

Lead-free wave and selective soldering systems require exposing the flux to slightly higher soldering temperatures. Lead-free alloys traditionally wet metal surfaces more slowly than tin-lead. Kester liquid fluxes for lead-free assembly have new activator packages to enable rapid wetting and hole-filling, ensuring reliable product output.

*Formula	985M	959T	2220-VF VOC-Free	2235
	No-Clean	No-Clean	Water-Soluble	Water-Soluble
Application	Spray or Wave Fluxer	Spray or Foam	Spray, Wave or Foam	Spray or Foam
Halide Content %	Halide - Free	Halide - Free	1.6	1.6
Specific Gravity	0.805	0.794	1.060	0.856
Solids %	3.6	2.9	7	11
Compliant	IPC/J-STD-004B Flux Designator ROLO	IPC/J-STD-004B Flux Designator ORLO	IPC/J-STD-004B Flux Designator ORH1	IPC/J-STD-004B Flux Designator ORH1

Kester Part #	Description	Packaging
63-0004-0985	985M No-Clean	1 gallon
64-0004-0985	985M No-Clean	5 gallon
65-0004-0985	985M No-Clean	53 gallon drum
63-0020-0959	959T No-Clean	1 gallon
64-0020-0959	959T No-Clean	5 gallon
65-0020-0959	959T No-Clean	53 gallon drum
63-0056-2220	2220-VF VOC-Free Water-Soluble	1 gallon
64-0056-2220	2220-VF VOC-Free Water-Soluble	5 gallon
65-0056-2220	2220-VF VOC-Free Water-Soluble	53 gallon drum
63-0000-2235	2235 Water-Soluble	1 gallon
64-0000-2235	2235 Water-Soluble	5 gallon
65-0000-2235	2235 Water-Soluble	53 gallon drum

*These products are designed specifically for high performance lead-free applications.

No-Clean Fluxes					
	Alcohol Based			VOC-Free	
Formula	985M	959T	951	979	977
Flux Type	Low Solids No-Clean	Low Solids No-Clean	Rosin-Free Low Solids, No Clean	VOC-Free No-Clean	VOC-Free No-Clean
Percent Solids	3.6	2.9	2.0	4.2	3.25
VOCs (g/liter)	776	770	792	0	0
Specific Gravity	0.805	0.794	0.814	1.015	1.012
Product Characteristics	Designed for the wave soldering applications and gives excellent hole fill on thick board assemblies.	Designed for the wave soldering of conventional and SMT board assemblies. Developed to minimize the formation of micro-solderballs.	Very low solids, rosin free, foam and spray application flux. Practically no residue after the soldering process.	Developed to reduce bottomsides micro-solder balling and bridging on glossy laminates and between connector pins. Designed as a spray flux, 979's activation system provides excellent wetting producing complete and consistent hole-fill.	Developed to reduce bottomsides micro-solder balling and bridging. The wetting system is designed to allow for a larger process window and can survive the longer dwell times in extremely turbulent chip waves. Designed for spray applications.
Compliant Specifications	Telcordia Issue 1 GR-78-CORE & IPC/J-STD-004B Flux designator ROL0	Telcordia Issue 1 GR-78-CORE & IPC/J-STD-004B Flux designator ORLO	Telcordia Issue 1 GR-78-CORE & IPC/J-STD-004B Flux designator ORLO	Telcordia Issue 1 GR-78-CORE & IPC/J-STD-004B Flux designator ORLO	Telcordia Issue 1 GR-78-CORE & IPC/J-STD-004B Flux designator ORLO
Residue Removal (not normally required)	Wash with Kester's #5768 Bio-Kleen® saponifier at 2% concentration.	Wash with Kester's #5768 Bio-Kleen® saponifier at 2% concentration.	Wash with Kester's #5768 Bio-Kleen® saponifier at 2% concentration.	Wash with hot de-ionized water at 49-60°C (140-160°F) or use 1% solution of Kester's #5768 Bio-Kleen®	Wash with hot de-ionized water at 49-60°C (140-160°F) or use 1% solution of Kester's #5768 Bio-Kleen®
Thinner	4662	4662	110	De-ionized Water	De-ionized Water
Flux Test Kit	PS-20	PS-22	PS-22	PS-20	PS-20



