Soldering Supplies

MG Chemicals offers a complete line of soldering supplies and soldering accessories for all your soldering needs. Whether you're a hobbyist, a small-scale operator designing a prototype, or a large-scale manufacturer, MG Chemicals' soldering supplies have all your needs covered.

Desoldering Braids

400 Series – Fine braid SUPER WICK™
400-LF Series – Lead-free SUPER WICK™
400-NS Series – No-clean SUPER WICK™
400-NF Series – Unfluxed SUPER WICK™

Flux Pens

835-P – Rosin-based liquid flux with moderate activity
836-P – Halogen-free organic flux with low activity
837-P – Water soluble flux with high activity

Flux Removers

Heavy Duty

413C – Removes the most stubborn, encrusted, hard, baked-on fluxes and residues

Plastic-Safe

4140 – Blend of mild solvents to create an eco-friendly dry cleaning flux remover.
4150 – A plastic-safe, high-purity printed circuit board cleaner.
4140A – Cleans post solder residues quickly and conveniently.

Solder Mask

862 – Water soluble synthetic latex

Tip Tinner

4910 – SAC305 powder with thermally stable compounds

Solder Pastes

4860P – Sn63/Pb37 No-clean
4900P – SAC305 No-clean
4902P – Sn42/Bi57/Ag1 No-clean low temperature

Solder Wires

Lead Solders

4870-4875 – Sn60/Pb40 No-clean
4890-4898 – Sn60/Pb40 RA
4860-4865 – Sn63/Pb37 No-clean
4880-4888 – Sn63/Pb37 RA

Lead-Free Solders

4900 – SAC305 No-clean
4901 – Sn99 No-clean
49500WS – Sn100e Water-soluble

Soldering Fluxes

Liquid

835 – Rosin-based
8351 – No-clean, halogen-free
836LFNC – Lead-free, no-clean
837LFWS – Lead-free, water-soluble

Paste

8341 – No-clean, halogen-free
8342 – Rosin-based

Desoldering Braids

Desoldering Braids for Solder Removal, Rework and Repairs

MG Chemicals Super Wicks™ are desoldering braids made of clean, oxide-free copper wire with a tight weave. The best solder wick is designed for solder removal to ease the replacement of electronics components without damaging the board or components. They reduce rework/repair time and minimize the risk of heat damage to the board.

Our desoldering braids' exceptional weave design and heat transfer capacities result in very fast and large capacity wicking, faster than any other competitive brand on the market.

Features & Benefits

- Copper wick – high purity oxide free copper
- Tight weave and fast wicking
- Environmentally stable
- ESD safe bobbins for 1.5 m size
- NSF – Non-Food Compounds Program listed

Applications

- Solder removal
- Reworking and repair of circuit boards
- Benchtop repair and service
- Surface mount assembly touch-up

400 Series—Fine Braid Super Wick™

- RMA flux and economical

400-LF Series—Lead Free Super Wick™

- No clean flux
- Flux residue is non-conductive and non-corrosive

400-NS Series—No Clean Super Wick™

- Designed for use with lead-free solder
- No-clean flux with high activation temperature
- Flux residue is non-conductive and non-corrosive

400-NF Series—Unfluxed Super Wick™

- Allows custom flux use

Flux Properties*

Flux classification	Rosin (R) ROL0
Flux percentage	<5%
Cleaning requirements	Recommended

