phase alpha + beta at room temperature
Cu content	59.0 - 63.0% (nominal 60%)
Zn content	Balance (nominal 40%)
Density	8.39 g/cm³ (0.303 lb/in³)
Conductivity	≈ 28% IACS (16.3 MS/m at 20 °C)
Melting range	899 - 905 °C (1 650 - 1 661 °F)
Thermal conductivity	≈ 126 W/(m·K)
Max service temp.	200 °C continuous (pressure); higher for non-pressure
Product forms	Sheet, strip, plate, rod, bar, wire, tube, extrusions
Certificates	MTC EN 10204 3.1 / 3.2, SGS, BV, TUV
MOQ	500 kg per specification

Composition and property limits conform to ASTM B36 specification for the C28000 UNS designation. Verify all values against the MTC for each heat lot.

1.4 When to Choose C28000

C28000 is the right choice when you need a brass that is hot-worked into structural or semi-structural components - sheet, plate, bar, extrusions or forgings - where higher strength and lower cost than C26000 / C27000 are more important than cold formability. Its excellent hot formability makes it ideal for hot-forged valve bodies, fittings and marine hardware, and for hot-rolled architectural sheet and condenser plates. It is also widely used as a brazing filler metal (spelter) for torch and furnace brazing of steel and copper assemblies. For cold-formed thin-wall parts (cartridge cases, deep-drawn shells), C26000 (70/30) is the correct grade. For high-speed machined hardware, free-cutting C36000 (leaded) machines far better. For marine or potable-water tube service, an inhibited brass (C44300, C68700) or cupronickel (C70600, C71500) should be used instead. For high-conductivity electrical busbar, pure copper (C11000, C10200) is required.

2. Chemical Composition & Standards

C28000 is a binary Cu-Zn alloy. The 40% nominal zinc content places the alloy directly across the alpha / beta phase boundary of the Cu-Zn phase diagram. At room temperature, the equilibrium microstructure is a two-phase mixture of alpha (f.c.c. solid solution, rich in copper) and beta (ordered B2 / CsCl-type, zinc-rich). The alpha phase provides ductility and corrosion resistance; the beta phase provides strength, hardness, and - critically - becomes highly ductile at elevated temperature, which is the key to C28000's outstanding hot formability. The relative proportions of alpha and beta depend on the exact Cu/Zn ratio within the 59-63% Cu specification range: material near the high-copper end (63%) will be mostly alpha with minor beta, while material near the low-copper end (59%) will be predominantly beta. This is why precise composition control within the specification range is important for consistent hot-working behaviour. Zinc dissolves substitutionally in copper, and at 40% Zn the solid-solution strengthening effect is greater than in C26000 (30%) or C27000 (35%), giving C28000 higher as-annealed strength but lower ductility at room temperature.

2.1 Chemical Composition (wt%)

Element	Symbol	Content (% mass)	Note
Copper	Cu	59.0 - 63.0	Matrix; nominal 60%
Zinc	Zn	Balance (nominal 40%)	Solid-solution strengthener; beta-phase former
Lead	Pb	≤ 0.07	Trace; not a free-machining grade
Iron	Fe	≤ 0.07	Trace impurity; can refine grain
Tin	Sn	□ 0.10	Trace; improves corrosion resistance if present
Nickel	Ni	□ 0.30	Trace; whitening / strengthening element
Aluminium	Al	□ 0.05	Trace; would impair hot work if high
Antimony	Sb	□ 0.005	Trace; dezincification promoter
Arsenic	As	□ 0.005	Absent - C28000 is NOT inhibited
Phosphorus	P	□ 0.005	Trace only; not deoxidised
Bismuth	Bi	□ 0.002	Trace; embrittling
Other (total)	—	≤ 0.50	Sum of other named elements

Composition limits per ASTM B36 for the C28000 UNS designation. Note that C28000 is a plain brass and does NOT contain arsenic or antimony as dezincification inhibitors - for inhibited brass, specify C44300 / C68700. The Cu/Zn ratio within the 59-63% Cu range determines the alpha:beta phase balance; verify composition on the MTC for each heat lot.

