



# Multicore® High-Performance Liquid Fluxes

*Advanced Wave Soldering Efficiency*



With a variety of formulations for various wave soldering processes, Multicore® brand high-performance liquid flux technology is compatible with dual-wave and lead-free processes, delivering outstanding results. From no-clean to low-residue to VOC-free, Multicore® brand fluxes deliver unique properties for individualized manufacturing needs.





# Multicore<sup>®</sup> High Performance Liquid Fluxes

Advanced Wave Soldering Efficiency

Developing liquid flux solutions for modern lead-free and environmentally friendly processes take expertise and ingenuity – two characteristics found throughout the Henkel formulation teams. Through careful process analysis and a complete understanding of chemical interactions and manufacturing requirements, Henkel has developed a broad range of Multicore<sup>®</sup> brand liquid fluxes to suit a variety of applications.

**Multicore<sup>®</sup> MF101<sup>™</sup>** is a high-activity, no-clean, VOC-free liquid flux designed for use on surfaces with low solderability such as oxidized copper. With sustained activity for a wide process window and a low solder balling formulation, **Multicore<sup>®</sup> MF101<sup>™</sup>** is ideal for high-yield dual-wave and Pb-free processes.

Developed specifically to complement lead-free wave soldering, **Multicore<sup>®</sup> MF 200<sup>™</sup>** allows for high-speed soldering on conventional leaded and surface-mount components. Its outstanding through-hole penetration allows for exceptional performance and the minimal

residues of the material reduce contamination to ATE probes.

**Multicore<sup>®</sup> MF300<sup>™</sup>** delivers the ultimate in flux performance. The VOC-free, clear residue, resin-free and lead-free compatible, low solder balling formulation provides manufacturers with an environmentally sound, yet technically superior, liquid flux material.

For manufacturers that require a no-clean solution for difficult-to-solder surfaces, **Multicore<sup>®</sup> MFR301<sup>™</sup>** is the flux of choice. An IPA-based, rosin flux with lead-free compatibility, **Multicore<sup>®</sup> MFR301<sup>™</sup>** provides fast soldering with no bridges or icicles. Its sustained performance delivers a maximum process window and the no-clean formula helps manufacturers reduce operational costs.

**Multicore<sup>®</sup> Hydro-X20<sup>™</sup>** provides an effective alternative for production environments where water cleaning is used. This material is a highly water-soluble flux and eliminates the need for CFC usage. **Multicore<sup>®</sup> Hydro-X20<sup>™</sup>** is odor-free, leaves boards very clean and, when used with dry film resists, leaves no solder balls.

Multicore <sup>®</sup> Liquid Fluxes	Description/Application	% Solids	Acid Value	IPC Class	Application
MF101 <sup>™</sup>	High yield, sustained activity flux for dual wave and lead-free processes. Low solder balling formulation.	6.5 - 7.0	40	ROM0	Spray
MF200 <sup>™</sup>	A general purpose, halide-free flux with sustained activity to extend flux life in dual wave and lead-free wave soldering applications. Suitable for spray flux application systems. Solvent-based flux may be thinned with IPA.	6.4	48.5	ROM0	Spray/Foam
MF300 <sup>™</sup>	General purpose, VOC-free (water-based), no clean, halide-free and resin-free flux with special formulation to minimize solder balling. Compatible with lead-free processes.	4.6	37	ROM0	Spray/Foam
MFR301 <sup>™</sup>	Higher solids, halide-free flux for better wetting on reduced solderability surfaces and to minimize bridging on complex geometries. Fully lead-free and dual wave compatible. Solvent-based flux may be thinned with IPA.	6.5	41	ROM0	Spray/Foam
Hydro-X20 <sup>™</sup>	A high activity, water washable flux designed for the soldering of the most difficult electronic assemblies. Unique activator package enables a wider process window and the soldering of all common electronic surfaces with ease. Residues are readily and completely removed by water wash after soldering. Suitable for lead-free wave soldering.	20	24	ORH1	Spray/Foam

Flux Technology	Rosin	Solids	Flux Application		Pre-Heat		Alloy		Electrical Reliability					
			Spray	Foam	IR	Convection	Selective Soldering	Lead-Free	IPC	Bellcore SIR	Bellcore Electro-migration	QPL/MIL	JIS	Halide-Free
Water-Based	Rosin-Free, No Clean	Low	•	•		•	•	•	•		•			•
	Rosin-Containing, No Clean	Low	•			•	•	•	•	•	•		•	•
Alcohol-Based	Rosin-Free, No Clean	Low	•	•	•	•	•	•	•		•			•
	Rosin-Containing, No Clean	Low	•	•	•	•	•	•	•		•			•
	Water Soluable	High		•	•	•	•	•	•			•		

Across the Board,  
Around the Globe.



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