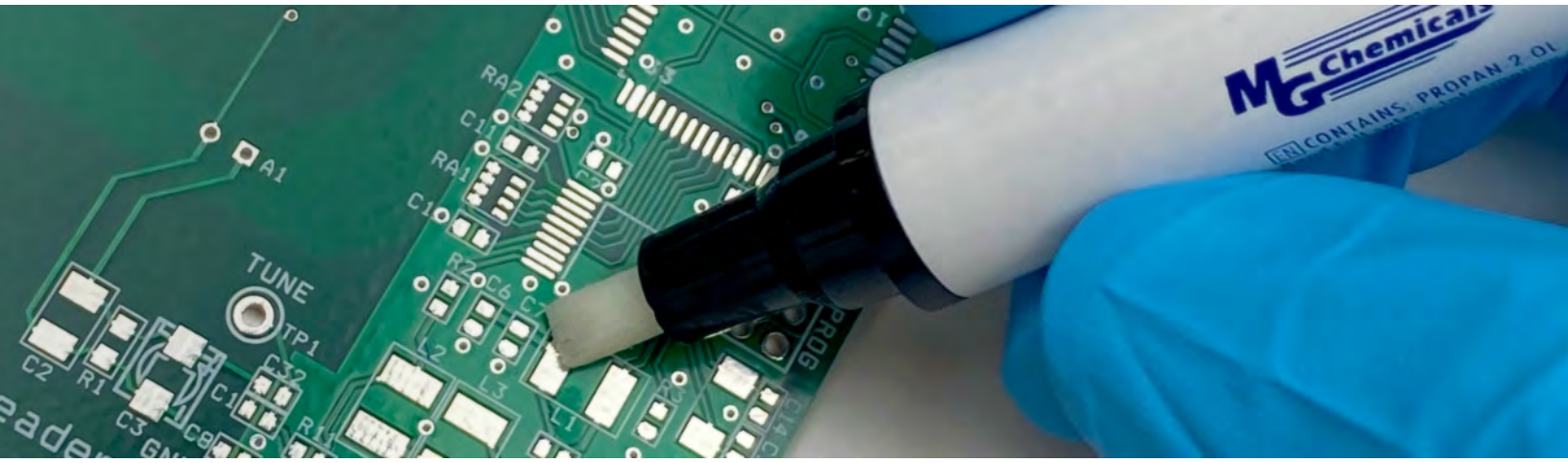
*These properties do not apply to the 400-NF Series.

Desoldering Braids

Selection Guide

Cat. No.	Type	Width	Length	ESD Safe	Label Color
423	Fine braid	0.04 in (1 mm)	5 ft (1.5 m)	Yes	White
424	Fine braid	0.06 in (1.5 mm)	5 ft (1.5 m)	Yes	Yellow
442	Fine braid	0.06 in (1.5 mm)	25 ft (7.5 m)	No	Yellow
452	Fine braid	0.06 in (1.5 mm)	50 ft (15 m)	No	Yellow
425	Fine braid	0.08 in (2 mm)	5 ft (1.5 m)	Yes	Green
443	Fine braid	0.08 in (2 mm)	25 ft (7.5 m)	No	Green
453	Fine braid	0.08 in (2 mm)	50 ft (15 m)	No	Green
426	Fine braid	0.10 in (2.5 mm)	5 ft (1.5 m)	Yes	Blue
444	Fine braid	0.10 in (2.5 mm)	25 ft (7.5 m)	No	Blue
454	Fine braid	0.10 in (2.5 mm)	50 ft (15 m)	No	Blue
427	Fine braid	0.12 in (3 mm)	5 ft (1.5 m)	Yes	Brown
424-LF	Lead free	0.06 in (1.5 mm)	5 ft (1.5 m)	Yes	Yellow
425-LF	Lead free	0.08 in (2 mm)	5 ft (1.5 m)	Yes	Green
426-LF	Lead free	0.10 in (2.5 mm)	5 ft (1.5 m)	Yes	Blue
424-NS	No clean	0.06 in (1.5 mm)	5 ft (1.5 m)	Yes	Yellow
424-NS-10FT	Unfluxed	0.06 in (1.5 mm)	10 ft (3.1 m)	Yes	Yellow
425-NS	No clean	0.08 in (2 mm)	5 ft (1.5 m)	Yes	Green
426-NS	No clean	0.10 in (2.5 mm)	5 ft (1.5 m)	Yes	Blue
426-NS-10FT	Unfluxed	0.10 in (2.5 mm)	10 ft (3.1 m)	Yes	Blue
453-NS	No clean	0.08 in (2 mm)	50 ft (15 m)	No	Green
424-NF-10FT	Unfluxed	0.06 in (1.5 mm)	10 ft (3.1 m)	Yes	Yellow
426-NF-10FT	Unfluxed	0.10 in (2.5 mm)	10 ft (3.1 m)	Yes	Blue

Flux Pens



Designed for Prototyping, Rework and Repair of Circuit Boards

MG Chemicals flux pens enable convenient dispensing for high-precision application of flux for improved solder wetting. Our pens are designed to work with both leaded and non-leaded solder, providing an effective (remove "oxygen") barrier against oxidation. Pens are available in Rosin Activated (RA), NoClean (NC) and Water Soluble (WS) flux versions. These fluxes can be readily removed by our flux removers.