2.2 Applicable Standards by Product Form

Product form	Common standards
Sheet / plate / strip	ASTM B36 (plate / sheet / strip); ASTM B272 (flat products)
Rod & bar (plain)	ASTM B21 (naval brass rod, ref.); customer specification
Rod & bar (free-cutting)	Leaded variant C36000 per ASTM B16 preferred for machining
Wire	ASTM B134 (general wire); brazing wire per AWS / EN ISO
Tube (seamless / welded)	ASTM B135 (brass tube); B395 (seamless U-bend)
Brazing filler metal	AWS A5.8 / EN ISO 17672 (CuZn brazing alloys)
Extruded / drawn profiles	Customer specification; precision shapes
Forgings	ASTM B283 (forged brass); customer specification

2.3 Brass Comparison - C28000 vs Common Brass Grades

Property	C28000	C27000	C26000	C36000
Common name	Muntz Metal	Yellow Brass	Cartridge Brass	Free-Cutting Brass
Cu (%)	59.0 - 63.0	63.0 - 68.5	68.5 - 71.5	60.0 - 63.0
Zn (%)	Balance (~40)	Balance (~35)	Balance (~30)	Balance (~37)
Other additions	None	None	None	Pb 2.5 - 3.7
Phase (room temp.)	Alpha + beta	Single alpha	Single alpha	Alpha + Pb
Hot formability	Excellent (best)	Excellent	Good	Fair
Cold formability	Poor (beta-limited)	Good	Excellent (best)	Poor
Machinability	Fair (40)	Fair (30)	Fair (30)	Excellent (100)
Annealed UTS (MPa)	380	330 - 380	300 - 350	340 - 370
Dezincification	Susceptible	Susceptible	Susceptible	Susceptible
Primary use	Hot-worked structural, brazing rod	Hardware, springs, drawn parts	Cartridge cases, deep-drawn parts	High-speed machined parts

Machinability rating is relative to C36000 = 100 (ASTM / CDA convention). C26000 is the benchmark for cold formability; C36000 is the benchmark for machinability; C28000 (Muntz Metal, 60/40) is the benchmark for hot-worked structural brass and brazing spelter. The beta phase in C28000 gives the highest as-annealed strength of the plain brasses but limits cold formability at room temperature.

3. Physical, Thermal & Electrical Properties

C28000 exhibits the physical, thermal and electrical properties of a two-phase alpha-plus-beta brass. The 40% zinc content raises strength significantly relative to C26000 (30% Zn) and C27000 (35% Zn), while lowering density, melting point, and both electrical and thermal conductivity. The beta phase, being an ordered B2 structure, contributes additional strength but is electrically more resistive than alpha. The alloy is non-magnetic and retains useful strength to moderate temperatures. Values below are typical for as-hot-worked (annealed) material at room temperature; cold finishing slightly increases strength and resistivity and slightly lowers conductivity.

Property	Symbol	Value	Unit
Density	ρ	8.39	g/cm³
Melting range (solidus - liquidus)	T_m	899 - 905	°C
Specific heat capacity	c_p	0.380	J/(g·K)
Thermal conductivity	λ	126	W/(m·K)
Thermal expansion coeff.	α	21.1	× 10□⁶ / K (20 – 300 °C)
Electrical conductivity	σ	≈ 28	% IACS
Electrical resistivity	ρ	0.062	μΩ·m (at 20 °C)
Temp. coeff. of resistance	α_r	0.0017	/°C (0 – 100 °C)
Modulus of elasticity	E	100	GPa
Shear modulus	G	37	GPa
Poisson's ratio	v	0.33	—
Magnetic permeability	μ	≈ 1.0	essentially non-magnetic
Max continuous service temp.	—	200	°C (pressure); higher for non-pressure

Sources: ASTM B36 property data; CDA alloy data sheet for C28000 (Muntz Metal). Values are typical for as-hot-worked material at 20 °C unless noted. Conductivity and resistivity vary slightly with exact Cu/Zn ratio and temper; the alpha:beta phase balance also affects conductivity.

4. Mechanical Properties by Temper

C28000 mechanical properties depend on the degree of cold finishing applied after hot working, and on the alpha:beta phase balance determined by the exact Cu/Zn ratio within the 59-63% Cu specification range. The as-hot-worked (annealed) temper gives moderate ductility and good strength; cold finishing raises strength and hardness further but at the expense of elongation, since the beta phase does not cold-work as gracefully as alpha. C28000 cannot be cold-worked to the high elongations and severe draw depths achievable with C26000, and it is not used for spring-temper thin strip. Instead, the cold-finished tempers are used for structural bar, rod and plate where dimensional accuracy and moderate strength are required. Typical values at room temperature are shown below.

