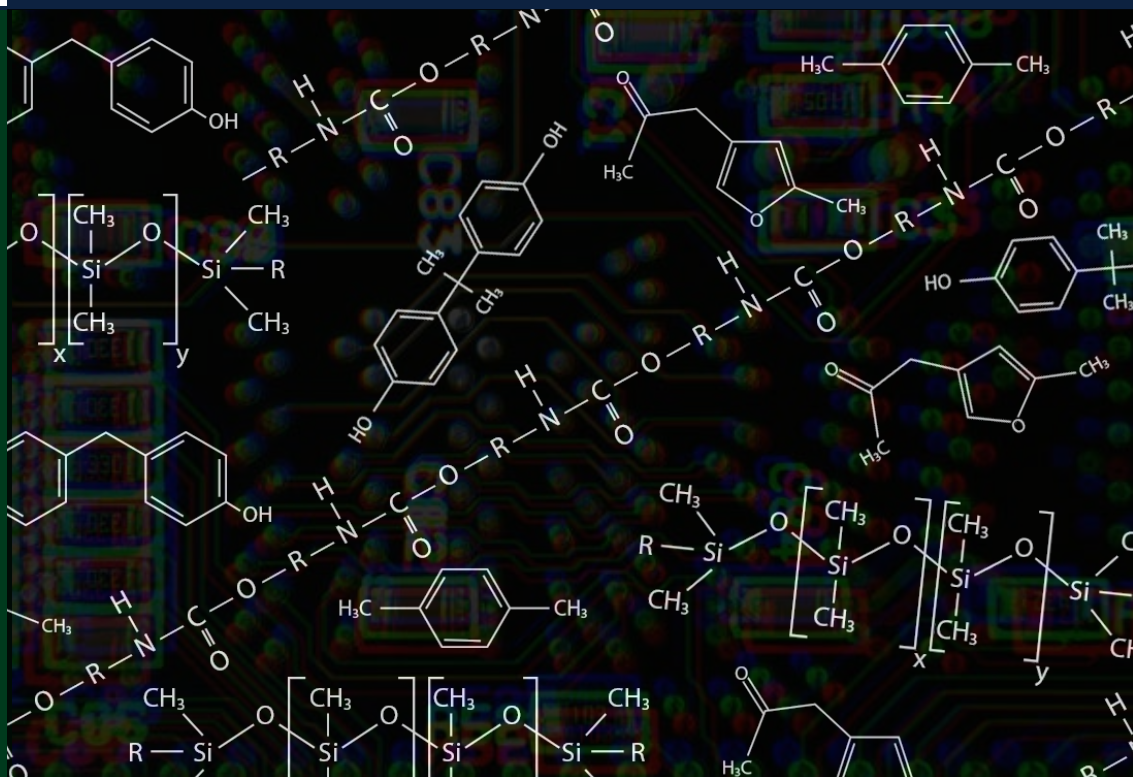
MG Chemicals

ONE COMPANY... MANY SOLUTIONS

SOLDER & ACCESSORIES

- LEADED SOLDER WIRE
- LEAD-FREE SOLDER WIRE
- FLUXES
- FLUX REMOVERS
- SOLDER PASTES
- SUPER WICKS



WHAT IS MG CHEMICALS?

MG Chemicals is a manufacturer and wholesaler of chemical products for the electronics industry. Our chemical products include dusters and circuit coolers, electronic cleaners, flux removers, contact cleaners, protective coatings, epoxies, adhesives, RTV silicones, lubricants, EMI/RFI shielding coatings, thermal management products, prototyping supplies, solders and more. We also distribute related non-chemical products such as wipes, swabs, brushes, desoldering braids, copper-clad boards and 3D printing filaments.

MG SERVICE

MG Chemicals understands that setting up production involves multiple challenges. Our service team has years of experience in production and equipment use, and understands the various technical issues you may encounter during planning, pilot studies and production runs. To overcome these challenges, we offer the following professional services.

MG Chemicals can

- Provide advice on equipment and materials
- Assist with setup and troubleshooting
- Review your proposed application processes
- Suggest ways of optimizing and customizing processes to best meet your needs
- Offer training on the proper use of our products

Quality Assurance

Since 1955, MG Chemicals has provided the North American electronics industry with a full line of high performance chemicals and accessories. The MG Chemicals manufacturing facility operates under the ISO 9001 Quality System Standard. All products undergo MG Chemicals' design process, including the testing and analysis of each product to maximize performance, user safety, environmental safeguards and market desirability.

Customer Care

Customer care is what separates MG Chemicals from the rest. Our commitment to all of these principles focuses on getting you the quality product and support you deserve.

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LEADED SOLDER WIRE

Sn60/Pb40

MG Chemicals Sn60/Pb40 electronics-grade solder wire is formulated from a blend of 60% tin and 40% lead. Made from non-recycled metal, our flux core manufacturing process eliminates flux voids and irregular wires. This wire melts at a slightly higher temperature range than the Sn63/Pb37 solder, resulting in robust and reliable joints that are highly resistant to whisker formation. This alloy puts down a slightly thicker coating of solder. It is often preferred for lead tinning and other solder coating applications. These solder wires meet J-STD-004 and J-STD-006 specifications. This type of solder wire is available in a wide variety of sizes, diameters and gauges, allowing you to select the perfect fit for your specific needs.

Sn60/Pb40 RA Solder Wire

MG Chemicals Sn60/Pb40 Leaded Solder uses a classical tin-to-lead alloy ratio, complemented with an RA flux core, which results in robust and reliable joints that are highly resistant to whisker formation. The RA Flux residue is non-corrosive and non-conductive, and can be left on the board or cleaned with one of MG's flux removers. (see page 14)

- **Rosin activated Flux core (RA)**
- **Rapid wetting / Fast flowing**
- **Consistent soldering**
- **Non-corrosive flux residue**
- **Non-conductive flux residue**
- **Optional cleaning**
- **Melting point: 183 °C-191 °C / 361 °F-376 °F**

Cat. Number	Size		Diameter		Gauge	Flux %	Packaging
4890-18G	18 g	0.6 oz	1.01 mm	0.040"	19	2.2	Pack of 25
4894-227G	227 g	0.5 lb	0.63 mm	0.025"	23	2.2	Spool
4894-454G	454 g	1 lb	0.63 mm	0.025"	23	2.2	Spool
4895-227G	227 g	0.5 lb	0.81 mm	0.032"	22	2.2	Spool
4895-454G	454 g	1 lb	0.81 mm	0.032"	22	2.2	Spool
4896-227G	227 g	0.5 lb	1.01 mm	0.040"	20	2.2	Spool
4896-454G	454 g	1 lb	1.01 mm	0.040"	20	2.2	Spool
4897-227G	227 g	0.5 lb	1.27 mm	0.050"	18	2.2	Spool
4897-454G	454 g	1 lb	**1.27 mm**	0.050"	18	2.2	Spool
4898-227G	227 g	0.5 lb	1.57 mm	0.062"	16	2.2	Spool
4898-454G	454 g	1 lb	1.57 mm	0.062"	16	2.2	Spool

Also available in flux core percentages 1.1% and 3.3%

Sn60/Pb40 NC Solder Wire

MG Chemicals No Clean formula uses a synthetically refined, splatter-proof, resin flux core. It leaves a small amount of post-soldering residue that is non-conductive and non-corrosive, and won't cause electrical shorts.