835-P – Rosin Flux Pen

Rosin-based liquid flux with moderate activity

836-P – No-Clean Flux Pen

Halogen-free organic flux with low activity

837-P – Water Soluble Flux Pen

Water soluble flux with high activity

Features & Benefits

- Compatible with leaded and non-leaded solder
- No-clean options available
- Meets J-STD-004B
- RoHS compliant

Applications

- Repairs and rework
- Through-hole and surface mounting
- Solder touchups

Flux Pens

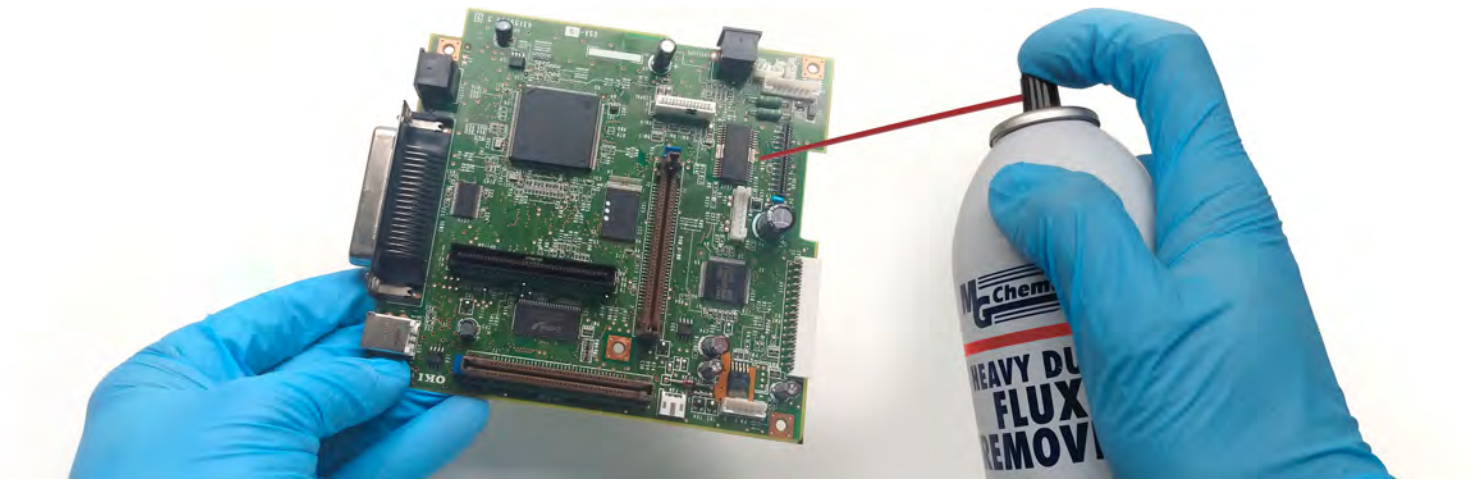
	835-P	836-P	837-P
PROPERTIES			
Flux classification	ROM1 RA	ORL0	ORH1
Flux type	Rosin	Organic	Organic
Flux activity	Moderate	Low	High
Halides by weight	0.44%	<0.5%	2.2% ±0.3%
Copper mirror	Partial removal	Pass	Complete removal of copper film
Corrosion	Pass	N/A	Pass
Cleaning requirements	Recommended	Recommended	Required
Solid percentage	50%	1.9—2.5%	17.5% ±1%

Refer to TDS for more information

SUPPORTING PRODUCTS

Flux Removers	Plastic-safe	Heavy Duty
	4050A	413B
	4140	413C
	4140A	

Flux Removers



Dissolves and Removes Stubborn Post Soldering Residue

MG Chemicals' flux removers are suitable for maintenance and repair operations, service centers, prototyping, maker projects, and small scale electronics production. We offer two options for dissolving and rinsing flux residue.

