



## Multicore HF108

Henkel's Multicore HF108 is a halogen-free, no-clean, lead-free solder paste, which has a broad process window for printing, reflow, humidity resistance and shows minimal hot slump.





HF108 solder paste has been formulated to give low voiding in CSP via-in-pad joints and excellent solderability over a wide range of reflow profiles in air and nitrogen, and across a wide range of surface finishes including Nickel/Gold, Immersion Tin, Immersion Silver and OSP Copper.

**Product Attribute    Process Benefit**

<b>Halogen-free</b>	HF108 solder paste meets all the current “definitions” of halogen-free <ul style="list-style-type: none"> <li>• no added halogen</li> <li>• measured &lt;900 ppm Chlorine and Bromine and &lt;1,500 ppm total by Oxygen (O<sub>2</sub>) bomb test</li> <li>• reflow in air and/or nitrogen</li> </ul>
<b>Halide-free</b>	Flux classification ROL0 in accordance to J-STD-004
<b>Printing excellence</b>	SAC alloys, with type 3 and type 4 powders <ul style="list-style-type: none"> <li>• suitable for high speed printing demands</li> <li>• low hot slump, reduced bridging for fine pitch printing demands (IPC 21A – 0.15 mm)</li> </ul>
<b>Colorless and pin-testable residues</b>	Improves speed and ease of post-reflow inspection
<b>Low voiding</b>	New chemistries allow pursuit of low void levels (<5%). Low void levels reduce risk of decreased solder joint reliability.

HF108 solder paste has a high tack force to resist component movement during high speed placement. It offers long printer abandon times and excellent resistance to high temperatures and relative humidity.

	Halide-Free	Halogen-Free		
<b>Drivers for Classification</b>	High reliability solder interconnects International standards	REACH Non-government organizations (NGOs)		
<b>Definition</b>	No flux corrosivity or dendritic growth detection Specific requirements to give ROL0 classification	No intentional halogens added to flux Comply to international standards (see below)		
<b>Test Procedures</b>	Well-established Chloride and Bromide halide test measured by titration	NEW – O <sub>2</sub> bomb on flux Ion chromatography on flux		
<b>International Standards</b>	Copper Mirror	no penetration	JPCA-ES-01-1999	Bromine <900 ppm Chlorine <900 ppm
	Silver Chromate	no discoloration		
	Fluoride test	no color change		
	Chloride and Bromide	<0.005%	IEC 61249-2-21	Bromine 900 ppm max. Chlorine 900 ppm max. 1,500 ppm max. (total halogens)
	Flux corrosion	no pitting no color change		
SIR	no discoloration no dendritic growth no corrosion >10 <sup>8</sup> Ω	IPC-401B	Bromine 900 ppm max. Chlorine 900 ppm max. 1,500 ppm max. (total halogens)	

**Henkel Corporation**  
15350 Barranca Parkway  
Irvine, CA 92618  
1.949.789.2500  
1.800.562.8483

**Henkel Europe**  
Hemel Hempstead,  
Hertfordshire, HP2 4RQ  
United Kingdom  
+44.1442.278.000

**Henkel Asia**  
332 Mei Gui South Road  
Waigaoqiao FTZ  
Shanghai 200131 China  
+86.21.3898.4800

**Across the Board,  
Around the Globe.**   
[www.henkel.com/electronics](http://www.henkel.com/electronics)

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