TECHNICAL DATA SHEET

PRODUCT: COPPER ALLOY UNS-C62500

PRODUCT BASIC INFORMATION:

Alloy:	**UNS-C62500**	**Aluminum-Iron Bronze**
Form:	--	
Temper:		--
Dimension:	--	
Surface Finish:	--	
Similar Alloys	UNS C95500 - UNS C95400 - UNS C95800 - UNS C95410 - UNS C62400 - UNS C95820	
Application:	General Use	

CHEMICAL COMPOSITION:

Element		**Percentage (%)**
Aluminum	**(Al)**	12.5 - 13.5
Silicon	**(Si)**	--
Iron	**(Fe)**	3.5 - 5.0
Copper	**(Cu)**	82.7
Manganese	**(Mn)**	<= 2.0
Magnesium	**(Mg)**	--
Lead	**(Pb)**	--
Zinc	**(Zn)**	--
Titanium	**(Ti)**	--
Cadmium	**(Cd)**	--
Remainder Total		<= 0.50

MECHANICAL PROPERTIES:

Properties	Metric	Imperial
Tensile strength	690 MPa	10000 psi
Tensile Strength, Yield	380 MPa	55100 psi
Elongation	1.0%	1.0%
Elastic modulus	110 GPa	16000 ksi
Shear Modulus	42.3 GPa	6140 ksi
Fatigue Strength	460 MPa	66700 psi

PHYSICAL DATA :	Metric Units	Imperial Unit
Melting Point (Liquidus)	1052 °C	1926 °F
Melting Point (Solidus)	1047 °C	1917 °F
Density	7.21 g/cc @ 20°C	0.260 lb/in³ @ 68°F
Specific Gravity	--	--
Coefficient of Thermal Expansion	--	--
Thermal Conductivity	38.9 W/mK @ 20°C	270 BTU-in/hr-ft²-°F
Thermal Capacity (Specific Heat):	0.380 J/g-°C	0.0908 BTU/lb-°F
Electrical Conductivity	10%	IACS
Electrical Resistivity:	0.0000172 Ω.cm @ 20°C	--
Modulus of Elasticity (tension)	110 GPa @ 20°C	16000 ksi
Modulus of Rigidity (torsion)	--	--
Poisson's Ratio	--	--

PROCESSING PROPERTIES:	METRIC	ENGLISH
Annealing Temperature:	600 - 650 °C	1110 – 1200 °F
Hot-Working Temperature:	745 - 850 °C	1370 - 1560 °F
Recrystallization Temperature:	--	--

DESCRIPTIVE PROPERTIESD:	METRIC	ENGLISH
Velocity of Sound:	--	--

OTHER PROPERTIES:

Typical Applications	The copper alloy UNS C6240 are used in pump and valve components for industrial process streams, high strength fasteners, marine equipment, and pole line hardware.
Machinability	The machinability rating of the UNS C62500 copper alloy is 20.
Weldability	Copper alloy can be welded using coated metal arc welding, brazing, gas shielded arc welding, seam welding, spot welding, and butt-welding methods. It is suggested that soldering and oxyacetylene welding techniques should not be used for welding these alloys.
Heat Treatment	---
Hot Working	UNS C62500 has good hot forming capacity.
Cold Working	--
Annealing	Annealing of UNS C62500 can be performed at temperatures ranging from 594 to 650°C (1100 to 1200°F).
Forging	UNS C62500 copper alloys can be forged at temperature ranging from 746 to 844°C (1375 to 1550°F). Hot forgeability rate of UNS C62500 copper alloys is 80.
Hardening	--

Product	Specification
ROD - Welding Application	**AWS** - A5.13 - SURFACE WELDING RODS AND ELECTRODES

APPLICATIONS

Principal Design Features	UNS C62500 aluminum bronze alloy is a fantastic metal for industrial and electrical applications. The alloy's superb mechanical and physical properties make it an excellent alternative to leaded-bronze alloys, and its resistance to seawater and corrosion makes it perfect for marine environments. Maintaining the right welding procedures and matching filler metals is critical to avoid significant rework or damage to the final product. Regardless of the specific type of manufacturing, UNS C62500 aluminum bronze is a great choice for creating high-quality, reliable products.

PACKAGING, HANDING & STORAGE:

Package:	Packed in waterproof Kraft, fastened by steel straps on wood pallets, suitable for handling, loading and unloading from the trunks or containers, suitable for export ocean forwarding.
Handling:	Prevent the goods hurting the people who are moving, loading, unloading, especially pay attention to the rolling and dropping for the coils.
Storage:	Stored in indoor area on plain floor, free away from moisture, water, snow, animal oils and dye wastes, avoid storing with acid or basic chemical goods.