

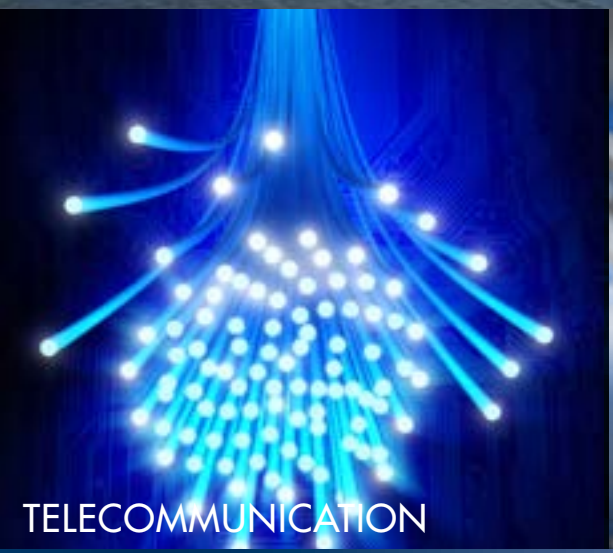
MG Chemicals®

PRODUCT CATALOG











Who is MG Chemicals

M.G. 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 braid, and copper clad boards.

Quality Assurance

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

MSDS Access

M.G. Chemicals lists complete handling, environmental, safety and shipping information for each product on Material Safety Data Sheets. MSDSs are available at **www.mgchemicals.com/msds** or by fax.

Technical Support

We will endeavor to provide our customers with the requested information they need with prompt and courteous attention. We offer help on our website www.mgchemicals.com and with our techsupport hotline at 1-800-201-8822.

Shipping & Handling

M.G. Chemicals' products are offered in IATA tested and United Nations approved high performance shipping cartons for ease of transport anywhere in the world.

Product Availability

M.G. Chemicals' products are readily available through electronic distribution in North America and internationally. Please visit our website for the closest stocking distributor in your area.

Customer Care

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

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Compliance Center

Food Safe Certification

M.G. Chemicals has been working closely with the Canadian Food Inspection Agency (CFIA) and NSF International/Non Food Compounds Registration (NSF) to certify products that can be used around food establishments.

Only certified products can be used in or around food establishments. This includes the maintenance of both electronic controls and mechanical parts of food plant assembly lines.

Each MG product that has been certified is zero residue. This means that no harmful contaminants are left behind that may accidently get onto food; however, there are strict guide lines that require all surfaces to be washed after any maintenance is performed, so you will find the following statement on our labels: "...Food contact surfaces are to be rinsed with water prior to reuse and avoid food contamination during its use and storage."

Each product that has been certified comes with a certification letter that can be obtained by contacting CFIA or NSF or from our website.

To obtain a list of M.G. Chemicals' products that has been certified by CFIA and NSF to be used around food plants, visit **www.mgchemicals.com/foodsafe**

REACH

EU Regulations on Registration, Evaluation, Authorization and restriction of Chemical substances)

No product of MG Chemicals ("MG") contains any Substances of Very High Concern ("SVHC's") as defined by REACH.

MG currently does not export one ton of any individual substance to the European market, and is therefore neither required, nor eligible, to pre-register any substances under REACH. European customers of MG can continue to use our products, as long as their total usage of any particular substance contained in these products remains under the one-ton threshold.

Most of the products sold by MG are "preparations" of individual substances that have been purchased from large multi-national corporations. MG believes most of these substances have been pre-registered by the original manufacturers, and MG's customers can be considered "downstream users" of these original manufacturers. MG is currently in the process of verifying that these pre-registrations have taken place and will be releasing and continually updating a list of our products that have been verified to contain 100% pre-registered materials, as the information becomes available.

European customers should take note that the ultimate responsibility for registration falls on them, and quantities of individual unregistered ingredients in preparations obtained from different suppliers must be added together for the purpose of determining if the one-ton threshold has been passed.

