



Multicore MP218



The solder paste you can rely on in any environment

Reduce process variation in challenging climatic environments; cut down on paste wastage and minimize inventory and scrap—just some of the advantages you can expect from using Multicore MP218 solder paste from Henkel.

Today, it's the norm for major electronics manufacturers to carry out assembly in several global locations, whether for delivery expediency or to achieve economical advantage. But going through the source-and-trial process in each market to find solder products that give consistent results can be both time-consuming and expensive.

This is especially true of solder pastes, which are highly sensitive to temperature and humidity variations in the operating environment. A non-ideal combination can cause premature drying or promote excessive moisture absorption by the paste, leading to problems with printing and component placement, or creating solderballing defects during reflow.

Engineered for dependable performance, wherever you must produce

If you need a solder paste you can depend on to work under various harsh climate conditions, and you're not switching to lead-free manufacture just yet, then Multicore MP218 solder paste is designed for you. (If you need an equivalent lead-free product, ask us about LF318 solder paste). Here are some of the benefits you'll enjoy:

MP218 Attribute	Process Benefit
Outstanding humidity resistance – exhibits high coalescence even after 24 hours exposure to 75%RH. In independent testing to IPC ANSI/J-STD-005 and JIS-Z-3284 standards	Reduces process variation due to environmental factors, a particular advantage where assembly is carried out in hot and humid conditions
Superior slump resistance	Reduced bridging
Colorless residues	Better cosmetic appearance
Soft, non-stick pin-testable residues	Improves ease and reliability of in-circuit testing and reduces frequency with which test probes require cleaning
Optimized paste viscosity	Suitable for fine pitch, high speed printing up to 150 mm/s (6 in/s)
Extended open time & tack-life	Reduces material scrap
Halide-free flux classification: ROL0 to ANSI/J-STD-004	High reliability of finished assembly without cleaning
High tack force	Resists acceleration forces during high speed placement, eliminating skewed and missing component and need for rework
Long printer abandon times	Reduces solder paste wastage, increases process efficiency
Excellent solderability	Suitable for use on a wide range of surface finishes including HASL, Ni/Au, immersion Sn, immersion Ag and OSP Cu
Wide printing and reflow process windows	Accommodates a wide range of printer settings and reflow profiles. Suitable for use in air and nitrogen



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Alloy powder data

Available alloys Sn62, Sn63, 63S4* (Anti-tombstone)			
Powder particle size, μm	15-38	15-45 (63S4)	25-45
Multicore powder size coding	ADP	ACP	AGS
Metal loading (% weight)	89.5%	89.5%	89.5 & 90%

*63S4 (Anti-Tombstone Alloy): A drop-in replacement for standard lead alloys, the anti-tombstone alloy works using a phased reflow process where a small amount of SN62 wets both sides of the termination before the SN63 melting point is reached, tack-soldering components to the PCB and delivering a larger assembly process window.

Printing

Multicore MP218 solder paste is available for stencil printing down to 0.4 mm (0.016 in) pitch devices, with type 3 (AGS) powder. Printing at speeds between 25 mm/s (1.0 in/s) & 150 mm/s (6 in/s) can be achieved using laser cut, electro-polished, or electroformed stencils and metal squeegees (preferably 60°).

Reflow

Any available method of heating to effect reflow may be used, including IR, convection, hot belt, vapor phase and laser soldering. Please consult the MP218 Engineering Manual, available from your local Henkel office, for examples of suitable reflow profiles.

Cleaning

Multicore MP218 solder paste residues are no-clean and are designed to be left on the PCB, since they do not pose a hazard to long-term reliability. Should there be a specific requirement for residue removal, this may be achieved using conventional cleaning processes based on solvents such as Multicore MCF800, or suitable saponifying agents. For stencil cleaning and cleaning board misprints, Multicore SC-01 Solvent Cleaner is recommended.

Reliability data

Test	Specification	Results
Copper Plate Corrosion	ANSI/J-STD-004	Pass
Copper Mirror Corrosion	ANSI/J-STD-004	Pass
Chlorides and Bromides	ANSI/J-STD-004	Pass
Surface Insulation Resistance (without cleaning)	ANSI/J-STD-004 Telcordia GR-78-Core JIS-Z-3284	Pass Pass Pass
Electromigration (without cleaning)	Telcordia GR-78-Core JIS-Z-3284	Pass Pass
Flux Activity Classification (without cleaning)	ANSI/J-STD-004	ROLO

Packaging

Multicore MP218 solder paste is supplied in plastic jars, and Semco cartridges. Other packaging types may be available on request.

Storage and shelf life

Multicore MP218 should be stored at 0-10°C. Shelf life is 6 months, provided the solder paste is stored tightly sealed in the original container at 0-10°C.

Further product information

A comprehensive engineering manual containing detailed technical data and application notes is available for Multicore MP218 solder paste. For safe handling information on this product, consult the Material Safety Data Sheet appropriate to your region. Contact your local Henkel technical service helpdesk to obtain copies.