Features & Benefits

- Powerful flux removal
- Zero residue, non-corrosive, and fast drying
- Available in aerosol, liquid, and pen formats
- Plastics-safe versions are available
- RoHS compliant

Applications

- Cleaning flux residue
- Repair, rework, and maintenance
- Service centers
- Prototyping
- Maker projects

Flux Removers for PCBs (Plastic-Safe)

4050A – A plastic-safe, high-purity PCB cleaner that removes both polar and non-polar contaminants

4140 – Ethyl alcohol, isopropanol and ethyl acetate blended to create an eco-friendly dry cleaning solvent

4140A – Its plastic safe formula removes rosin, non-rosin, and no clean fluxes, as well as both ionic and non-ionic type

Heavy Duty

413B – Dissolves and removes stubborn, encrusted, hard, baked-on fluxes and residues

413C – Cleans post solder residues quickly and conveniently

Flux Removers

	413B	413C	4050A	4140	4140A
PROPERTIES					
Viscosity @ 25 ˚C	<20.5 mm^2/s	<20.5 mm^2/s	<20.5 mm^2/s	3.1 mm^2/s	<20.5 mm^2/s
Density	0.75–0.83 g/mL	0.84 g/mL	0.77 g/mL	0.79 g/mL	0.76 g/mL
Shelf Life	5 y	5 y	5 y	5 y	5 y
Flash Point	-18 °C	11 °C	-29 °C	13 °C	-4 °C
Boiling Point	≥56 °C	83 °C	≥52 °C	≥78 °C	>83 °C
Auto-ignition Temperature	425 °C	456 °C	363 °C	≥363 °C	285 °C
Water Miscibility	Partially miscible	Miscible	Miscible	Miscible	Partially miscible
AVAILABLE PACKAGING					
Net contents	425 g (Aerosol)	945 mL (Bottle) 18.9 L (Pail)	450 g (Aerosol)	400 g (Aerosol)	945 mL (Bottle) 3.78 L (Jug) 18.9 L (Pail) 11.5 mL (Pen)

Solder Pastes

No-Clean Pastes Available in Lead and Lead-Free Versions

MG Chemicals' solder pastes ensure strong adhesion when connecting PCB components to copper pads during board fabrication. Our solder pastes contain a non-conductive flux, making cleaning afterwards unnecessary, plus solder powder with a particle size distribution that complies with the J-STD-005 Type 3 (80% min. between 25-45 µm).

Features & Benefits

- Leaded and non-leaded options available
- Alloy exceeds J-STD-006C and meets ASTM B 32 purity requirements
- No-clean residues, residues are not harmful to assemblies
- Flux meets J-STD-004B
- RoHS-compliant

Applications

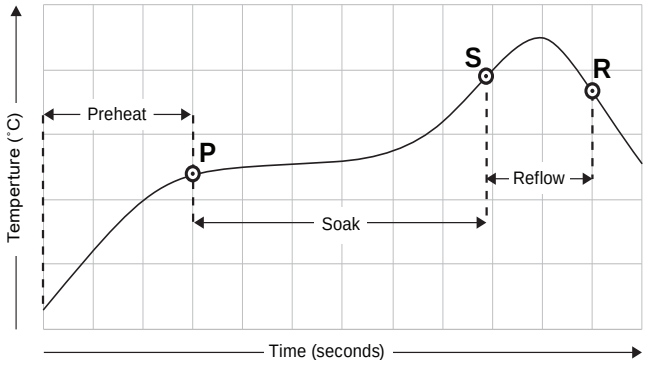
- Repairs and rework
- Through-hole and surface mount
- Solder touch-ups
- Component bonding