RoHS

RoHS, also known as Lead-Free, stands for Restriction of Hazardous Substances. RoHS, also known as Directive 2002/95/EC, originated in the European Union and restricts the use of six hazardous materials found in electrical and electronic products. All applicable products in the EU market after July 1, 2006 must pass RoHS compliance. 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 electronic 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 impacted 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 for more details.

Super Duster ™ 152

- Ozone safe
- Non-flammable
- Non-conductive
- Zero residue
- Variable valve allows greater user control

CFIA REGISTERED

NSF Nonfood Compounds Program Listed K2 Registration #141801



This general purpose duster removes microscopic dust, lint & foreign particles. Cleans computers and keyboards, photographic and audio/video equipment, coin counters, printers, timing devices, cash machines, optical equipment, fax machines and other electro mechanical instruments. High rate of flow delivery system for increased performance.

This product is not designed for use near ignition sources . For cleaning in such circumstances, use M.G. Chemicals' special application Super Duster 134 (Cat. No. 402A).

402B	Cat. No.	Availability	Format
	402B-285G	285 grams (10 oz)	aerosol
	402B-400G	400 grams (14 oz)	aerosol



Dusters and Coolers

Super Duster ™ 134

- 100% HFC 134A gas
- Ozone safe
- Non-flammable
- Non-conductive
- Zero residue
- Variable trigger valve allows great user control



This special application duster is 100% non flammable and 100% non conductive. It should be used to remove dust, lint and foreign particles in electronics and other equipments around sources of ignition or open flames. Okay to use on live circuits.

402A

Cat. No.	Availability	Format
402AR	285 g (10 oz)	refill aerosol
402A-285G	285 g (10 oz)	aerosol
402A-450G	450 g (16 oz)	aerosol

Trigger Valve

Allows user precision control and greater comfort.





Allows user precision control and greater comfort. This high quality threaded chrome valve is for use with Cat. No. 402AR Super Duster Refill aerosol cans, and can be used over and over. It simply screws onto the top of the can, and can be easily removed at any time without damage to the valve or the can, even if the can's contents have not been depleted.

402T

Cat. No.	Format
402T	chrome trigger valve

Super Cold ™ 134 Plus

Chills to -51°C (-60°F)

CFIA REGISTERED

Used to locate thermal intermittent electronic components, PCB cracks, cold solder joints, and oxidized junctions. Freezes gum & adhesives for easy removal. Protects heat-sensitive components during soldering.



- 100% HFC 134A GAS
- OZONE SAFE
- NON-FLAMMABLE
- NON-CONDUCTIVE
- ZERO RESIDUE
- VARIABLE VALUE ALLOWS GREAT USER CONTROL

403A

Cat. No.	Availability	Format
403A-285G	285 grams (10 oz)	aerosol
403A-400G	400 grams (14 oz)	aerosol

Isopropyl Alcohol (liquid)

A great general-purpose electronics cleaner. Also effective as a flux remover. Perfect for use with fiber optics. Extra effective with M.G. Chemicals' Cat. No. 852 and 853 Hog Hair cleaning brushes. Also available in convenient 5"x8" presaturated wipes.

- 99.953% PURE ANHYDROUS ALCOHOL
- SAFE ON PLASTICS
- LOW TOXICITY
- CONTAINS NO OZONE-DEPLETING SUBSTANCES



824	Cat. No.	Availability	Format
	824-100ML	125 ml (4.2 oz)	liquid
	824-500ML	500 ml (17 oz)	pump
	824-1L	1 litre (33 oz)	liquid
	824-4L	4 litres (1 gallon)	
	824-1G	3.78 litres (1 gallon) * box of 4	liquid
	824-20L	20 litres (5 gallons)	liquid
	824-WX25	25 per box	single wipe
	824-WX50	50 per bag	single wipe
	824-WX500	500 per bag	single wipe

Isopropyl Alcohol (aerosol)



- 99.953% pure anhydrous alcohol
- Complies to California Air Resource Board VOC limits for electronics cleaners
- Safe on plastics
- Low Toxicity
- Contains no ozone-depleting substances