The No Clean name refers to the fact that the board will not be adversely affected if it isn't cleaned. It does not mean there will be no residue.

- **No-clean formula**
- **Halide free**
- **Spreads like rosin activated flux**
- **Virtually non-splattering**
- **Low post solder residue**
- **Melting point: 183 °C-191 °C / 361 °F-376 °F**

Cat. Number	Size		Diameter		Gauge	Flux %	Packaging
4870-18G	18 g	0.6 oz	1.01 mm	0.040"	19	2.2	Pack of 25
4875-227G	227 g	0.5 lb	0.81 mm	0.032"	22	2.2	Spool
4875-454G	454 g	1 lb	0.81 mm	0.032"	22	2.2	Spool
4876-227G	227 g	0.5 lb	1.01 mm	0.040"	20	2.2	Spool
4877-227G	227 g	0.5 lb	1.27 mm	0.050"	18	2.2	Spool

Also available in flux core percentages 1.1% and 3.3%

Sn63/Pb37

MG Chemicals Sn63/Pb3 electronics grade solder wire is formulated from a blend of 63% tin and 37% lead. Made from non-recycled metal, it uses the eutectic tin-to-lead alloy ratio. Our flux core manufacturing process eliminates flux voids and irregular wire.

Being eutectic, it has no plastic range. This type is one of the easiest solders to work with because it offers a low melting temperature with a sharp melting/solidification point, which results in robust and reliable joints that are highly resistant to whisker formation. In most situations it flows better than the Sn60/Pb40, and is the preferred alloy for rework, component attachment and touch-up soldering for through-hole and surface mount applications. It meets or exceeds J-STD-004 and J-STD-006 specifications. This wire is available in a wide variety of sizes, diameters and gauges, allowing you to select a perfect fit for your specific needs.

Sn63/Pb37 NC Solder Wire

This wire features a no-clean, synthetically refined, splatter-proof resin flux core. It leaves a small amount of light opaque post-soldering residue that is non-conductive and non-corrosive, and won't cause electrical shorts.

The No Clean name refers to the fact that the board will not be adversely affected if it isn't cleaned. It does not mean there will be no residue.

- **No-clean formula**
- **Eutectic alloy**
- **Halide free**
- **Virtually non-splattering**
- **Melting point: 183 °C / 361 °F**

Cat. Number	Size		Diameter		Gauge	Flux %	Packaging
4860-18G	18 g	0.6 oz	1.01 mm	0.040"	19	2.2	Pack of 25
4865-227G	227 g	0.5 lb	0.63 mm	0.025"	22	2.2	Spool
4865-454G	454 g	1 lb	0.63 mm	0.025"	22	2.2	Spool
4866-227G	227 g	0.5 lb	1.01 mm	0.040"	20	2.2	Spool

Also available in flux core percentages 1.1% and 3.3%

Sn63/Pb37 WS Solder Wire

This wire uses a water-soluble flux core. It offers great compatibility with all liquid water-soluble organic flux. It produces minimal spattering, and will not decompose and carbonize under prolonged heat. Cleaning flux residue requires only water rinsing or in-line cleaning after soldering.

- **Water soluble formula**
- **Low VOC**
- **Fast wetting and flowing action**
- **Melting point: 183 °C / 361 °F**

Cat. Number	Size		Diameter		Gauge	Flux %	Packaging
4885WS-454G	454 g	1 lb	0.81 mm	0.032"	22	3.3	Spool

Also available in flux core percentages 1.1% and 2.2%

Sn63/Pb37 RA Solder Wire

This wire is complemented with an RA flux core, strong enough for excellent tarnish and oxide removal while producing bright shiny solder joints

RA Flux residues are non-corrosive and non-conductive, and therefore can be left on the board or cleaned with one of MG's flux removers. (See page 14)

- **Rosin activated flux core (RA)**
- **Eutectic alloy**
  - **Rapid wetting / Fast flowing**
  - **Consistent soldering**
  - **Non-corrosive**
- **Non-conductive flux residue**
- **Optional cleaning**
- **Standard Flux Core percentage at 2.2% ***
- **Melting point: 183 °C / 361°F**

Cat. Number	Size		Diameter		Gauge	Flux %	Packaging
4880-18G	18 g	0.6 oz	0.81 mm	0.032"	22	2.2	Pack of 25
4884-227G	227 g	0.5 lb	0.63 mm	0.025"	23	2.2	Spool
4884-454G	454 g	1 lb	0.63 mm	0.025"	23	2.2	Spool
4885-227G	227 g	0.5 lb	0.81 mm	0.032"	22	2.2	Spool
4885-454G	454 g	1 lb	0.81 mm	0.032"	22	2.2	Spool
4886-227G	227 g	0.5 lb	1.01 mm	0.040"	20	2.2	Spool
4886-454G	454 g	1 lb	1.01 mm	0.040"	20	2.2	Spool
4887-227G	227 g	0.5 lb	1.27 mm	0.050"	18	2.2	Spool
4887-454G	454 g	1 lb	1.27 mm	0.050"	18	2.2	Spool
4888-227G	227 g	0.5 lb	1.57 mm	0.062"	16	2.2	Spool
4888-454G	454 g	1 lb	1.57 mm	0.062"	16	2.2	Spool

*Also available in Flux Core percentages 1.1% and 3.3%

LEAD-FREE SOLDER WIRE

SAC305

The SAC305 electronics-grade solder wire series is the predominantly-used lead-free alloy composition that meets J-STD-004 and J-STD-006 specifications.

These SAC305 wires achieve a consistent solder and flux percentage through a state-of-the-art extrusion wire-drawing machine. This machine continually monitors the wire to prevent voids and ensure consistency, providing a top-grade solder wire.

All of our SAC305 cored wires are RoHS compliant.

SAC305 RA Solder Wire

A SAC305 complemented with a rosin activated (RA), medium activity flux. RA Flux residue is non-corrosive and non-conductive, and therefore can be left on the board or cleaned with one of MG's flux removers. (see page 14)

This wire is also REACH compliant.

- **Lead-free**
- **Rosin Activated flux**
- **Fast wetting**
- **Fast flowing**
- **Non-corrosive**
- **Non-conductive**
- **RoHS compliant**
- **Melting point: 217 °C - 221°C / 423 °F - 430 °F**

Cat. Number	Size		Diameter		Gauge	Flux %	Packaging
4925-112G	113 g	0.25 lb	0.81 mm	0.032 in	21	2.2	Spool
4925-454G	454 g	1.0 lb	0.81 mm	0.032 in	21	2.2	Spool
4926-112G	113 g	0.25 lb	1.01 mm	0.040 in	19	2.2	Spool
4926-454G	454 g	1.0 lb	1.01 mm	0.040 in	19	2.2	Spool

Also available in flux core percentages 2% to 4%

SAC305 NC Solder Wire

This lead-free wire is complemented with a no-clean, synthetically refined, splatter-proof resin flux core. Mild enough to not require cleaning, it leaves a small amount of post-soldering residue that is non-conductive and non-corrosive, and won't cause electrical shorts. The name No Clean refers to the fact that the flux residues are not harmful to assemblies and does not mean there will be no residue.