4860P— Sn63/Pb37 No-clean solder paste

4900P— SAC305 No-clean solder paste

4902P— Sn42/Bi57/Ag1 No-clean low temp. solder paste

Typical Reflow Profile

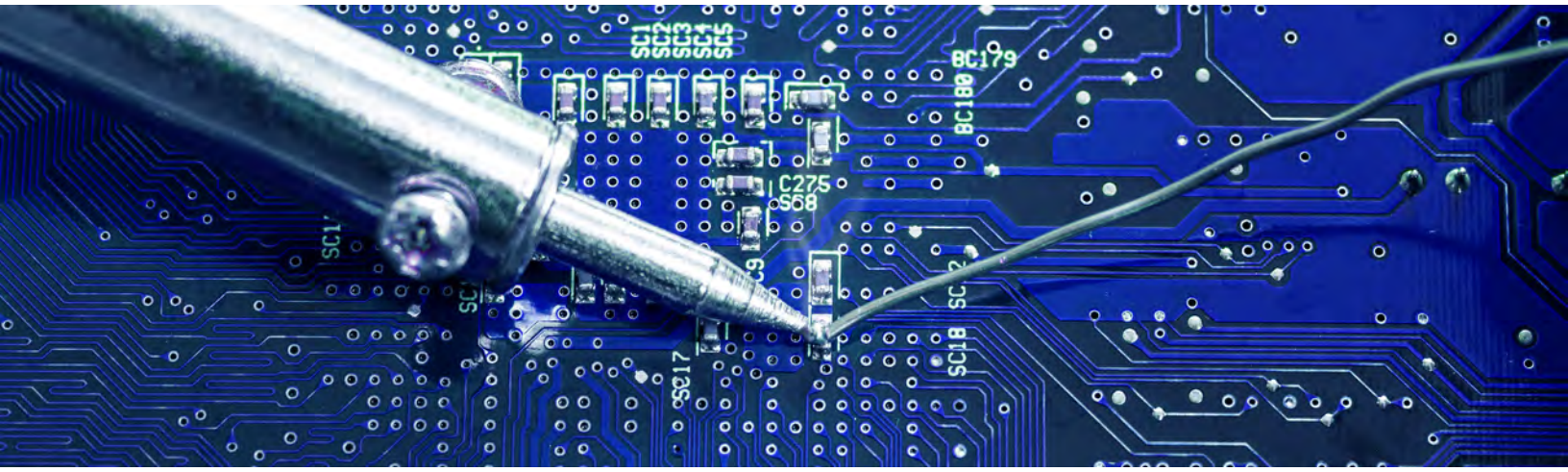


	P (Preheat)	S (Soak)	R (Reflow)
4860P	120 °C @ 90 s	200 °C @ 270 s	180 °C @ 330 s
4900P	120 °C @ 90 s	200 °C @ 270 s	180 °C @ 330 s
4902P	115 °C @ 100 s	150 °C @ 155 s	130 °C @ 225 s

Solder Pastes

	4860P	4900P	4902P
PROPERTIES			
Flux Classification	REL0	ROL0	ROM1
Flux Type	Resin	Rosin	Rosin
Flux Activity	Low	Low	Moderate
Copper Mirror	No removal	No removal	No penetration
Corrosion Test	Pass	Pass	Minor corrosion
Electromigration	Pass	Pass	$4 \times 10^9\ \Omega$ @ 96 h $4 \times 10^9\ \Omega$ @ 596 h
Solder Ball Test	Pass	Pass	—
Slump Test			
@ 25 °C, 0.63 vert./horiz.	No bridges	No bridges	—
@ 150 °C, 0.63 vert./horiz.	No bridges	No bridges	—
@ 25 °C, 0.33 vert./horiz.	0.20/0.20	No bridges	—
@ 25 °C, 0.33 vert./horiz.	0.20/0.20	Pass	—
Viscosity, poise	850–1100	1600–1900	153 000 cP
Acid Number (mgKOH/g sample)	100	117	142
Halides (by weight)	<0.05%	<0.05%	≤0.15%
Post Reflow Flux Reside	45%	5.5%	N/A
Metal Loading	88%	88.5%	N/A
Surface Insulation Resistance (SIR)	$2.4 \times 10^{10}\ \Omega$	$2.0 \times 10^{10}\ \Omega$	$\geq 2 \times 10^9\ \Omega$ @ 96 h Pass @ 168 h
Bellcore (Telecordia)	$4.1 \times 10^{10}\ \Omega$	$5.3 \times 10^{10}\ \Omega$	N/A
Tack			
Initial	85 g	124 g	—
Retention @ 24 h	90 g	111 g	—
Retention @ 72 h	92 g	98 g	—
AVAILABLE PACKAGING			
Net contents	35 g (syringe) —	25 g (syringe) 250 g (jar)	15 g (syringe) 25 g (syringe)

Solder Wires



Wide Range of Leaded and Lead-Free Solder Wires Available

MG Chemicals offers an extensive portfolio of solder wire designed to cover the needs of all users, from hobbyists to large manufactures. From traditional leaded solder to more advanced alloys that melt at higher temperatures, MG Chemicals offers a wide range of flux types, gauges and package sizes.