824	Cat. No.	Availability	Format
	824-450G	450 grams (16 oz)	aerosol

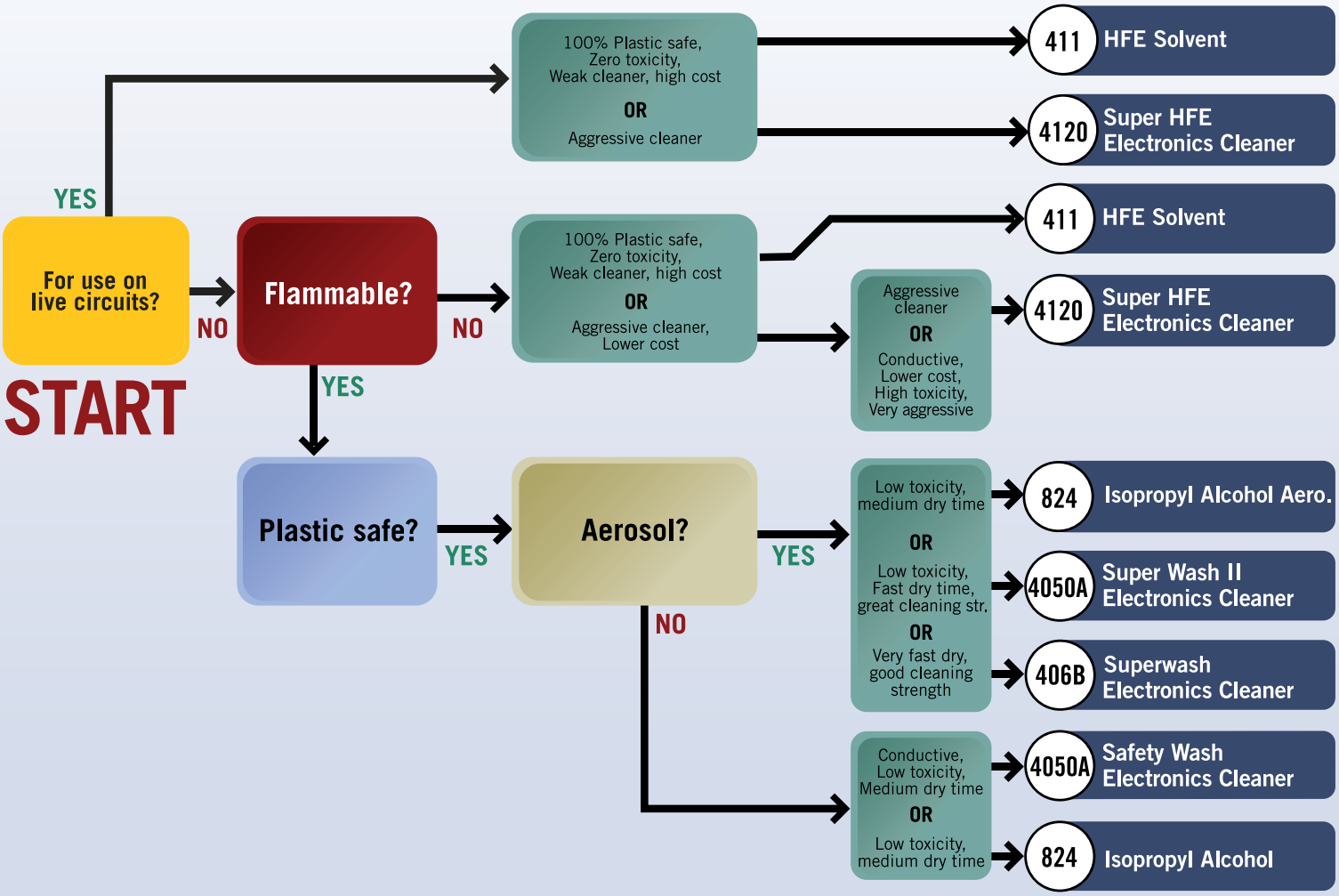
70/30 Alcohol Blends

8241	Cat. No.	Availability	Format
	8241-20L	20 litres	liquid
	8241-T	75 wipes	tub
	8241-WX25	25 per box	single wipe



Electronic Cleaners Selection Chart

Use this flowchart to determine the electronics cleaner best suited to your application.