- **Lead-free**
- **Halide free**
- **Spreads like rosin-activated flux**
- **No-clean flux**
- **Virtually non-splattering**
- **Hard non-conductive residues**
- **Exceeds J-STD-004B**
- **RoHS compliant**
- **Melting point: 217 °C - 221°C / 422 °F - 430 °F**

Cat. Number	Size		Diameter		Gauge	Flux %	Packaging
4900-35G	17 g	0.6 oz	0.81 mm	0.032 in	21	2.2	Pack[a)]
4900-112G	113 g	0.25 lb	0.81 mm	0.032 in	21	2.2	Spool
4900-227G	227 g	0.5 lb	0.81 mm	0.032 in	21	2.2	Spool
4900-454G	454 g	1.0 lb	0.81 mm	0.032 in	21	2.2	Spool
4915-112G	113 g	0.25 lb	1.01 mm	0.050 in	19	2.2	Spool
4915-454G	454 g	1.0 lb	1.01 mm	0.040 in	19	2.2	Spool
4916-112G	113 g	0.25 lb	1.27 mm	0.050 in	18	2.2	Spool
4916-454G	454 g	1.0 lb	1.27 mm	0.050 in	18	2.2	Spool
4917-227G	227 g	0.5 lb	1.57 mm	0.062 in	16	2.2	Spool

[a)] Box of 25 pocket packs

Also available in flux core percentages 2% to 4%

Sn99

Sn99 NC, Halogen Free Solder Wire

MG Chemicals Sn99 Lead-Free Solder is an electronics-grade solder wire. It uses a high-purity eutectic Sn99.3/Cu0.7 alloy, which is complemented with a no-clean, synthetically refined, splatter-proof resin flux core. It wets and spreads like an RA type flux and is virtually non-splattering. This solder meets J-STD-004 and exceeds J-STD-006 specifications.

This wire is a great lead-free alternative to leaded solders and serves as an economical substitute for the SAC305 alloy solders. It leaves a small amount of post-soldering residue that is non-conductive and non-corrosiv.e. The No Clean name refers to the fact that the flux residues are not harmful to assemblies and does not mean there will be no residue.

- **Eutectic alloy**
- **Resin spreads like rosin-activated flux**
- **Virtually non-splattering**
- **Non-corrosive**
- **Non-conductive**
- **Halide free**
- **NFS International Registered [No. 144209] as an acceptable nonfood compound for use on electrical equipments in and around food processing areas.**
- **RoHS Compliant**
- **Melting point: 227 °C - 442 °F**

Cat. Number	Size	Diameter	Gauge	Flux %	Packaging
4901-112G	¼ lb (113g)	0.032"	21	2.2	Spool
4901-227G	½ lb (227g)	0.032"	21	2.2	Spool
4901-454G	1 lb (454g)	0.032"	21	2.2	Spool

Also available in flux core percentages 2% to 4%

LEAD-FREE CORED WIRE

Sn100e

MG Chemicals' Sn100e series offers electronics-grade solder wires that use a high-purity eutectic tin/copper/cobalt alloy. They are a great lead-free alternative to leaded solders and generally provide better wetting, contact angle, flow and visual appearance than typical Sn63/Pb37 while still delivering excellent performance characteristics. This alloy provides superior solder penetration into plated through-holes and is a suitable replacement for SAC305 solder as it forms brighter, shinier and less grainy joints, and is less expensive.

Our Sn100e solder wires meet J-STD-004 and exceed J-STD-006 specifications.

These solder wires achieve a consistent solder and flux percentage thanks to our state-of-the-art extrusion wire-drawing machine. This machine continually monitors the wire to prevent voids and ensure consistency, providing a top-grade solder wire.

Sn100e RA Solder Wire

This Sn100e Lead Free RA Solder is complemented with a rosin activated, medium activity flux that is classified as ROM1 according to J-STD-004B.

This solder is ideal for through-hole and surface mount interconnects. It is a suitable replacement for SAC305 solder since the 494x forms brighter, shinier and less grainy joints. Furthermore, it is less expensive than SAC305.

- **Eutectic alloy**
- **Exceeds J-STD-006 impurity requirements**
- **Fast wetting**
- **Fast flowing**
- **Non-corrosive**
- **Non-conductive residues**
- **REACH (compliant)**
- **RoHS compliant**
- **Melting point: 228 °C - 442 °F**

Cat. Number	Size		Diameter		Gauge	Flux %	Packaging
4942-112G	112 g	0.25 lb	0.81 mm	0.032 in	21	2.2	Spool
4942-454G	454 g	1.0 lb	0.81 mm	0.032 in	21	2.2	Spool
4944-112G	112 g	0.25 lb	0.51 mm	0.020 in	25	2.2	Spool
4944-454G	454 g	1.0 lb	0.51 mm	0.020 in	25	2.2	Spool

Also available in flux core percentages 2% to 4%

Sn100e NC Solder Wire

This wire features a no-clean, synthetically refined, splatter-proof resin flux core. It is fast wetting, fast flowing and low VOC.

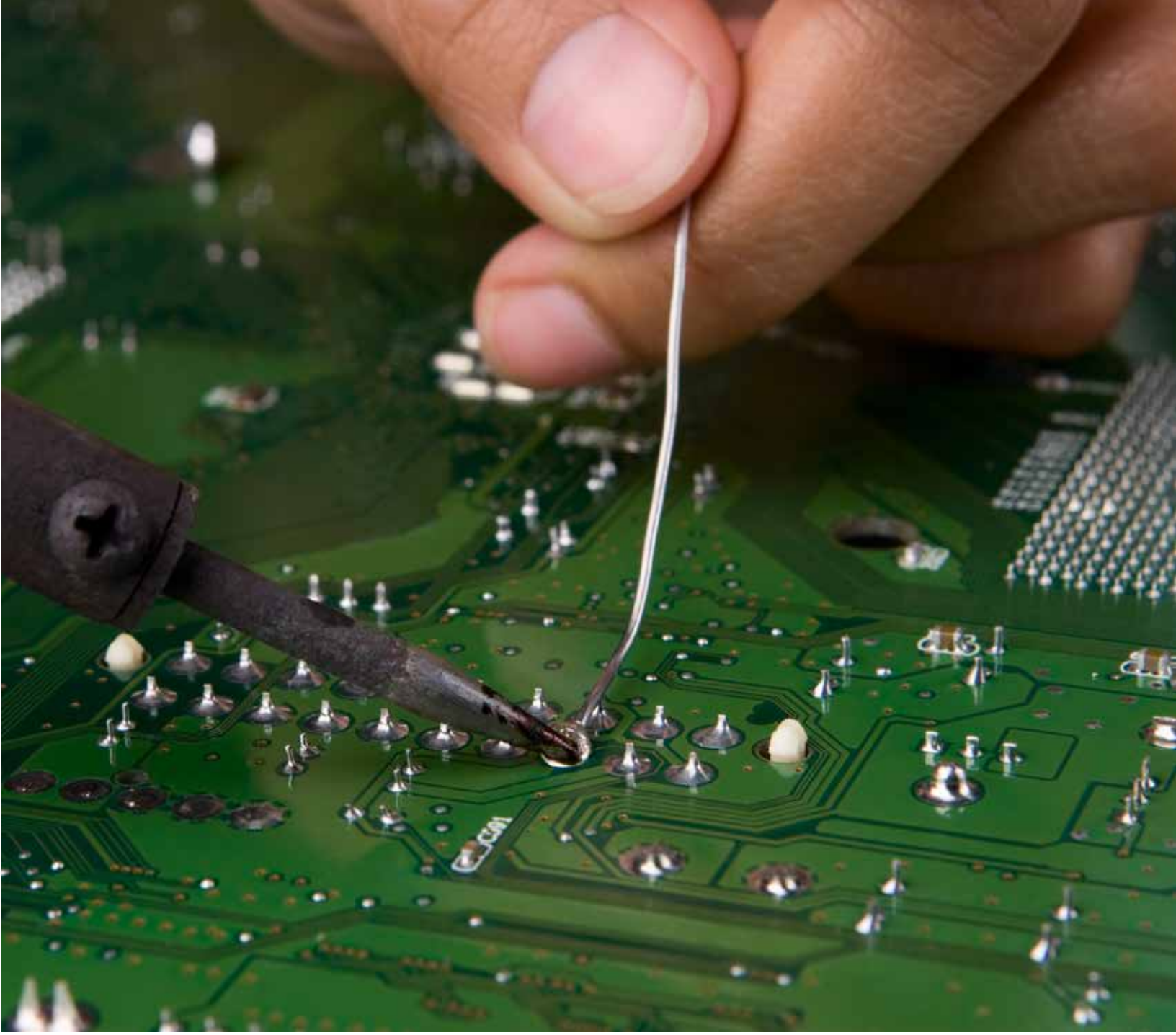
Mild enough to not require cleaning, it leaves a small amount of post-soldering residue that is non-conductive and non-corrosive and won't cause electrical shorts.

