Product data sheet

BALVER ZINN®

Bi57Sn43

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Language English

SDS 950006

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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	9
Reduces dross	8
Reduces bridging	8
Improves PTH filling	9
Shiny joint appearance	6

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

Check material compatibility with every process change.

Read AN before use.

Read MSDS before use.

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