Temper	Tensile (typ.)	Yield 0.2% (typ.)	Elong. (min.)	Hardness (typ.)
As-hot-worked (annealed)	380 - 450 MPa	150 - 200 MPa	≥ 20%	55 - 70 HRB
Cold-drawn 1/4 hard (H01)	450 - 500 MPa	250 - 310 MPa	≥ 15%	70 - 80 HRB
Cold-drawn 1/2 hard (H02)	500 - 560 MPa	310 - 380 MPa	≥ 8%	80 - 88 HRB
Cold-drawn 3/4 hard (H03)	540 - 600 MPa	380 - 450 MPa	≥ 5%	88 - 92 HRB
Cold-drawn full hard (H04)	≥ 580 MPa	≥ 450 MPa	≥ 3%	≥ 92 HRB
Hard (H06, limited)	≥ 620 MPa	≥ 490 MPa	≥ 2%	≥ 95 HRB

Hardness shown in Rockwell B scale. Values are indicative; verify against ASTM B36 specification limits and the MTC for each lot. C28000 is not typically supplied in spring temper - the beta phase limits cold workability, and severe cold working can cause cracking. For spring-temper strip, use C26000 or C27000 instead.

5. Product Forms & Size Range

C28000 is supplied across a range of wrought product forms. Sheet, plate and strip are the highest-volume forms, driven by architectural sheet, condenser plates and structural hardware; rod and bar are supplied for machined and forged components; wire is produced for brazing spelter and general-purpose hardware; tube is available for decorative and non-critical service. Because C28000 is primarily hot-worked, the key production controls are hot-working temperature (to ensure the beta phase is ductile), grain-size management, and consistent alpha:beta phase balance through precise Cu/Zn ratio control. Cold finishing is applied after hot working to achieve dimensional accuracy and moderate strength enhancement, but is limited in extent due to the beta phase.

Surface finish, edge condition (for strip), and temper uniformity are controlled throughout production. Mill-hot-rolled, cold-rolled, and precision-finished surfaces are offered per the applicable ASTM specification and customer requirements.

5.1 Standard Size Range by Product Form

Form	Typical size range	Notes
Sheet / plate	Thick. 0.5 - 50 mm; width ≤ 1 000 mm	ASTM B36; architectural, structural, condenser plates
Strip / foil	Thick. 0.1 - 3 mm; width ≤ 600 mm	ASTM B36; limited cold-rolled strip (beta-limited)
Round rod / bar	Dia. 5 - 120 mm; length 1 - 6 m	Hot-rolled or cold-drawn; machined parts, forgings
Square / hex bar	8 - 70 mm across flats	For hardware, fittings, forged blanks
Wire	Dia. 0.5 - 10 mm	Brazing spelter, general-purpose wire, rivet stock
Tube (seamless)	OD 6 - 80 mm; wall 0.8 - 5 mm	ASTM B135; decorative, non-critical service
Extruded profiles	Per customer drawing	Hot-extruded shapes; structural sections
Forgings	Per customer drawing	Hot-forged valve bodies, fittings, marine hardware

5.2 Surface Finish & Special Processing

- Sheet / plate: mill-hot-rolled, cold-rolled, or precision-ground finish.
- Rod / bar: hot-rolled, cold-drawn, centreless-ground or polished.
- Wire: hard, medium-hard or annealed; bare or tinned for brazing.
- Tube: bright-annealed inside and out; plain, polished or plated for decorative use.
- Edge condition for strip: round, square or deburred.
- Hot-working temperature controlled to ensure beta-phase ductility (700 - 800 C working range).
- Cu/Zn ratio controlled within spec to ensure consistent alpha:beta phase balance.
- Custom cutting, blanking, slitting and drawn profiles to customer drawing.

5.3 Packaging

- Sheet / plate: palletised with interleave paper, edge protectors and moisture barrier.
- Strip / foil: coil on cores, moisture-barrier wrapped, desiccant included.
- Rod / bar: bundled in wooden cases with separator strips and end protection.
- Wire: coils or spools, individually bagged, desiccant included.
- Tube: bundled or boxed, capped ends, desiccant for bright-annealed stock.
- Each bundle tagged with heat number, size, temper and quantity.
- Export seaworthy packing with moisture barrier and desiccant.

