

## ◆ INTRODUCTION

Aufhauser SilverAlloy A-50Ni2 is low melting, free-flowing, cadmium-free, and suitable for use in joining "300" series stainless steels in food, medical and dental fields. It is also used extensively in joining small tungsten carbide inserts in cutting tools.

## ◆ APPLICATIONS

Aufhauser A-50Ni2 is used for joining most ferrous and non-ferrous metals except aluminum and magnesium.

## ◆ CHEMICAL COMPOSITION

<u>Silver</u>	<u>Copper</u>	<u>Zinc</u>	<u>Nickel</u>	<u>Max Impurities</u>
49.0-51.0	19.0-21.0	26.0-30.0	1.5-2.5	0.15

## ◆ PHYSICAL and MECHANICAL PROPERTIES

	Solidus	1220 °F (660 °C)
	Liquidus	1305 °F (707 °C)
	Brazing Range	1310-1550 °F (710-843 °C)
	Specific Gravity	8.98
	Density	4.73 TO/cu.in.
	Electrical Conductivity	15 %IACS
	Electrical Resistivity	11.75 μohm-cm
	Color	Light Yellow



## ◆ SPECIFICATIONS MEET or EXCEED

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|---|---|
| <ul style="list-style-type: none"> <li>- AWS A5.8 BAg-24</li> <li>- ASME BAg-24</li> <li>- AMS 4788</li> <li>-</li> </ul> | <ul style="list-style-type: none"> <li>- ISO 3677: B Ag 50 Zn Cu Ni 660-750</li> <li>- UNS P07505</li> <li>- EN 17672 Ag 450</li> </ul> |
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## ◆ AVAILABLE FORMS

- Powder/Paste
- Wire, Rods, Foil
- Specialty preforms per customer specifications

## ◆ STANDARD ROD SIZES AND DIAMETERS

- Diameters: 1/32", 3/64", 1/16", 3/32", 1/8"
- Sizes: 1, 3, 5, or 50 troy ounces
- Lengths: 18, 20, or 36 inches

## ◆ PROPERTIES OF BRAZED JOINTS:

Generally, the joint strength using SilverAlloy A-50Ni2 will surpass the strengths of the base metals. Strength is a function of the base metals being joined, type of joint, design of joint, joint clearances and brazing procedures.

## ◆ ADDITIONAL INFORMATION

Addition of nickel to the silver-copper zinc alloy imparts corrosion properties which retards joint or interface corrosion of the brazed assembly. The nickel element in SilverAlloy A-50Ni2 also improves bond strength when joining of tungsten carbide cutting tips. A-50Ni2 is a suitable replacement to the cadmium containing SilverAlloy Cd-50Ni3 alloy. Its low liquidus of 1305 °F reduces surface oxidation and sensitization to stainless steels.