The name No Clean refers to the fact that the flux residues are not harmful to assemblies and does not mean there will be no residues.

- **Eutectic alloy**
- **Spreads like rosin-activated flux**
- **Virtually non-splattering**
- **Non-corrosive**
- **Non-conductive**
- **Halide free**
- **RoHS compliant**
- **Melting point: 228 °C - 442 °F**

Cat. Number	Size		Diameter		Gauge	Flux %	Packaging
4933-112G	112 g	0.25 lb	0.51 mm	0.020in	25	2.2	Spool
4933-454G	454 g	1.0 lb	0.51 mm	0.020 in	25	2.2	Spool
4935-112G	112 g	0.25 lb	0.81 mm	0.032in	21	2.2	Spool
4935-454G	454 g	1.0 lb	0.81 mm	0.032 in	21	2.2	Spool
49500-454G	454 g	1.0 lb	0.81 mm	0.032 in	21	3.3	Spool

Also available in flux core percentages 2% to 4%



Sn100e WS Solder Wire

This Sn100e solder wire is complemented with a water-soluble flux core. The residues left on the board are readily soluble in hot water, requiring cleaning in most applications.

- **Eutectic alloy**
- **Spreads like rosin activated flux**
- **Virtually non-splattering**
- **Halide free**
- **REACH (compliant)**
- **RoHS (compliant)**
- **Melting point: 228 °C - 442 °F**

Cat. Number	Size		Diameter		Gauge	Flux %	Packaging
49500WS-454G	454 g	1.0 lb	0.81 mm	0.032 in	21	3.3	Spool

Also available in flux core percentages 2% to 4%

SOLDER PASTE

MG Chemicals' solder pastes are formulated to provide superior connection between surface mount components and the copper traces of a printed circuit board. Our solder pastes are made of powdered non-recycled metals blended with no-clean flux. Available in leaded (tin/lead) and lead-free (tin/silver/copper) formulations, they leave non-conductive, non-corrosive and highly insulated post soldering residues. Perfect for printed circuit board assembly and repair. Our pastes are available in convenient syringes and jars.

LEADED

MG Chemicals' leaded solder paste is a unique blend of low oxide high purity solder powder with no-clean flux formulation. Designed for surface mount applications, our No Clean Solder Paste will help you achieve high productivity while reducing production costs. Our leaded solder paste is offered in convenient 35g syringes and 250g jars.

Sn63/Pb37- No Clean (NC) Solder Paste

M.G. Chemicals No Clean Solder Paste is made from a blend of virgin high purity non-recycled tin and lead metal powder blended with a no-clean flux to form a paste. The post-soldering transparent residues are non-conductive, non-corrosive and highly insulated. The name No Cean refers to the fact that the flux residues are not harmful to assemblies and does not mean there will be no residues.

- **No-clean formula**
- **Low residues**
- **Excellent wettability**
- **Non-corrosive flux residue**
- **Non-conductive flux residue**
- **J-STD-006C compliant**
- **Melting point: 183 °C / 361 °F**

Cat. Number	Size	Packaging
4860P-35G	35 g	Syringe
4860P-250G	250 g	Jar
4860P-500G	500 g	Jar

LEAD-FREE

MG Chemicals' lead-free solder paste provides high fluxing activity levels, promotes thermal stability, and prevents thermal degradation when reflowing under normal atmospheric conditions. Since use of nitrogen is not required, our lead-free solder pastes provide excellent cost savings. They exhibit superior joint strength, excellent wettability, and extraordinary print definition and tack life.

Sn42/Bi57/Ag1- Low Temperature Solder Paste

M.G. Chemicals Low Temperature Solder Paste is made for low temperature applications. It spreads easily and adheres well to a variety of materials, and provides excellent soldering results and appearances. This uniform paste dispenses evenly and resists solder beading and bright spots.

- **Excellent fine pitch printing capability**
- **Long operational life – non slumping**
- **Good wettability**
- **J-STD-006C compliant (certification pending)**
- **RoHS compliant**
- **Melting point: 138 °C / 280 °F**

Cat. Number	Size	Packaging
4902P-15G	15 g	Syringe
4902P-25G	25 g	Syringe

SAC305 (Sn/Ag/Cu) - No Clean (NC) Solder Paste

M.G. Chemicals No Clean Solder Paste is made from a blend of high purity non-recycled tin, silver and copper metal powder, mixed with a no-clean flux to form a paste. It is a lead-free, no-clean, halogen-free solder paste designed specifically with robust flux activity and enhanced printing characteristics for ultra-fine pitch applications. It provides an extreme fluxing activity level with excellent wetting on copper OSP-coatings. Wide reflow process windows combined with high thermal stability yield solder joints with smooth surfaces.

In addition it offers repeatable, consistent printing characteristics, combined with long stencil and tack life, to accommodate high speed printing. This material yields excellent printing capabilities across a variety of board designs, and ultra-fine pitch down to 0.3mm, with excellent paste release that achieves brick-like print results

- **No-clean formula**
- **Enhanced print characteristics utilizing proprietary paste flux manufacturing techniques**
- **Non-corrosive**
- **Thermally stable**
- **Shiny and bright solder joints**
- **Low hard non-conductive tacky residues**
- **Long tack time**
- **Excellent wettability**
    - **Suitable for air or nitrogen atmospheres**
    - **Meets J-STD-005A**
    - **Complies with RoHS Directive 2002/95/EC**
    - **Melting point: 217 °C - 221 °C / 423 °C - 430 °F**

Cat. Number	Size	Packaging
4900P-25G	25 g	Syringe
4900P-250G	250g	Jar

MG Chemicals offers a full line of solder flux formulated to provide high-tack force, superior wetting and remarkable soldering performance levels. Made from high-grade natural or synthetic resins and/or thixotropic agents, they are specifically formulated for use with high temperature lead-free chemistries or lower temperature conventional leaded alloys. They are designed to meet the changing requirements of today's soldering operations, provide effective adhesion to copper and other substrates, and act as an oxygen barrier to prevent oxidation during soldering. Our fluxes are available in Rosin Activated (RA), No Clean (NC), No Clean Halogen Free and Water Soluble (WS) formulations, in paste or liquid formats, and are available for leaded and / or lead-free chemistries.