6. Tolerances, Finish & Quality Control

C28000 products are produced and inspected to the applicable ASTM specification (B36, B135, B283). Because the alloy is primarily hot-worked and then cold-finished to dimension, the key quality controls are hot-working temperature management (to ensure beta-phase ductility and avoid hot shortness), alpha:beta phase balance (controlled through Cu/Zn ratio), grain-size management, and dimensional accuracy after cold finishing. Tensile, elongation and hardness testing applies to every lot; microstructural examination confirms the alpha:beta phase balance; and bend / formability testing applies to strip and bar stock. For tube, hydrostatic or pneumatic testing applies per ASTM B135.

6.1 Dimensional Tolerances (typical)

Parameter	Typical tolerance
Sheet / plate thickness	± 0.05 - 0.50 mm (per thickness range, ASTM B36)
Strip thickness	± 0.01 - 0.08 mm (precision strip tighter)
Strip width	± 0.10 - 0.50 mm
Rod diameter (cold-drawn)	h8 - h9 (e.g. ± 0.02 - 0.10 mm)
Rod diameter (hot-rolled)	h11 - h13 (looser, e.g. ± 0.2 - 0.5 mm)
Wire diameter	± 0.01 - 0.05 mm (per AWG / metric class)
Tube OD / wall	Per ASTM B135 class; OD ± 0.05 - 0.15 mm
Straightness (bar)	≤ 2.0 mm in any 1 m length
Flatness (sheet / plate)	Per ASTM B36 class; tighter for structural

6.2 Surface Finish & Cleanliness

- Smooth, clean surface per ASTM acceptance standard; no laminations, cracks or inclusions.
- Hot-rolled surfaces descaled and inspected for hot-shortness cracking.
- Cold-drawn surfaces bright and uniform; free from drawing lubricant residue for joining service.
- Annealed grain size controlled and reported for structural consistency.
- Rod / bar edges and ends deburred; cold-drawn surfaces bright and uniform.
- Tube bright-annealed inside and out for decorative and fitting service.
- Alpha:beta phase balance confirmed by microstructural examination per lot.

6.3 Quality Control Test List

Test	Standard / method	Frequency
Chemical analysis (full)	ASTM E478 / E536 (Cu, Zn, Pb, Fe, Sn, all)	Each heat
Tensile / elongation	ASTM E8 / E8M	Each lot
Hardness (HRB / HV)	ASTM E18 / E92	Each lot
Microstructure (alpha + beta)	ASTM E3 / E407; phase balance confirmed	Each lot
Grain size (alpha phase)	ASTM E112 (intercept method)	Each lot (annealed)
Dimensional inspection	Calipers / micrometers / laser	Each piece / sample
Bend / formability test	ASTM E290 / customer method	Each lot (strip / bar)
Hydrostatic / pneumatic test	ASTM B135 (tube)	Each tube
Surface / visual inspection	ASTM acceptance criteria; eddy-current (tube)	Each piece
Hot-shortness check	Visual on hot-worked surfaces; no intergranular cracks	Each lot

Microstructural examination to confirm alpha:beta phase balance is mandatory for C28000 because the phase ratio - controlled by the Cu/Zn ratio within the 59-63% Cu range - directly determines hot-working behaviour, strength, and ductility. Hot-shortness inspection ensures the hot-working temperature window was correctly managed. Verify all values against the MTC.

7. Fabrication, Welding & Service Considerations

C28000 is the benchmark hot-worked structural brass. Its two-phase alpha-plus-beta microstructure means that the fabrication strategy is fundamentally different from single-phase alpha brasses (C26000, C27000): C28000 is shaped primarily by hot working - hot rolling, hot forging, hot extrusion, hot stamping - where the beta phase is ductile and low-flow-stress. Cold forming is limited because the beta phase is brittle at room temperature; severe cold drawing, deep drawing or cold heading will crack the beta phase. After hot working, a moderate amount of cold finishing (drawing, rolling) is applied for dimensional accuracy and surface finish, but the extent is limited. C28000 solders and brazes readily, and is itself widely used as a brazing filler metal (spelter). The guidance below covers the fabrication and service practices that exploit C28000's hot-working advantage and avoid its known limitations.