Features & Benefits

- Meets or exceeds J-STD-004B and J-STD-006C
- Multiple alloys, gauge sizes and fluxes available

Applications

- Hobbyist, prototyping and academic projects
- Manufacturing operations of all sizes

Available Sizes

Diameter	Gauge (AWG)
0.062" (1.57 mm)	16
0.050" (1.27 mm)	18
0.040" (1.01 mm)	19
0.032" (0.81 mm)	21
0.025" (0.63 mm)	23

Leaded Solder Wires

4870–4875 — Sn60/Pb40 No-Clean Solder wire

4890–4898 — Sn60/Pb40 RA Solder wire

4860–4865 — Sn63/Pb37 No-Clean Solder wire

4880–4888 — Sn63/Pb37 RA Solder wire

This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Lead-Free Solder Wires

4900 — SAC305 No-Clean Solder wire

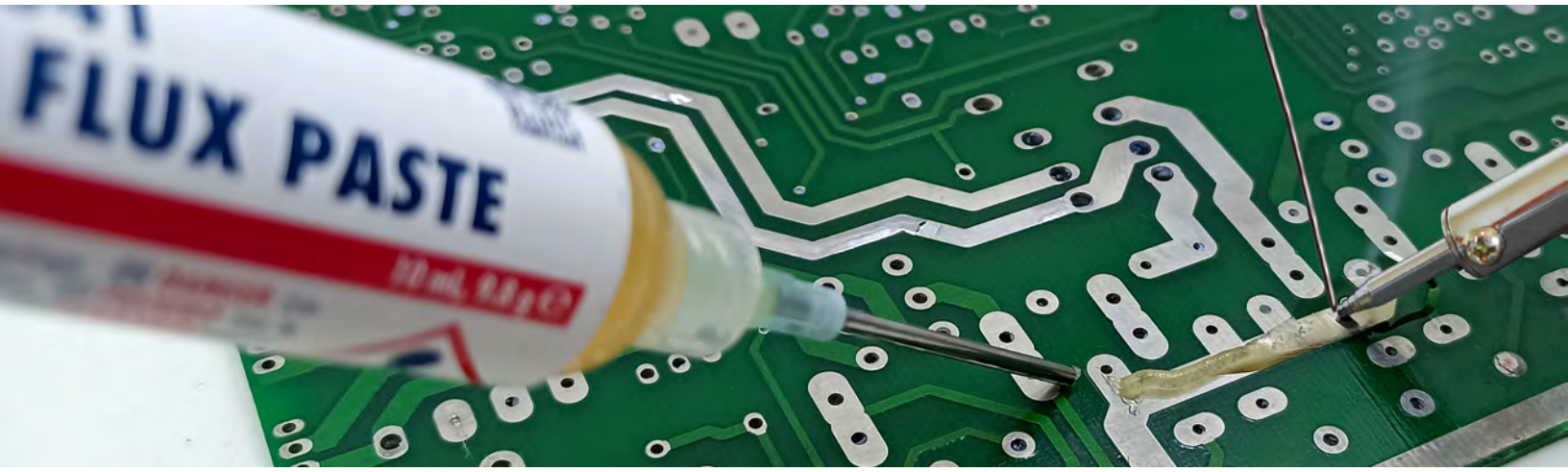
4901 — Sn99 No-Clean Solder wire

49500WS — Sn100e Water Soluble Solder wire

Solder Wires

	LEADED SOLDER WIRES				LEAD-FREE SOLDER WIRES		
	4870–4875	4890–4898	4860–4865	4880–4888	4900	4901	49500WS
PROPERTIES							
Flux Classification	REL0	ROM1	REL0	ROM1	REL0	REL0	ORH1
Flux Type	Resin	Rosin	Resin	Rosin	Resin	Resin	Organic
Flux Activity	Low	Moderate	Low	Moderate	Low	Low	High
Copper Mirror	No removal	—	No removal	—	No removal	No removal	—
Corrosion Test	Pass	Pass	Pass	Pass	Pass	Pass	—
Electromigration	Pass	—	Pass	—	Pass	Pass	—
Silver Chromate Cl^- + Br^-	Pass	Detection	Pass	Detection	Pass	Pass	Detection
Flux Residue Dryness	Pass	—	Pass	—	Pass	Pass	—
Acid Number (mgKOH/g sample)	100	150–160	190–210	150–160	190–210	190–210	180–200
Softening Point of Flux Extract	24 °C	80 °C	24 °C	80 °C	24 °C	24 °C	60 °C
Solder Spread	130 mm^2	—	130 mm^2	N/A	130 mm^2	130 mm^2	—
Splitting of Flux-Cored Wire Solder	0.30%	—	0.30%	N/A	0.30%	0.30%	—
Halides (by weight)	<0.05%	0.5–0.2%	<0.05%	0.5–0.2%	<0.05%	<0.05%	>2%
Post Reflow Flux Reside	45%	N/A	55%	—	55%	55%	—
Surface Insulaltion Resistance (SIR)	2.4×10^{10} Ω	>1.0×10^{9} Ω	2.3×10^{11} Ω	>1.0×10^{9} Ω	2.3×10^{11} Ω	2.3×10^{11} Ω	>1.0×10^{9} Ω
Bellcore (Telecordia)	4.1×10^{10} Ω	—	6.1×10^{11} Ω	—	6.1×10^{11} Ω	6.1×10^{11} Ω	—
Cleaning	No-clean	Required	No-clean	Required	No-clean	No-clean	Required
AVAILABLE PACKAGING							