Rosin Activated (RA) Flux

MG Chemicals Rosin Activated Flux is made from pure white water gum rosin, a unique solvent system, and very effective activators. The superior fluxing ability remains constant throughout the entire aeration process. This Rosin flux contains a foaming property that provides fast wetting action. It features superior fluxing ability, instant wetting, good spreading capabilities, low surface tension, thermal stability and easy-to-remove residue. It displays excellent foaming properties and may be applied by dip, spray or brush methods. After soldering, the rosin residue is non-corrosive, non-conductive moisture and fungus resistant. Available in liquid or pen formats.

- **Rosin-activated Flux (RA)**
- **Compatible with leaded chemistries**
- **Excellent foaming characteristics**
- **Superior fluxing ability**
- **Instant wetting**
- **Fast spreading**
- **Low surface tension**
- **Thermally stable**
- **Excellent foaming properties**
- **Non-corrosive, non conductive flux residue**
- **Non hygroscopic**
- **Moisture and fungus resistant**
- **Meets Mil. spec. #RA 14256**
- **J-STD-004B compliant**
- **ROMI class, J Standard**
- **RoHS compliant**

Cat. Number	Size		Packaging
835-P	10 ml	0.34 fl oz	Pen
835-100ML	125 ml	4.2 fl oz	Bottle
835-1L	1 L	33.8 fl oz	Bottle
835-4L	4 L	1 gal	Jug

FLUXES

MG Chemicals fluxes comprise a chemical composition that cleans metal surfaces to ease the flow of filler metals over base metals. They contribute to the removal of surface metal oxides and provide a protective barrier against re-oxidation and heat scaling, while assisting with heat transfer from the heat source to the metal surface. All of our fluxes are **J-STD-004B and RoHS compliant.**

No Clean (NC) Flux
Leaded / Lead-Free Chemistries

MG Chemicals' unique mixture of high grade synthetic resin and thixotropic agents designed specifically for use with high temperature lead-free and conventional Sn/Pb alloys. It provides fluxing activity levels that promote fast wetting action and maximum wetting spread.

- **Excellent wettability**
- **No-clean formula**
- **Non-corrosive, non-conductive, non-tacky residues**
- **Compatible with lead-free & leaded solder systems**
- **Thixotropic paste**

Cat. Number	Size		Packaging
8341-10ML	10 ml	0.34 fl oz	Syringe

No Clean (NC) , VOC Free Flux
Leaded / Lead-Free Chemistries

MG Chemicals No Clean VOC-Free Flux is a halide-free flux, designed for the soldering of conventional and surface mount PCB assemblies. It is formulated to remain active after the chip wave, virtually eliminating occurrences of solderballing.

- **Rapid wetting on virtually all types of substrates**
- **CFC-Free**
- **VOC-free, halide-free**
- **Remains active after the chip wave**
- **Bright, shiny solder joints**
- **Pin testable**
- **Virtually eliminates solder balls and bridging**
- **Bellcore GR-78-CORE compliant**

Cat. Number	Size		Packaging
8351-125ML	125 ml	4.2 fl oz	Bottle
8351-1L	1 L	26 fl oz	Bottle
8351-4L	4 L	1.1 gal	Jug
8351-20L	20 L	5.3 gal	Pail

No Clean (NC) Flux, Halogen Free
Leaded / Lead-Free Chemistries

MG Chemicals No-Clean Halogen-Free Flux offers a unique combination of high grade synthetic resin with thixotropic agents and very low solids. It may be used for both leaded and lead-free applications, providing a broader processing window.

- **No-clean formula**
- **Halogen-free**
- **Excellent wetting**
- **Bright, shiny solder joints**
- **Low residue**
- **Rosin/resin free**
- **Compatible with lead-free & leaded solder chemistries**
- **Meets Mil. spec. #RA 14256**
- **ROMI class, J Standard**

Cat. Number	Size		Packaging
836-P	10 ml	0.34 fl oz	Pen
836LFNC-1L	1 L	33.8 fl. oz	Bottle
836LFNC-4L	4 L	1.1 gal	Jug

Water Soluble (WS) Flux
Leaded / Lead-Free Chemistries

MG Chemicals Lead-Free Water Soluble Flux is a neutral, water-removable liquid soldering flux for conventional and surface mount PCB assemblies. The organic activating system in our Lead-Free Water Soluble Flux has a neutral pH at room temperature and becomes activated at soldering temperatures.

It is formulated to be effective over a broad preheat range and may be used for both leaded and lead-free applications. As with all water-soluble fluxes, post-soldering cleaning is required. Residues can be easily removed with both hot and cold water, so no neutralizer is needed. De-ionized water should be used in the final rinse for cleanliness results that exceed MIL-28809A.

- **Excellent wetting**
- **Bright, shiny solder joints**
- **Neutral pH**
- **Rosin/resin free**
- **Compatible with lead-free & leaded solder chemistries**
- **Meets Mil. spec. #RA 14256**
- **ROMI class, J Standard**

Cat. Number	Size		Packaging
837-P	10 ml	0.34 fl oz	Pen
837LFWS-1L	1 L	33.8 fl. oz	Bottle
837LFWS-4L	4 L	1.1 gal	Jug

RA Rosin Flux Paste

RA Rosin Flux Paste is a superior electronics-grade flux paste system that makes SMD electrical and electronics soldering faster and easier. It is designed for lead-free alloys, but it works well with conventional leaded solder. It is easy to apply and stays on the area where it is applied, and a little bit goes a long way. It does not contain any zinc chloride or ammonium chloride. Post-soldering residue removal is much easier due to the organic acid base of the flux.

- **Uses Premium Grade RA Flux**
- **Excellent wettability**
- **High tack force**
- **Long tack time**
- **Zinc chloride or ammonium chloride-free**
- **Residue can easily be removed with Cat. #824 Isopropyl Alcohol or Cat. #4140 Flux Remover**
- **Complies with IPC ANSI-J-STD-004 ROH1 (certification pending)**
- **RoHS compliant**
- **Melting point: 183 °C / 361 °F**

Cat. Number	Packaging	Net Weight	
8342-50G	Jar	50 g	1.7 oz

FLUX REMOVERS

How to effectively remove flux residues

Removing flux is a two-step process that involves dissolving the flux and rinsing off the dissolved flux. The rinsing step is very important because after dissolving the flux it may appear that the solids in the flux have disappeared. But once the flux remover has evaporated away, the solids will re-deposit on the board as a white residue.

Dissolving the Flux

There are two ways to dissolve flux.

You can use an aerosol with a hog hair cleaning brush and spray the areas where the flux resides, or, if you are using our 4140 Flux Remover, you may spray it on liberally, as it is plastic-safe and will not harm surrounding components. In cases where you run into a patch of burnt-on difficult-to-remove flux, the 413B Heavy Duty Flux Remover is ideal, but be careful to apply it directly only to the flux-contaminated area, as it will harm some components.

You may also use our PC board flux remover in liquid form by submerging your component(s) in a tray.

Rinsing the Board

Flux removers evaporate fast and, if not rinsed promptly after application, might leave residues on the cleaned surface.

There are two ways to rinse a board.

If you used an aerosol flux remover, the easiest way to rinse is to hold the board vertically and vaporise more flux remover until you see the fluid running off of the board, free of residue.

If you have dissolved the flux by submerging the board in liquid flux remover, just dip the board into the tray and swish the flux remover around.