7.1 Forming & Joining

- Hot formability: excellent - hot rolls, forges, extrudes and stamps readily; beta phase is ductile at 700-800 C.
- Cold formability: limited - beta phase is brittle at room temperature; avoid severe cold drawing, deep drawing or cold heading.
- Cold finishing: moderate cold drawing or rolling for dimensional accuracy only; limited reduction per pass.
- Annealing: 700 - 750 C, air cool; restores homogeneous alpha+beta structure after cold work.
- Soldering: excellent; surfaces tin readily with tin-lead and lead-free solders after proper fluxing.
- Brazing: excellent as a joint member and as a filler metal (spelter) for steel-to-copper torch/furnace brazing.
- Welding: gas-shield (GTAW / TIG, GMAW / MIG) acceptable for non-critical joints; oxy-acetylene and resistance welding good.
- Machining: fair (Type I continuous chip, ~40% machinability rating); use free-cutting C36000 for high-speed turning.
- Polishing / plating: takes a bright polish and accepts nickel, chrome, tin and decorative plating readily.
- Hot-working temperature window: 700 - 800 C; avoid overheating above ~830 C to prevent beta-phase embrittlement and hot shortness.

7.2 Service Limits & Design Notes

C28000 can operate continuously up to about 200 °C for pressure-containing and structural code applications; for non-pressure decorative and architectural service, higher temperatures are acceptable for short periods. Softening of cold-finished tempers begins near 250 °C, so cold-finished structural parts should not see sustained service above this level without re-annealing consideration. Galvanically, C28000 is compatible with other copper alloys and with steel; it should be insulated from aluminium and from passive stainless steel in conductive media to avoid galvanic attack. The principal service limitation is dezincification - selective loss of zinc - in acidic, high-chloride or stagnant-water environments. For potable-water or marine tube service, specify an inhibited brass (C44300, C68700) or cupronickel (C70600 / C71500) instead. C28000 should also be avoided in ammonia-bearing or ammonia-producing environments, where plain brasses can suffer season cracking (stress-corrosion cracking); relieve internal stress by stress-relief anneal (250 - 300 °C) for parts carrying residual cold work in ammonia service. The beta phase, in particular, is more susceptible to stress-corrosion cracking than alpha, so stress relief is especially important for cold-finished C28000 in ammonia service.

7.3 Design Practices

- Specify C28000 for hot-worked structural components (sheet, plate, bar, forgings) where strength and economy matter more than cold formability.
- For cold-formed thin-wall parts (deep drawing, cartridge cases), use C26000 (70/30) instead - it has superior cold ductility.
- For high-speed machined hardware, switch to free-cutting C36000 (leaded) and accept lower formability and corrosion resistance.
- For potable-water or marine tube service, use inhibited brass (C44300, C68700) or cupronickel (C70600, C71500) - never plain C28000.
- Control the hot-working temperature window (700-800 C) to ensure beta-phase ductility and avoid hot shortness.
- Control the Cu/Zn ratio within the 59-63% Cu range to ensure consistent alpha:beta phase balance for predictable hot-working behaviour.
- For ammonia-bearing service, stress-relief anneal (250-300 C) all cold-finished C28000 parts to prevent season cracking.
- For decorative plated finish, C28000 takes polish, nickel, chrome and tin plating readily.
- For brazing applications, C28000 (or its brazing-alloy variant) is an effective spelter for torch, furnace and induction brazing of steel and copper.
- For architectural sheet and trim, C28000 offers good corrosion resistance in rural, urban and marine atmospheres and an attractive golden colour.

8. About Gnee Metal

Gnee Metal is a supplier of copper and copper-alloy products for export markets. Our ISO 9001 / 14001 / 45001 certified plants serve customers in North America, Europe, the Middle East and Southeast Asia with C28000 Muntz Metal sheet, strip, plate, rod, bar, wire, tube, extrusions and forgings for architectural, structural, marine hardware, condenser plate, brazing spelter and general fabrication applications.

We provide project-specific mill test certificates (EN 10204 3.1 / 3.2) with certified composition, alpha:beta phase balance, grain-size and mechanical data, third-party inspection by SGS / BV / TUV, and value-added services including custom cutting, slitting, blanking, hot-forged shapes, precision cold finishing, and technical consultation to help you select the correct grade, Cu/Zn ratio, temper and phase balance for your application. Contact us for a quote or for assistance.

Item	Detail
Website	chinacopperalloys.com
Email	sales@gneemetal.com
Certificates	ISO 9001 / ISO 14001 / ISO 45001
Third-party	SGS, Bureau Veritas, TÜV