Safety Wash ™

- Safe on plastics
- Low toxicity



Use when a low toxicity electronics cleaner is desired. Effective at removing oils, greases, inorganic and organic soils, smoke, flux, and ionic residues from PC boards, office equipment, connectors, electronic or mechanical parts, workbenches, relays and semi-conductors. Extra effective with M.G. Chemicals' Cat. No. 852 and 853 Hog Hair cleaning brushes.

4050	Cat. No.	Availability	Format
	4050-1L	1 litre (33 oz)	liquid
	4050-4L	4 litres (1 gallon)	liquid
	4050-20L	20 litres (5 gallons)	liquid

Safety Wash II ™

CFIA REGISTERED

NSF Nonfood Compounds Program Listed K2 Registration #141800



A powerful, plastic safe electronics cleaner designed for electronics. Extra effective with M.G. Chemicals' Cat. No.'s 852 & 853 Hog Hair cleaning brushes.

- Safe on plastics
- Low toxicity
- In compliance for use in food plants

4050A	Cat. No.	Availability	Format
	4050A-450G	450 grams (16 oz)	aerosol

Super Wash ™

NSF Nonfood Compounds Program Listed K2 Registration #141146

- Safe on plastics
- Rapid dry time

CFIA REGISTERED



Use when a rapid drying electronics cleaner is required. Perfect for quickly cleaning PC boards. Rapid dry time makes this product excellent for rinsing away other slower drying solvents. Great for rinsing dissolved flux. Extra effective with M.G. Cat. No. 852 and 853 Hog Hair Cleaning Brushes.

406B	Cat. No.	Availability	Format
	406B-425G	425 grams (15 oz)	aerosol

Pure HFE

Cleans energized circuits, contacts, motors and other electronic equipment. A TF Solvent replacement. Approved by SNAP without restrictions. Extra effective with the use of M.G. Chemicals Cat. No. 852 and 853 Hog Hair cleaning brushes.

- 100% NON-FLAMMABLE
- 100% NON-CONDUCTIVE
- 100% NON-TOXIC

CFIA REGISTERED



411	Cat. No.	Availability	Format
	411-300G	300 grams (10.6 oz)	aerosol

Super HFE Electronics Cleaner

NSF Nonfood Compounds Program Listed K2 Registration #141799

CFIA REGISTERED



Use when a non-flammable and non-conductive electronics cleaner is required. Excellent cleaning strength. Also suitable for use as a contact cleaner or flux remover. Extra effective with the use of M.G. Cat. No. 852 and 853 Hog Hair cleaning brushes.

4120	Cat. No.	Availability	Format
	4120-450G	450 grams (16 oz)	aerosol

Flux Removers

Removing flux is a two-step process. The first step is dissolving the flux. The second step is 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 white residue.





Step 1: Dissolving the Flux

If you are using flux remover in aerosol form, spray a little flux remover onto the flux, then agitate with a hog hair cleaning brush. If you are using our 4140 Flux Remover, you may spray it liberally, as it is safe on your components. If you are using 413B Heavy Duty Flux remover, you may spray it liberally on the solder side of the board, but be careful to only apply it directly to the flux contaminated area if you are using it on the component side of the board, as it will harm some components. The 4140 is plastic safe so it may be applied liberally. Have a can of 413B handy in case you run into a patch of burnt-on difficult to remove flux.

If you are using flux remover in liquid form, pour the flux remover into a tray. If you are using 4140 Flux Remover, you may then submerge the PC board into the tray, agitating the flux with a hog-hair brush. If you are using 413B Heavy Duty Flux Remover, you should not submerge the board into the tray, as the components will be damaged. Instead, wet the hog-hair brush you are using by dipping it into the tray, and then use it to agitate the flux on the board. Periodically rinse and re-wet the brush by swishing it in the flux remover.