If you have been using a tray to dissolve flux from several boards, you should use a separate tray, or have an aerosol can handy for rinsing, as dissolved flux may remain in the cleaning tray and redeposit during the rinsing process.

An alternate method for rinsing dissolved flux off of a board is to use our 406B Super Wash. It is an excellent choice for rinsing because it is very fast-drying and also plastic-safe. It will strip away both the slower-drying flux remover and the dissolved flux, producing a clean dry board in seconds.

MG Chemicals' flux removers offer two formulas to dissolve and remove post-solder residue and other contaminants that remain on circuit boards after manufacturing, repair or rework. Both work on most types of solder fluxes: rosin, non-rosin, no-clean and water-soluble.

Either of our flux removers can rinse as well as dissolve flux. However, our Heavy Duty Flux Remover should be used with caution as it may harm surrounding components that are directly exposed to it.

Heavy Duty Flux Remover

MG Chemicals Heavy Duty Flux Remover contains both acetone and alcohols. It is specially formulated to dissolve and remove the most stubborn, encrusted, hard, baked-on fluxes and residues left on parts after soldering. It penetrates quickly to remove non-ionic and ionic contaminants left on non-component side circuit boards, and can also work aggressively on isolated and hard-to-reach areas that require spot cleaning. Offered in aerosol and liquid formats.

- **Extra strength (harmful on some plastics)**
- **Quickly dissolves burnt-on flux**
- **Fast evaporation**
- **Variable valve allows user to control rate of flow**

Cat. Number	Size	Packaging
413B-425G	425 g (498 mL)	Aerosol
413B-1L	945 mL (1 qt)	Bottle
413B-4L	4 L (1.1 gal)	Jug
413B-20L	18.9 L (5 gal)	Pail

Flux Remover for PC Boards

MG Chemicals' special blend of ethyl alcohol, isopropanol and ethyl acetate. It is plastic-safe, and widely used in the electronics industry to remove rosin, non-rosin and no-clean fluxes. Offered in aerosol and liquid formats.

- **Safe on plastics**
- **Moderate evaporation**
- **RoHS Compliant**
- **Low odour**
- **Zero residue**
- **Variable valve allows user to control rate of flow**

Cat. Number	Size	Packaging
4140A-P	10 ml (0.34 fl. oz)	Pen
4140-400G	400 g (353 mL)	Aerosol
4140-1L	1 L (33.8 fl. oz.)	Bottle
4140-4L	4 L (1.1 gal)	Jug
4140-20L	20 L (4.54 gal)	Pail

TIP TINNER

TIP TINNER

MG Chemicals Tip Tinner is a mixture of tin/silver/copper lead-free solder powder and thermally stable oxide-reducing compounds. It can be used to repair oxidized soldering tips for optimal performance, and to extend the working life of new soldering tips by re-tinning or removing baked-on residue and oxidation that accumulates on soldering tips when not in use.

- **Easy to use**
- **Effective at repairing oxidized iron tips**
- **Prolongs the life of new iron tips**
- **96.5% Tin / 3.0% Silver / 0.5% Copper**
- **RoHS compliant**

Cat. Number	Size	Packaging
4910-28G	28 g (1 oz.)	Tin can

DESOLDERING BRAIDS

M.G. Chemicals desoldering braids (wicks) are made of clean, oxide-free copper wire, tight-weaved. They are specially designed to ease the replacement of electronics components and remove any extra solder without damaging the board or components. They are ideal for the reworking and repair of printed circuit boards found in a variety of electronics devices. Our desoldering braids are available in Type 'R', Lead-Free or No Clean formats, and are offered in a wide variety of lengths and widths. Static dissipative wicks come in 5-foot spools and can be custom-ordered in any other size. Packs are also available.

Fine Braid Super Wick 400 - LF Series

M.G. Chemicals Lead Free Super Wick LF Series are formulated to remove high-temperature lead-free solders. All are formulated with a no-clean flux designed for higher activation temperatures. They also work well with conventional tin/lead solders. They transfer heat to solder joints more quickly and efficiently than conventional wicks.

- **For lead-free solder**
- **No-clean flux**
- **Transfer heat rapidly**
- **Static dissipative bobbins**
- **Meet J-STD-004 requirements**
- **Conform to Bellcore specification GR-78-CORE (TR-TSY-000078), and IPC Test Method III**

Length	0.05" # 2 Yellow	0.075" #3 Green	0.1" #3 Blue
5 ft	424-LF	425-LF	426-LF

Fine Braid Super Wick 400 - NS Series

M.G. Chemicals Super Wick NS Series braids are high quality desoldering braids made from high-purity oxide-free copper and formulated for the removal of leaded solders. A no-clean flux provides higher temperature activation. Can also be used with lead-free solder chemistry. Its faster heat transfer properties allow for safer and quicker solder removal.

- **No Clean Super Wick**
- **Flux residue is non-conductive and non-corrosive**
- **ESD (electrostatic dissipative) safe for all 1.5 m / 5 ft bobbins**
- **Flux residue remaining on board does not have to be cleaned**
- **High SIR-meets the requirements of both the Bellcore Spec. TR-TSY-000078 and IPC Test Method III**

Length	0.05" #2 Yellow	0.075" #3 Green	0.1" #4 Blue
5 ft	424-NS	425-NS	426-NS
50 ft	-	453-NS	454-NS
5 ft - 10 pack	424-NS-10	425-NS-10	426-NS-10

Fine Braid Super Wick 400 Series

MG 4xx series Super Wick Fine Braids are high quality desoldering braids that have been precision cleaned and produced with up-to-date and environmentally friendly processes and technology. The oxide-free high purity copper conducts heat fast, allowing for faster wicking and shorter dwell times that minimize possible overheating damage. They use pure type 'R' resin flux that conforms to all the requirements of MIL-F-14256F, Type 'R' and ANSI/J-STD-004. They leave an environmentally safe residue. In short, they are cleaner, faster and more consistent desoldering braids.

- **Reactive flux core (R)**
- **High purity, oxide-free copper**
- **Works with leaded or lead-free chemistries**
- **Environmentally and PCB safe residues**
- **ESD (electrostatic dissipative) safe for 1.5 m [5 ft]**
- **Manufactured under SPC guidelines**
- **Conforms to MIL-F-14256F**
- **ANSI/J-STD-004 compliant**

Length	0.025" #1 White	0.05" #2 Yellow	0.075" #3 Green	0.1" #4 Blue	0.125" #5 Brown
5 ft	423	424	425	426	427
25 ft		442	443	444	
50 ft		452	453	454	
100 ft		462	463	464	
5 ft - 10 pack		424-10	425-10	426-10	427-10

INDUSTRY STANDARDS AND REQUIREMENTS

The electronics industry has set three joint standards that prescribe the requirements and test methods for soldering materials used in their work. These standards are J-STD-004, J-STD-005 and J-STD-006.

J-STD-004B

The J-STD-004B standard prescribes general requirements for the classification and characterization of fluxes for high quality solder interconnections. It is used for quality control and procurement purposes.

This standard classifies and characterizes tin/lead and lead-free soldering flux materials for use in electronic metallurgical interconnections for printed circuit board assembly. Soldering flux materials include liquid flux, paste flux, solder paste, solder cream, flux-coated and flux-cored solder wires, and preforms. This standard is not intended to exclude any acceptable flux or soldering materials; however, such materials must produce the desired electrical and metallurgical interconnections.

