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HT-37

TECHNICAL DATA

NOMINAL COMPOSITION	Copper	52.5% ± 1.5
	Manganese	38.0% ± 2.0
	Nickel	9.5% ± 1.0
	Other Elements, Total	0.50% Max
PHYSICAL PROPERTIES	Color	Silver
	Solidus	1616°F (880°C)
	Liquidus	1697°F (925°C)
	Recommended Brazing Temperature	1747-1797°F (953-981°C)
	Density (g/cm³)	7.66
	Elongation	24%
	Shear Strength (MPa)*	305
Tensile Strength (MPa)*	595	
USES	HT-37 is primarily used in joining tungsten carbides, tool steels, cast irons, stainless steels and nickel based heat resistant alloys. It provides high strength, good ductility, and short-term oxidation resistance above 1000°F (538°C).	
	HT-37 can be brazed by a variety of different processes including induction, vacuum, and atmospheric furnace brazing. It is useful in brazing materials that may be harmed by the higher temperatures used in copper brazing or materials susceptible to grain boundary penetration by boron-containing filler metals. HT-37 also has excellent gap filling capabilities and develops maximum strength characteristics with clearances of 0.005-0.010". It's important to ensure that the base components are properly cleaned prior to the application of the braze alloy.	
BRAZING CHARACTERISTICS	The properties of a braze joint are dependent upon the base metals, joint design and clearance, and brazing technique.	
	*The mechanical properties listed above were determined from lap joints of tungsten carbide and SAE 4340 steel tested at ambient temperatures.	
PROPERTIES OF BRAZED JOINTS		
SPECIFICATIONS	HT-37 conforms to: Unified Numbering System (UNS) C69950 and Society of Automotive Engineers (SAE) / AMS 4764, Nicuman 37, HT-095	
AVAILABLE FORMS	Strip, engineered preforms, specialty preforms, powder and paste	
SAFETY INFORMATION	The operation and maintenance of brazing equipment or facility should conform to the provisions of American National Standard (ANSI) Z49.1, "Safety in Welding and Cutting."	

Individuals requiring further information and Engineering Specification Documents may wish to contact the Engineering Society for Advanced Mobility, Land Sea Air and Space, The Society of Automotive Engineers <http://www.sae.org/> (SAE AMS) or The American Welding Society (AWS) <http://aws.org/>

NOTE:

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