

# ALPHA<sup>®</sup> Sn42 Bi57.6 Ag0.4 Solder Wire

## LEAD FREE SOLID SOLDER WIRE

### DESCRIPTION

ALPHA Sn42 Bi57.6 Ag.4 Solid Solder Wire is primarily used for rework operations and touch up soldering of SnBiAg based electronics assemblies.

### FEATURES & BENEFITS

- Provides Sn42 Bi57.6 Ag.4 alloy in a convenient to use wire form.
- Available in various diameters of wire that are suitable for electronics assembly processes.
- Easier to use and more versatile than SnBiAg alloy Solid Solder Sticks
- Enables rework of SnBiAg alloy solder joints while maintaining the original alloy composition. This avoids the need for additional reliability testing of solder joints reworked with an alternative alloy.

### PRODUCT INFORMATION

Alloy: Sn42% Bi57.6% Ag.4%  
Diameters: 0.6mm. Other diameters available on request.  
Packaging: 0.25kg Spool; 5kg Box

### APPLICATION

There is no “ideal” tip temperature, since that will depend on what you are soldering, and how thermally demanding the assembly is. In general, tip temperatures of between 200 °C and 300 °C would be appropriate.

For fluxing, ALPHA CVP-520 Flux Gel is available in 10g syringes, 30g syringes and 125g jars for use with ALPHA Sn42 Bi57.6 Ag.4 Solid Solder Wire.

All components used with ALPHA Sn42 Bi57.6 Ag.4 Solid Solder Wire must be lead-free to eliminate the formation of tin/lead/bismuth intermetallic which has a melting point under 100°C.

### TECHNICAL DATA

Melting Point:	137.1°C
Thermal Conductivity:	24.5 W/M/K
Coefficient of Thermal Expansion:	17.1 ppm/°C
Ultimate Tensile Strength:	67 MPa

### SAFETY

Observe standard precautions for handling and use. Use in well ventilated areas. DO NOT SMOKE.

ALPHA Sn42 Bi57.6 Ag.4 Solid Solder Wire is not considered toxic. However, when used with ALPHA CVP-520 Flux Gel in typical soldering applications will generate a small amount of decomposition and fumes. These fumes should be adequately exhausted / vented for operator safety and comfort.

### STORAGE

When properly stored (ambient temperatures and dry) a shelf life of 1 year is guaranteed.

SM #1136-1 2014-10-01

ALPHA Global Headquarters  
300 Atrium Drive, Somerset, NJ 08873 USA • 1-800-367-5460 • [www.alpha.alent.com](http://www.alpha.alent.com)

*The information contained herein is based on data considered accurate and is offered at no charge. No warranty is expressed or implied regarding the accuracy of this data. Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated.*

ALPHA is a registered trademark of Alpha Metals, Inc.

© 2014 ALPHA