

# Kester NP510-LT HRL1

Lead-Free, No-Clean, Low Temperature Application Solder Paste

## For assemblies that have temperature sensitive substrates and components

Kester NP510-LT HRL1 is a low temperature, no-clean, lead-free, zero-halogen solder paste specifically designed for assemblies that require temperature sensitive substrates and components or have high thermally induced high warp signatures due to the designs becoming more complex and thinner. This warping can lead to defects such as HIP and Non-Wet Opens. Using NP510-LT HRL1 can essentially eliminate these defects while providing similar thermal cycling and drop shock performance to SAC305, all while maintaining a peak reflow temperature of <math><200\text{ }^\circ\text{C}</math>.



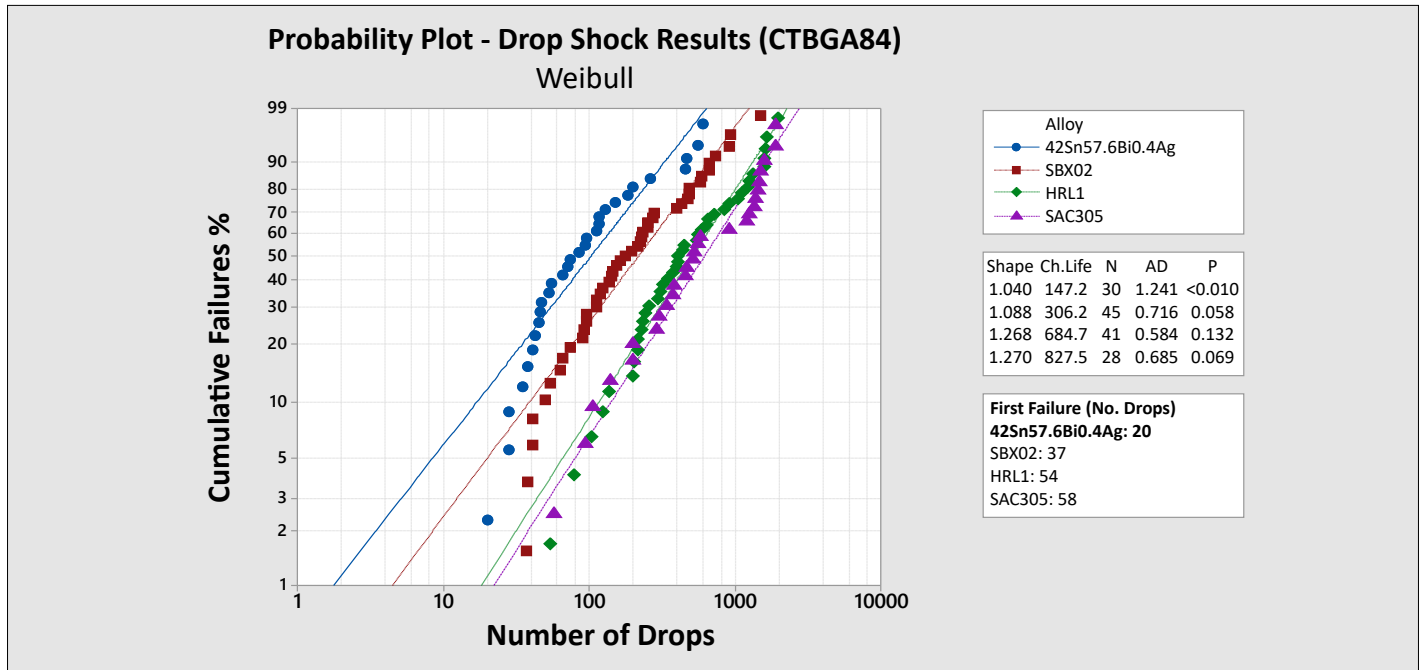
## Key Features

- Lower reflow peak temperature (185 to 195 °C) compared to traditional SAC-based, lead-free alloys
- Reduction in thermally induced board-to-package warpage
- Good solderability on various PCB surface finishes
- Classified ROL0 per IPC J-STD-004B
- Zero-Halogen (none intentionally added)
- Excellent printability above 0.60 area ratio
- Colorless residues for easy post-reflow inspection
- Significantly lower voiding for various packages - BGA, MLG, DPAK, LGA, etc.



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## PERFORMANCE SUMMARY

PROCESS	PERFORMANCE ATTRIBUTE	NP510-LT HRL1
Printing	Print Definition	Consistent fine feature print volumes
	Print Durability (Stencil Life)	8 hour stencil life
	Print Temperature Window	Consistent printing performance at the temperature of 20-25 °C (68-77 °F) and the relative humidity of 30-60% RH
	Print Speed Range	Fine pitch release remains consistent from speeds of 4-4.7 in/sec (100-120 mm/sec)
Reflow	Reflow Process Window	Consistent solderability across all profiles – short, medium or long soak in both air and nitrogen
	Hot/Cold Slump Performance	Meets requirements of IPC J-STD-005B



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