Kester Part #	Description	Packaging
63-0000-0951	951 No-Clean	1 gallon
64-0000-0951	951 No-Clean	5 gallon
65-0000-0951	951 No-Clean	53 gallon drum
63-0004-0985	985M No-Clean	1 gallon
64-0004-0985	985M No-Clean	5 gallon
65-0020-0959	985M No-Clean	53 gallon drum
63-0020-0959	959T No-Clean	1 gallon
64-0020-0959	959T No-Clean	5 gallon
65-0020-0959	959T No-Clean	53 gallon drum
63-0000-0977	977 VOC - Free No Clean	1 gallon
64-0000-0977	977 VOC - Free No Clean	5 gallon
65-0000-0977	977 VOC - Free No Clean	53 gallon drum
63-0000-0979	979 VOC - Free No Clean	1 gallon
64-0000-0979	979 VOC - Free No Clean	5 gallon
65-0000-0979	979 VOC - Free No Clean	53 gallon drum

Water-Soluble Fluxes			
Formula	2331-ZX	2235	2120
Flux Type	Neutral pH Organic Water-Soluble	Organic Water-Soluble	Organic Water-Soluble
Percent Solids	33	11	24
VOCs (g/liter)	729	763	670
Specific Gravity	0.899 ± 0.005	0.856 ± 0.005	0.862 ± 0.005
Percent Halides	2.2	1.5	Halide-Free
Product Characteristics	Original pH neutral organic flux for automated wave and drag soldering processes.	Highly active flux for surface mount assemblies designed to help reduce skips on bottom side surface mount pads.	Highly active, organic flux designed for automated wave soldering applications. This halide-free formula produces bright, shiny joints and high ionic cleanliness after water cleaning
Compliant Specifications	IPC/J-STD-004 Flux designator ORH1	IPC/J-STD-004 Flux designator ORH1	IPC/J-STD-004 Flux designator ORH0
Residue Removal	Residue removal is required. Use soft or de-ionized water at temperatures of 49-66°C (120-150°F).	Residue removal is required. Use soft or de-ionized water at temperatures of 49-66°C (120-150°F).	Residue removal is required. Use soft or de-ionized water at temperatures of 49-66°C (120-150°F).
Thinner	4662	4662	4662

Kester Part #	Description	Packaging
63-0097-2331	2331-ZX Water-Soluble	1 gallon
64-0097-2331	2331-ZX Water-Soluble	5 gallon
65-0097-2331	2331-ZX Water-Soluble	53 gallon drum
63-0000-2235	2235 Water-Soluble	1 gallon
64-0000-2235	2235 Water-Soluble	5 gallon
65-0000-2235	2235 Water-Soluble	53 gallon drum
63-0000-2120	2120 Water-Soluble	1 gallon
65-0000-2120	2120 Water-Soluble	53 gallon drum



Rosin Based Fluxes		
Formula	186	1544
Flux Type	Rosin Mildly Activated (RMA)	Activated Rosin (RA)
Percent Solids	36	50
Specific Gravity	0.879 ± 0.005	0.928 ± 0.005
Percent Halides	0.02	0.44
Product Characteristics	Designed for high thermal stability and superior solderability.	Kester's active, Non-corrosive rosin type flux. Used on surfaces that are more difficult to solder.
Compliant Specifications	IPC/J-STD-004 Flux designator ROL0	IPC/J-STD-004 Flux designator ROM1
Residue Removal	Residue is non-corrosive, but may be removed with solvent or with Kester's 5768 Bio-Kleen® saponifier at 7-10% solution in de-ionized or soft water at temperatures of 49-60°C (120-140°F).	Residue is non-corrosive, but may be removed with solvent or with Kester's 5768 Bio-Kleen® saponifier at 7-10% solution in de-ionized or soft water at temperatures of 49-60°C (120-140°F).
Thinner	120	104



Kester Part #	Description	Packaging
63-0000-0186	186 RMA	1 gallon
64-0000-0186	186 RMA	5 gallon
65-0000-0186	186 RMA	53 gallon drum
63-0000-1544	1544 RA	1 gallon
64-0000-1544	1544 RA	5 gallon
65-0000-1544	1544 RA	53 gallon drum

Kester Flux-Pen®

The Kester Flux-Pen® is a unique tool for rework and touch-up soldering. It allows controlled application of flux, eliminating the mess from flux bottles. Flux-Pens are ideally suited for typical hand-soldering applications. The five available formulas are listed below.

Kester Part #	Description
83-1004-0985	985M Low Solids No-Clean (20 pens/carton)
83-1000-0951	951 Low Solids No-Clean (20 pens/carton)
83-1018-0186	186-18 RMA No-Clean (20 pens/carton)
83-1000-0186	186 RMA No-Clean (20 pens/carton)
83-1097-2331	2331-ZX Neutral pH Water-Soluble (20 pens/carton)
83-1020-0959	959T Low Solids No-Clean (20 pens/carton)
83-1046-0952	952 D6 Low Solids No-Clean (20 pens/carton)