Net contents	4870-18G 4875-227G	4890-18G 4894-227G 4894-454G 4895-227G 4895-454G 4896-227G 4897-227G 4898-227G 4898-454G	4860-18G 4865-227G 4865-454G	4880-18G 4884-227G 4884-454G 4885-227G 4885-454G 4886-227G 4886-227G 4887-227G 4887-454G 4888-227G 4888-454G	4900-18G 4900-112G 4900-227G 4900-454G	4901-112G 4901-227G 4901-454G	49500WS-454G

Soldering Flux



Compatible with Lead and Lead-Free Solders

MG Chemicals soldering flux provides high tack-force and superior wetting for both leaded and non-leaded solder alloys. The flux comes in both liquid and paste formats, and in Rosin Activated (RA), No Clean (NC) and Water Soluble (WS) flux chemistries. Our fluxes provide exceptional adhesion to copper, and form an effective barrier against oxidation of circuit traces.

Features & Benefits

- No-clean options available
- Meets J-STD-004B
- RoHS compliant
- Available as liquid or paste

Applications

- General purpose soldering of PCBs, wire, cable, and semiconductors
- Repair and rework
- Through-hole and surface mount
- Solder touch-ups

Liquid Flux

835 — Rosin-based flux

8351 — No-clean, halogen-free flux

836LFNC — Lead-free, no-clean flux

837LFWS — Lead-free, water soluble flux

Paste Flux

8341 — No-clean, halogen-free flux

8342 — Rosin-based flux

Soldering Flux

	LIQUID FLUX				PASTE FLUX	
	835	8351	836LFNC	837LFWS	8341	8342
PROPERTIES						
Flux Classification	ROM1	ORL0	ORL0	ORH1	ROL1	RA
Flux Type	Rosin	Organic	Organic	Organic	Rosin	Rosin
Flux Activity	Moderate	Low	Low	High	Low	Moderate
Copper Mirror	Partial removal	Pass	Pass	Removal	Pass	—
Corrosion Test	Pass	—	—	Pass	Pass	—
Acid Number (mgKOH/g sample)	—	14–16	14–16	—	126	—
Halides (by weight)	0.44%	<0.5%	<0.5%	2.2%	<0.5%	—
Surface Insulation Resistance (SIR)	—	$2.1 \times 10^{9}\ \Omega$	$2.1 \times 10^{9}\ \Omega$	$1.8 \times 10^{10}\ \Omega$	—	—
Cleaning Requirements	Recommended	Not required	Not required	Recommended	Not required	Required
AVAILABLE PACKAGING						
Net contents	835-100ML	8351-125ML	836LFNC-1L	837LFWS-1L	8341-10ML	8342-10ML
	835-100MLCA	8351-1L			8341-50ML	8342-50G
	835-1L	8351-4L				
		8351-20L