Solder paste NP303-VLP103-T4

GENMA EUROPE

Product description

GENMA solder paste - our halogen-free "ultra low void" solder paste reaches void rates of less than 5% even with large-area components. The NP303-VLP103-T4 solder paste is designed for use in reflow ovens without a vacuum and impresses with very low void rates. During the soldering process, the ingredients in the flux that lead to voids dissolve. Therefore, compared to other solder pastes, our NP303-VLP103-T4 solder paste can achieve significantly lower void rates. The excellent wetting facilitates gas emission from the flux, so that voids are reduced. Conventional solder pastes usually have a void rate of 15% or more, with our "ultra low void" paste the void rate can be reduced to less than 5%. The solder paste has a very good printing behavior thanks to stable viscosity and thixotropy. The lower the void rates of a solder paste, the more stable and reliable the connection. In power electronics, which is strongly influenced by the heat generated, low void rates are particularly important. A low void rate is particularly important for solder joints with large surfaces such as LGA modules and CuOSP / QFN and SON components. The solder connection with very few voids allows the current to flow through almost the entire surface, so less heat is generated and overheating of the electronics can be avoided. Another advantage is that no vacuum reflow oven is needed. This ensures massive cost savings and a significant increase in throughput. The solder paste is designed especially for large components with large surfaces, but the same excellent results are achieved with small components.

Technical properties

	Specific value	Testing method
Alloy	Sn 96,5 / Ag 3,0 / Cu 0,5 / SAC305	
Melting temperature range	217 - 221	IEC61189-11
Powder size (µm)	22 - 38, type 4	IPC-TM-650-2.2.14.2
Flux type	ROL0, no clean	IPC J-STD-004B
Printing pitch (mm)	0,4	
Halide content (wt %)	< 0,05	JIS Z 3197 8.1.4.2
Slump in print (mm)	≤ 0,2	IPC-TM-650-2.4.35
Slump in heat (mm)	<0,3	
Insulation resistance (Ω)	≥ 1 x 10^{11} (40°C 90 % r. L)	JIS Z 3197 8.5.3
Insulation resistance (Ω)	≥ 1 x 10^{8} (85°C 85 % r. L)	JIS Z 3197 8.5.3
Migration test	No migration	JIS Z 3197 8.5.4
Copper mirror test	No corrosion	
Packaging	Jar (0,5 kg) Semco cartridge (0,65 kg, 1,2 kg)	
Transport	With cooling	
Tempering the solder paste	Set to room temperature before opening to avoid condensation.	
Recommended printing speed (mm/s)	20 - 80	
Recommended temperature during print (°C)	25 ± 3	
Squeegee material	Metal, polyurethane, plastic (hardness 70 - 100 shore)	

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	Specific value	Testing method
Recommended squeegee pressure (Mpa/cm squeegee width)	0,1 - 0,3	
Squeegee anglel (°)	40 - 70	
Clearance (mm)	0 - 0,1	
Stencil separation speed (mm/sec)	3 - 11	
Solder paste roll size (mm)	15 - 25	

Compliance

Dated 13.11.2025

Conform with RoHS-Regulation 2011/65/EU and 2015/863/EU.

Contains no substances (SVHC-list) more than threshold (0,1%) according to REACH legislation EG Nr. 1907/2006.

Contains no substances as defined by the Toxic Substance Control Act (TSCA) of the United States Environmental Protection Agency.

Contains no substances according to POP Regulation EU 2019/1021.

Contains no Per- and PolyFuluoroAlkyl Substances (PFAS).

Contains no phthalates or latex.

Contains no substances according to California Proposition 65.

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