

Sales Offices	Phone	Fax
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Melbourne	03 9409 8500	03 9408 3946
Sydney	02 9827 0790	02 9757 4486
Perth	08 9258 2600	08 9358 6206

PRODUCT DATA SHEET

Yellow Brass UNS C27400

Copper Alloys

Chemical Composition

(% maximum, unless shown as range)

	Copper	Iron	Lead	Zinc
Maximum/ Range	61.0 - 64.0	0.05	0.10	Rem.
Nominal	62.5	-	-	37.5

Note: Copper + Sum of Named Elements, 99.7% minimum.

Applicable Specifications

Product	Specification
Tube	ASTM B135
Wire	ASTM B134

Common Fabrication Processes

Blanking, Drawing, Forming and Bending, Roll Threading and Knurling, Shearing, Spinning, Squeezing and Swaging, Stamping

Fabrication Properties

Joining Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Oxyacetylene Welding	Good
Gas Shielded Arc Welding	Fair
Coated Metal Arc Welding	Not Recommended
Spot Weld	Good
Seam Weld	Not Recommended
Butt Weld	Good

Forming Technique	Suitability
Capacity for Being Cold Worked	Excellent
Capacity for Being Hot Formed	Fair
Machinability Rating	35

Typical Mechanical Properties at 20°C

Temper	Tensile Strength	Yield Strength (0.5% extension under load)	Elongation	Rockwell Hardness	
	MPa	MPa		B	F
H80	510	379	10	80	-
OS025	386	159	50	-	82

Austral Wright Metals stock this alloy as 0.1 mm brass shim with hardness in the range 130 – 165 Vickers (72 – 85 Rockwell B)

Physical Properties

	Metric	US Customary
Melting Point - Liquidus	916°C	1680°F
Density	8.44 gm/cm ³ @ 20°C	0.305 lb/in ³ at 68°F
Specific Gravity	8.44	8.44
Electrical Conductivity	0.161 MegaSiemens/cm @ 20°C	27 %IACS @ 68°F
Thermal Conductivity	116.0 W/m · °K at 20°C	67.0 Btu · ft/(hr · ft ² · °F) at 68°F
Coefficient of Thermal Expansion	20.5 · 10 ⁻⁶ per °C (20-300°C)	11.4 · 10 ⁻⁶ per °F (68-572°F)
Specific Heat Capacity	377.1 J/kg · °K at 293°K	0.09 Btu/lb/°F at 68°F
Modulus of Elasticity in Tension	103,400 MPa	15,000 ksi
Modulus of Rigidity	38,610 MPa	5,600 ksi

Tempers Most Commonly Used

Other	
TUBE	H55, H80, O50, O60
WIRE	H01, H02, H03, H04, H06, H08, H10, OS015, OS025, OS035, OS050, OS070

Typical Uses

Industrial

Cold Headed Parts

Plumbing

Plumbing Accessories, Plumbing Trap Tube, Traps

General Engineering

Shim stock