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PRODUCT DATA SHEET

70/30 Brass Alloy 260 UNS C26000

Copper Alloys

Also known as Cartridge Brass, Spinning Brass, Spring Brass

Composition, AS1572-1998

Copper		Lead	Iron	Zinc
Min	Max	Max	Max	Max
68.5	71.5	0.07	0.05	Remainder

Equivalent Alloy Specifications

Specification	Designation
UNS	C26000
ISO	CuZn30
BSI	CZ106
JIS	C 2600

Specification	Product Form
AS1566	Rolled flat products
AS1567	Wrought rods, bars & sections
AS1571	Seamless tubes for air conditioning & refrigeration

Australian Product Specifications

Mechanical Properties

	Product	Temper	Tensile Strength, MPa, min	Elongation, %, min	Hardness, HV
AS1566, Rolled flat products, & AS1567, Wrought rods, bars & sections.	Sheet & Flats	Annealed			< 110
	Sheet & Flats, <= 2.0 mm	½ hard	360	20	110 – 135
	Sheet & Flats, 2.1 – 3.2 mm	½ hard	340	20	100 – 125
	Rod & square bar >6mm	O	280	45	
	Rod & square bar >6mm	M	340	28	
	Sheet & Flats, <= 2.0 mm	Hard	420	3	135 – 165
Sheet & Flats, 2.1 – 3.2 mm	Hard	360	3	> 125	

Available Forms Austral Wright Metals can supply this alloy as coil, sheet, plate, rods, bars, sections. See alloy C26130 (formerly alloy 259) for tube & fittings.

General Description 70/30 brass has excellent ductility and good strength. It is often used where its deep drawing qualities are needed. The alloy is the most common brass in sheet form.

The alloy consists of the face centred cubic alpha phase, and has the optimum combination of strength and ductility in the copper-zinc series.

C26000 has the distinctive clear bright yellow colour normally associated with 'brass'.

Typical applications. Architecture, grillwork, appliances, drawn & spun containers and components, radiator cores and tanks, electrical terminals, plugs and lamp fittings, locks, door handles, name plates, plumbers hardware, fasteners, cartridge cases, cylinder liners for pumps.

PHYSICAL PROPERTIES

Property	Metric Units	Imperial Units
Melting Point (Liquidus)	965°C	1770°F
Melting Point (Solidus) (eutectic)	910°C	1670°F
Density	8.58 gm/cm ³ @ 20°C	0.310 lb/in ³ @ 68°F
Specific Gravity	8.58	8.58
Coefficient of Thermal Expansion	20.0 x 10 ⁻⁶ /°K (20 - 300°C)	11.0 x 10 ⁻⁵ /°F (68 - 572°F)
Thermal Conductivity	120 W/m.°K @ 20°C	70 BTU/ft ³ /ft/hr/°F @ 68°F
Thermal Capacity (Specific Heat)	375 J/kg.°K @ 20°C	0.09 BTU/lb/°F @ 68°F
Electrical Resistivity (Annealed)	6.2 microhm.cm @ 20°C	37 ohms (circ mil/ft) @ 68°F
Electrical Conductivity (Annealed)	0.16 microhm ⁻¹ .cm ⁻¹ @ 20°C	28% IACS
Temperature Coefficient of Electrical Resistance (Annealed)	0.0015 / °C @ 0 - 100°C	0.0008 / °F @ 32 - 212 °F
Modulus of Elasticity (tension)	110 GPa @ 20°C	16.0 x 10 ⁶ psi @ 68°F
Modulus of Rigidity (torsion)	40 GPa @ 20°C	6.0 x 10 ⁶ psi @ 68°F
Poisson's Ratio	0.33	0.33

FABRICATING PROPERTIES

Cold Working Capacity	Excellent
Hot Working Capacity	Fair
Hot Working Temperature	725 - 850°C
Annealing Temperature	375 - 650°C
Stress Relieving Temperature	250 - 300°C
Machinability Rating	30% of free cutting brass (C36000)
Polishing/Electroplating Finish	Excellent

JOINING PROPERTIES

Soldering	Excellent
Brazing	Excellent
Oxy-Acetylene Welding	Good
Gas Shielded Arc Welding (GTAW/TIG, GMAW/MIG)	Fair
Coated Metal Arc Welding (Manual electrodes)	Not recommended
Resistance Welding	- Spot Good - Seam Good

Corrosion Resistance

C26000 has good corrosion resistance to weathering and very good resistance to many chemicals. It may undergo dezincification in stagnant or slowly moving salt solutions, brackish water or acidic solutions. Although it will resist most waters, C26130 is preferred as it contains a small arsenic addition which inhibits corrosion.

C26000 should not be used in contact with ammonia or ammonia compounds, as it may suffer stress corrosion cracking. Beware of corrosion inhibitors in piping systems containing carbon steels, which should be checked for compatibility with alloy C26000.

70/30 brass should not be used with acetic acid, acetylene, brines, calcium chloride, moist chlorine, chromic acid, hydrochloric acid, mercury or its compounds, nitric acid and sodium hypochlorite. Please consult Austral Wright Metals for your specific application.

Phase Diagram & Mechanical Properties of the Brasses