J-STD-005

The J-STD-005 standard prescribes general requirements for the characterization and testing of solder pastes used to make high quality electronics interconnections. This specification is a material quality control document and is not intended to relate directly to the material's performance in the assembly process. Solder paste users are referred to 6.3 for a listing of requirements information, and options that should be addressed when procuring solder paste.

The standard defines the characteristics of solder paste through the definition of properties, and the specification of test methods and inspection criteria. Materials involved include solder powders and solder paste flux blended to produce solder paste. Solder powders are classified by the shape and distribution of their constituent particles. This standard is not intended to exclude particle sizes or distributions not specifically listed.

J-STD-006C

The J-STD-006C standard prescribes the nomenclature, requirements and test methods used for electronics-grade solder alloys; for fluxed and non-fluxed bar, ribbon, wire, and powder solders for electronic soldering applications; and for "special form" electronics-grade solders. This is a quality control standard and is not intended to relate directly to the materials' performances in the manufacturing process.

RoHS

RoHS (Restriction of Hazardous Substance, also known as Directive 2002/95/EC) originated in the European Union and restricts the use of six hazardous materials found in electrical and electronics products. All applicable products in the EU market after July 1, 2006 must meet RoHS compliance standards. RoHS impacts the entire electronics industry.

The substances restricted under the RoHS directive include lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (CrVI), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).

Any business that sells applicable electrical or electronics products, sub-assemblies or components directly to RoHS countries, or sells to resellers, distributors or integrators that in turn sell products to these countries, is affected if they utilize any of the restricted materials.

With the exception of our leaded solder wires, MG Chemicals does not produce any products containing any of the six substances controlled by RoHS.

For more information on the above regulatory issues, please visit the Compliance Center on our website.

CONFLICT MINERALS

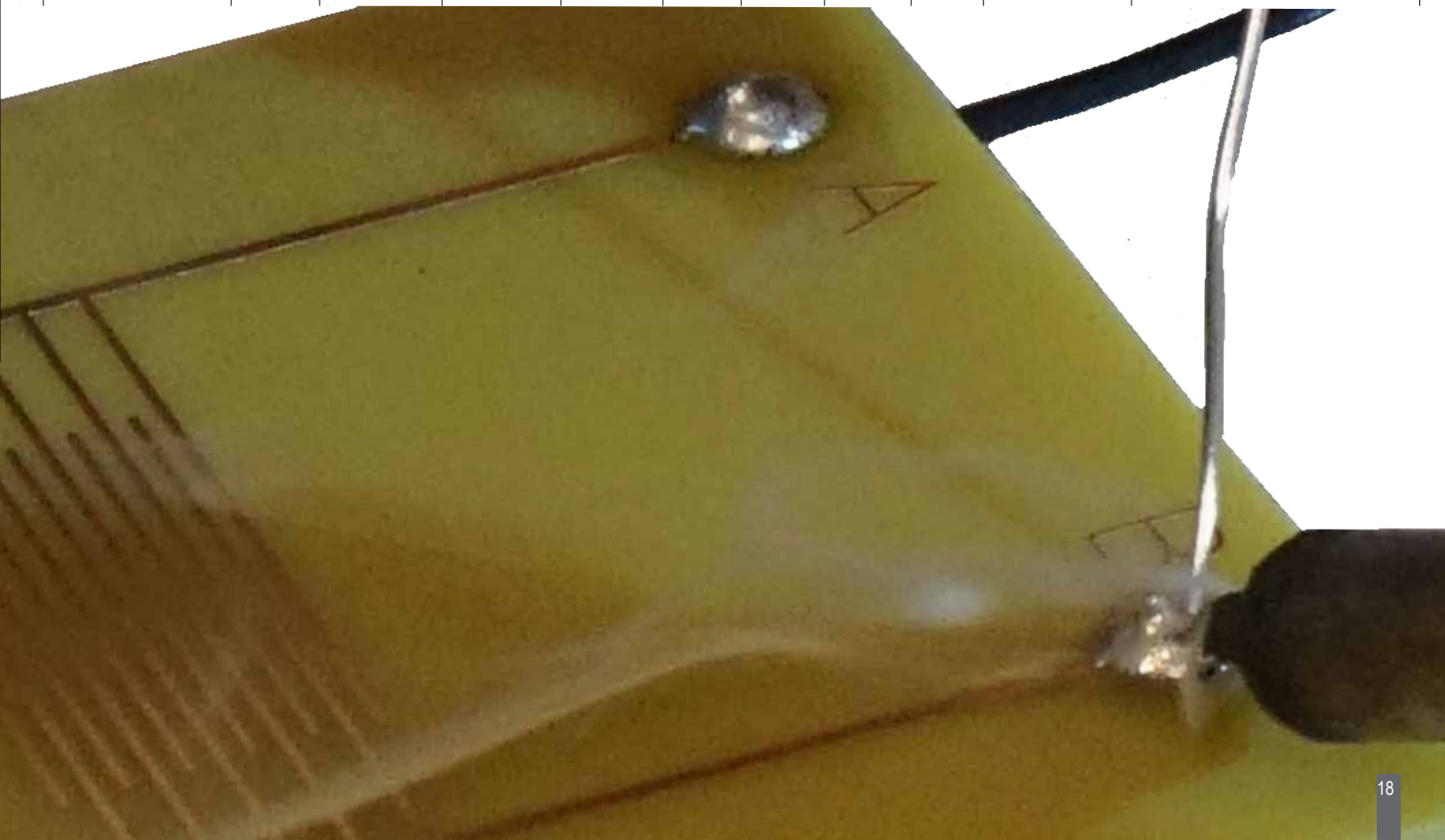
MG Chemicals Ltd. supports the elimination of conflict resources trade in accordance with the Dodd-Frank Financial Reform Bill. Our policy is to use only materials that haven't financed or benefited DRC armed groups, and are therefore either "DRC Conflict Free" or made from recycled materials. Our suppliers are made directly aware of this requirement and are asked to trace the source of their products back to their original smelters or refineries. Further, our suppliers are asked to report changes to their conflict minerals sourcing that would impact their DRC Conflict Free status.

