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Cadmium Free
SilverAlloy A-54Ni1

♦ INTRODUCTION

Aufhauser Silver Alloy A-54Ni1 is used for service temperatures up to 700 °F (370 °C). A-54Ni is a silver brazing alloy suitable for furnace brazing due to its low zinc content. Its broader melting range (250 °F) is helpful where clearances are not uniform.

♦ APPLICATIONS

Aufhauser A-54Ni1 is used for joining most ferrous and non-ferrous metals except aluminum and magnesium.

♦ CHEMICAL COMPOSITION

Silver	Copper	Zinc	Nickel
53.0-55.0	Remainder	4.0-6.0	0.5-1.5

♦ PHYSICAL and MECHANICAL PROPERTIES

Solidus:	1325 °F
Liquidus:	1575 °F
Brazing Range:	1575-1775 °F
Specific Gravity:	9.63
Density:	5.07 T.Oz./Cu.In
Electrical Conductivity:	49.08 %IACS
Electrical Resistivity:	3.46 μohm-cm
Color:	Yellow White

♦ SPECIFICATIONS MEET or EXCEED

- AWS A5.8 BAg-13
- ASME BAg-13
- AMS 4772

♦ STANDARD SIZES AND DIAMETERS

- Diameters: 1/32”, 3/64”, 1/16”, 3/32”, 1/8”
- Sizes: 1, 3, 5, or 50 troy ounce

♦ PROPERTIES OF BRAZED JOINTS:

Generally, the joint strength using SilverAlloy A-54Ni1 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. The recommended maximum operating temperature for SilverAlloy A-54Ni1 is up to 700°F (370°C).

♦ ADDITIONAL INFORMATION

During melting, SilverAlloy A-54Ni1 passes from the solid state to a mushy or plastic state and progressively to a liquid. If heated slowly through this plastic state (1325-1575 °F) the liquid portion may flow from the solid portion. This causes a separation of the alloy into a low temperature melting (solid) portion. This phenomenon is called liquation. The high temperature melting portion will melt only above the normal brazing temperature of SilverAlloy A-54Ni1. For this reason, SilverAlloy A-54Ni1 should be heated rapidly through the melting range.