Step 2: Rinsing the Board

You must ensure that you rinse off the dissolved solids completely before the flux remover evaporates and the solids redeposit. If you are using flux remover in aerosol form, the easiest way to do this is to hold the board vertically and liberally apply more flux remover until you see the flux remover running off of the board. 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 and you should be ok.

If you have been using the particular tray to dissolve flux on a number of boards, dissolved flux may accumulate in the tray and dipping the board may actually deposit flux solids onto the board. In this case you will want to either set up a separate tray for rinsing, or have an aerosol can handy for rinsing. A particularly good option for rinsing dissolved flux off of a board is to use our 406B Super Wash. Super Wash comes in a large aerosol can, allowing for liberal use, and it dries very rapidly. Super Wash will rinse off un-evaporated flux remover as well as flux solids, and almost immediately after rinsing your board, it will be dry and ready for service.

Flux Remover - Plastic Safe

CFIA REGISTERED

Use when a general-purpose flux remover is required. Excellent for removing rosin, non-rosin, and no clean fluxes. Also available in pen form.

- Safe on plastics
- Zero residue



4140

Cat. No.	Availability	Format
4140-400G	400 grams (14 oz)	aerosol
4140-1L	1 litre (33 oz)	liquid
4140-4L	4 litres (1 gallon)	liquid
4140-20L	20 litres (5 gallons)	liquid
4140-P	10 ml (0.34 oz)	pen

Heavy Duty Flux Remover

Use when an aggressive flux remover is required.

Penetrates to quickly remove all non-ionic and ionic soils found in post-solder applications. Variable valve allows user to control rate of flow. Extra effective with M.G. Chemicals' cleaning brushes.



- FAST EVAPORATION
- AGGRESSIVE CLEANER

413B

Cat. No.	Availability	Format
413B-425G	425 grams (15 oz)	aerosol
413B-1L	1 litre (33 oz)	liquid
413B-4L	3.78 litres (1 gallon)	liquid
413B-20L	18.9 litres (5 gallons)	liquid

SEE THE SOLDER AND DESOLDERING SECTION FOR MORE DETAILS.

835 Liquid Rosin Flux
See page 42

8341 No Clean Flux Paste
See page 42



Specialty Cleaners & Screen Cleaners

Label & Adhesive Remover



CFIA REGISTERED

- CARB Compliant

Effectively removes adhesives and sticker residues. Pleasant odor makes product easy to work with. Safe on plastic.

8361	Cat. No.	Availability	Format
	8361-140G	140 grams	aerosol

Audio/Video Head Cleaner

Cleans and restores sensitive magnetic and optical read/write heads. Removes nicotine, tape residues, metallic oxides, carbon deposits, oils, dirt.

- OZONE SAFE
- ZERO RESIDUE
- SAFE ON PLASTICS

407C	Cat. No.	Availability	Format
	407C-250ML	250 ml (8.4 oz)	liquid
	407C-1L	1 litre (33 oz)	liquid

LCD Screen Cleaning Kit

MG Chemicals' LCD Screen Cleaning Kit includes a high quality microfiber cleaning cloth and an advanced Non Drip Gel formula that will safely and effectively clean the toughest residues from your LCD and Plasma screens.

Glass Cleaner

NSF Nonfood Compounds Program Listed A1 Registration #141797

CFIA REGISTERED

High foaming action provides excellent cleaning capabilities on glass, plastic, chrome, stainless steel, countertops and tile. No harmful solvents or abrasives. For use on glass monitor screens, bar code readers and glass.