LEADED SOLDER WIRE QUICK SELECTOR

Cat. Number	Alloy	Flux Type	Flux Core %	Diameter	Size	Gauge	Softening Point	Melting Range
4884-227G	Sn63 / Pb37	RA	2.2	0.635mm (0.025”)	½ lb (227g)	23	80 °C / 176 °F	183 °C / 361 °F
4884-454G	Sn63 / Pb37	RA	2.2	0.635mm (0.025”)	1 lb	23	80 °C / 176 °F	183 °C / 361 °F
4885-227G	Sn63 / Pb37	RA	2.2	0.081mm (0.032")	½ lb (227g)	22	80 °C / 176 °F	183 °C / 361 °F
4885-454G	Sn63 / Pb37	RA	2.2	0.081mm (0.032")	1 lb (454g)	22	80 °C / 176 °F	183 °C / 361 °F
4886-227G	Sn63 / Pb37	RA	2.2	1.016mm (0.04”)	½ lb (227g)	20	80 °C / 176 °F	183 °C / 361 °F
4886-454G	Sn63 / Pb37	RA	2.2	1.016mm (0.04”)	1 lb (454g)	20	80 °C / 176 °F	183 °C / 361 °F
4887-227G	Sn63 / Pb37	RA	2.2	1.27mm (0.05”)	½ lb (227g)	18	80 °C / 176 °F	183 °C / 361 °F
4887-454G	Sn63 / Pb37	RA	2.2	1.27mm (0.05”)	1 lb (454g)	18	80 °C / 176 °F	183 °C / 361 °F
4888-227G	Sn63 / Pb37	RA	2.2	1.57mm (0.062”)	½ lb (227g)	16	80 °C / 176 °F	183 °C / 361 °F
4888-454G	Sn63 / Pb37	RA	2.2	1.57mm (0.062”)	1 lb (454g)	16	80 °C / 176 °F	183 °C / 361 °F
4880-18G	Sn63 / Pb37	RA	2.2	0.081mm (0.032")	18g (0.6 oz)	22	80 °C / 176 °F	183 °C / 361 °F
4860-18G	Sn63 / Pb37	No Clean	2.2	0.081mm (0.032")	78g (0.06oz)	22	75 °C / 167 °F	183 °C / 361 °F
4865-227G	Sn63 / Pb37	No Clean	2.2	0.081mm (0.032")	½ lb (227g)	22	75 °C / 167 °F	183 °C / 361 °F
4865-454G	Sn63 / Pb37	No Clean	2.2	0.081mm (0.032")	1 lb (454g)	22	75 °C / 167 °F	183 °C / 361 °F
4866-227G	Sn63 / Pb37	No Clean	2.2	1.016mm (0.04”)	½ lb (227g)	20	75 °C / 167 °F	183 °C / 361 °F
4894-227G	Sn60/Pb40	RA	2.2	0.635mm (0.025”)	½ lb (227g)	23	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4894-454G	Sn60/Pb40	RA	2.2	0.635mm (0.025”)	1 lb (454g)	23	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4895-227G	Sn60/Pb40	RA	2.2	0.081mm (0.032")	½ lb (227g)	22	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4895-454G	Sn60/Pb40	RA	2.2	0.081mm (0.032")	1 lb (454g)	22	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4896-227G	Sn60/Pb40	RA	2.2	1.016mm (0.04”)	½ lb (227g)	20	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4896-454G	Sn60/Pb40	RA	2.2	1.016mm (0.04”)	1 lb (454g)	20	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4897-227G	Sn60/Pb40	RA	2.2	1.27mm (0.05”)	½ lb (227g)	18	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4897-454G	Sn60/Pb40	RA	2.2	1.27mm (0.05”)	1 lb (454g)	18	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4898-227G	Sn60/Pb40	RA	2.2	1.57mm (0.062”)	½ lb (227g)	16	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4898-454G	Sn60/Pb40	RA	2.2	1.57mm (0.062”)	1 lb (454g)	16	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4890-18G	Sn60/Pb40	RA	2.2	0.081mm (0.032")	18 g (0.6 oz)	22	80 °C / 176 °F	183 °C - 190 °C / 361 °F - 374 °F
4870-18G	Sn60/Pb40	No Clean	2.2	0.081mm (0.032")	78 g (0.06oz)	22	75 °C / 167 °F	183 °C - 190 °C / 361 °F - 374 °F
4875-227G	Sn60/Pb40	No Clean	2.2	0.081mm (0.032")	½ lb (227g)	22	75 °C / 167 °F	183 °C - 190 °C / 361 °F - 374 °F
4875-454G	Sn60/Pb40	No Clean	2.2	0.081mm (0.032")	1 lb (454g)	22	75 °C / 167 °F	183 °C - 190 °C / 361 °F - 374 °F
4876-227G	Sn60/Pb40	No Clean	2.2	1.016mm (0.04”)	½ lb (227g)	20	75 °C / 167 °F	183 °C - 190 °C / 361 °F - 374 °F

LEAD-FREE SOLDER WIRE QUICK SELECTOR

Cat. Number	Alloy	Flux Type	Flux Core %	Diameter		Size		Gauge	Softening Point	Melting Range
4900-35G	Sac 305	No Clean	2.2	0.081 mm	0.032”	17 g	0.06 oz	21	75 °C / 167 °F	217 °C - 221 °C / 422 °F- 426 °F
4900-112G	Sac 305	No Clean	2.2	0.081 mm	0.032”	113 g	0.25 lb	21	75 °C / 167 °F	217 °C - 221 °C / 422 °F- 426 °F
4900-227G	Sac 305	No Clean	2.2	0.081 mm	0.032”	227 g	0.50 lb	21	75 °C / 167 °F	217 °C - 221 °C / 422 °F- 426 °F
4900-454G	Sac 305	No Clean	2.2	0.081 mm	0.032”	454 g	1.0 lb	21	75 °C / 167 °F	227 °C - 221 °C / 422 °F- 426 °F
4925-112G	Sac 305	RA	2.2	0.81 mm	0.032”	113 g	0.25 lb	21	80 °C / 176 °F	217 °C / 423 °F
4925-454G	Sac 305	RA	2.2	0.81 mm	0.032”	454 g	1.0 lb	21	80 °C / 176 °F	217 °C / 423 °F
4926-112G	Sac 305	RA	2.2	1.01 mm	0.040”	113 g	0.25 lb	19	80 °C / 176 °F	217 °C / 423 °F
4926-454G	Sac 305	RA	2.2	1.01 mm	0.040”	454 g	1.0 lb	19	80 °C / 176 °F	217 °C / 423 °F
4901-112G	Sn99	No Clean	2.2	0.81mm	0.032”	113 g	0.25 lb	21	75 °C / 167 °F	227 °C - 440 °F
4901-227G	Sn99	No Clean	2.2	0.81mm	0.032”	227 g	0.50 lb	21	75 °C / 167 °F	227 °C - 440 °F
4901-454G	Sn99	No Clean	2.2	0.81mm	0.032”	227 g	1.0 lb	21	75 °C / 167 °F	227 °C - 440 °F
4933-112G	Sn100e	No Clean	2.2	0.51 mm	0.020”	112 g	0.25 lb	25	75 °C / 167 °F	228 °C / 442 °F
4933-454G	Sn100e	No Clean	2.2	0.51 mm	0.020”	454 g	1.0 lb	25	75 °C / 167 °F	228 °C / 442 °F
4935-112G	Sn100e	No Clean	2.2	0.81 mm	0.032”	112 g	0.25 lb	21	75 °C / 167 °F	228 °C / 442 °F
4935-454G	Sn100e	No Clean	2.2	0.81 mm	0.032”	454 g	1.0 lb	21	75 °C / 167 °F	228 °C / 442 °F
4942-112G	Sn100e	RA	2.2	0.81 mm	0.032”	112 g	0.25 lb	21	80 °C / 176 °F	228 °C / 442 °F
4942-454G	Sn100e	RA	2.2	0.81 mm	0.032”	454 g	1.0 lb	21	80 °C / 176 °F	228 °C / 442 °F
4944-112G	Sn100e	RA	2.2	0.51 mm	0.020”	112 g	0.25 lb	25	80 °C / 176 °F	228 °C / 442 °F
4944-454G	Sn100e	RA	2.2	0.51 mm	0.020”	454 g	1.0 lb	25	80 °C / 176 °F	228 °C / 442 °F
49500-454G	Sn100e	No Clean	3.3	0.081mm	0.032”	454 g	1.0 lb	N/A	75 °C / 167 °F	228 °C - 442 ° F
49500WS-454G	Sn100e	Water Soluble	3.3	0.081mm	0.032”	454 g	1.0 lb	N/A	60 °C / 140 °F	228 °C - 442 °F



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