# **TECHNICAL DATA SHEET**



# SN42/BI57/AG1 SOLDER ALLOY

#### **FEATURES**

- Lead-Free Alloy
- High Purity
- Low Melting Temperature 138°C
- Good Fatigue Characteristics
- Density of 8.6 g/cm<sup>3</sup>

### **DESCRIPTION**

Sn42/Bi57/Ag1 is composed of 42 percent Tin, 57 percent Bismuth and 1 percent silver. Typical applications include lead-free electronics assembly, second-sided reflow, and other low-temperature soldering applications. This alloy is available in solid wire, foil, powder, solder paste, bar, ingot, and anode. Sn42/Bi57/Ag1 has shown to offer superior fatigue characteristics as compared to Sn42-Bi58. Sn42/Bi57/Ag1 has a melting temperature of 138°C (280°F).

IMPURITY LEVELS TO IPC-J-STD-006 IN PERCENT

Impurity Levels To IPC-J-STD-006 In Percent			
Fe: 0.05	Cd: 0.01	Cu: 0.08	
Al: 0.005	In: 0.01	Sb: 0.50	
Ni: 0.05	Zn: 0.005	Pb: 0.10	

## **MAJOR ALLOY INGREDIENTS IN PERCENT**

Sn	Bi	Ag
$42 \pm 0.5$	$57 \pm 0.5$	$1 \pm 0.2$

## **HANDLING & STORAGE**

If this alloy is used in wire solder, the product will have a shelf life of 2 years when stored in environmentally controlled conditions. Consult the Material Safety Data Sheet for specific handling procedures.

# **FLUX COMPATIBILITY**

Sn42-Bi57-Ag1 is compatible with most electronic grade fluxes.

#### **CLEANING**

Refer to data sheets provided by flux manufacturer.

#### **SAFETY**

Use with adequate ventilation and proper personal protective equipment. Refer to the accompanying Safety Data Sheet for any specific emergency information. Do not dispose of any hazardous materials in non-approved containers.

+ All information for reference only. Not to be used as incoming product specifications or for process design. Consult Certificate of Analysis for product specific information.

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