

Bi57Sn43

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SDS 950006



SUMMARY

Alloy Bi57Sn43 is a lead-free eutectic alloy with a melting point of 139°C for applications on temperature sensitive components.

ALLOY	Bi57Sn43
PROCESS	
Leadfree	9
Leaded	1
First filling*	9
Refilling*	9

*follow Application Note

INDUSTRY APPLICATION	
Standard electronics	9
Industrial electronics	6
Hi-Rel electronics (automotive)	1

PROCESS CAPABILITY	
Wave soldering	8
Selective soldering	8
Dip soldering	8
Wire tinning	1
Process: Ambient	8
Process: N2 partial	9
Process: N2 vull tunnel	9
Reduces dross	8
Reduces bridging	8
Improves PTH filling	9
Shiny joint appearance	6

Legend	
<i>Especially made for this purpose</i>	9 - 10
<i>Generally qualified for this purpose</i>	7 - 8
<i>Generally usable, but not the best choice</i>	5 - 6
<i>Generally not usable for this purpose</i>	3 - 4
<i>Wrong choice</i>	1 - 2

Check material compatibility with every process change.

Read AN before use.

Read MSDS before use.

Disclaimer:

This information is intended as advice to the best of our knowledge. The provided data is based on our own measurements, they do not provide any guaranteed properties nor are these delivery specifications. Due to the versatility of materials, applications and taking in consideration the industrial property rights of third parties, Balver Zinn Josef Jost GmbH & Co. KG cannot take any liability.

PROPERTIES

Manufacturing standard	DIN EN ISO 9453	
Alloy Code	Bi57Sn43	
Alloy composition	Bi57Sn43	
ANSI/J-STD-006C: 2013	not compliant	
DIN EN ISO 9453:2021-01	Alloy 301	
Liquidus	[°C]	139
Solidus	[°C]	139
Recommended working range*	[°C]	180 - 200

*follow Application Note

COMPOSITION

Bismuth	[Bi]	Remainder
Tin	[Sn]	41 - 43
Lead	[Pb]	max. 0.07
Silver	[Ag]	max. 0.1
Copper	[Cu]	max. 0.05
Nickel	[Ni]	max. 0.01
Germanium	[Ge]	-
Aluminium	[Al]	max. 0.001
Arsenic	[As]	max. 0.03
Gold	[Au]	max. 0.05
Cadmium	[Cd]	max. 0.002
Iron	[Fe]	max. 0.02
Indium	[In]	max. 0.1
Antimony	[Sb]	max. 0.1
Zinc	[Zn]	max. 0.001

SHAPE AND DIMENSION*

Ingot	1 kg	LxWxH [mm]	325x28x15
Ingot with loop	3.7 kg	LxWxH [mm]	-
	4 kg	LxWxH [mm]	-
Bar	Rectangle	[mm]	-
	Triangular	[mm]	400x10x10
Pellet		[mm]	-
Solid wire	⌀	[mm]	-

*other dimensions on request