825	Cat. No.	Availability	Format
	825-500G	500 grams (17.6 oz)	aerosol

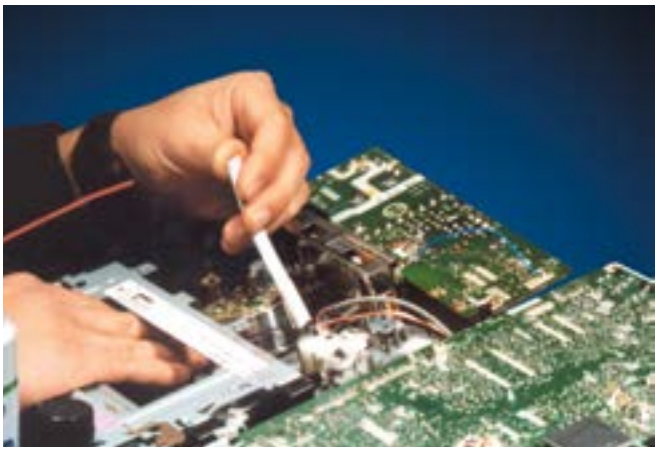
Rubber Renue™



Bring oxidized rubber back to life. Wet cloth with Rubber Renue and rub onto rubber surface. Do not leave excess solution on surface. Excellent for use on belts, platens, rollers, rubber parts.

- ZERO RESIDUE
- CONTAINS NO OZONE-DEPLETING SUBSTANCES
- FAST EVAPORATING

408	Cat. No.	Availability	Format
	408A-125ML	125 ml (4.2 oz)	liquid
	408B-1L	1 litre (33 oz)	liquid



- ADVANCED NON-DRIP FORMULA
- ALCOHOL AND AMMONIA FREE
- NON-STREAKING
- ANTI-STATIC

8242-K	Cat. No.	Availability	Format
	8242-K	200 ml	bottle

LCD Cleaning Wipes

Our new and improved cleaning wipe now looks and cleans better than ever. Tougher wipes to prevent ripping during dispensing and an air tight cap for extended shelf life after opening.

8242	Cat. No.	Availability	Format
	8242-RTS	50 wipes (Spanish)	tub
	8242-RTF	50 wipes (French)	tub
	8242-WX25	25 wipes per box	wipes

Super Contact Cleaner with Poly Phenyl Ether

Use when requiring a contact cleaner with lubrication that offers long-term protection from oxidation.

Reduces contact scrubbing and reduces connection wear and abrasion failures. Protects, lubricates and deoxidizes IC's, connectors, jacks, relays, contacts, switches, plugs, batteries, jacks, relays, controls, potentiometers and more. Also available in micro tip pen format.



- PROTECTS GOLD FOR LIFE
- IMPROVES CONDUCTIVITY ON ALL CONTACTS
- SAFE ON PLASTICS
- CARB COMPLIANT (FOR 801C ONLY)

801B 801C	Cat. No.	Availability	Format
	801B-125G	125 grams (4.5 oz)	aerosol
	801C-P	10 ml (0.34 oz)	micro tip pen

Contact Cleaner with Electronic Grade Silicone

Use when requiring a contact cleaner with dry silicone lubrication.

Cleans and protects with silicone for lubrication. Contains a unique blend of high purity solvents and electronic grade silicone. Cleans and lubricates tuners, office equipment, battery terminals, switches, keyboards, ignition systems, locks, plastic parts, rubber gaskets, contacts, mold releases, telescoping antennas and more.



- FAST DRY
- SAFE ON PLASTICS AND ELASTOMERS
- SILICONE LUBRICATION

404B	Cat. No.	Availability	Format
	404B-140G	140 grams (5 oz)	aerosol
	404B-340G	340 grams (12 oz)	aerosol

Electrosolve™ Contact Cleaner

Use when a zero residue contact cleaner is required.

- **Rapid dry time**
- **Safe on plastics**
- **Zero residue**

NSF Nonfood Compounds Program Listed K2 Registration #141798

CFIA CERTIFIED

An effective and powerful cleaner that quickly penetrates and dissolves most soil types. For use on most electronic parts and equipment including connectors, contacts, LED's, PCB's, components, circuit breakers, tuners and microprocessors. Variable valve allows user to control rate of flow. Extra effective with M.G. Cat. No. 852 and 853 Hog Hair Cleaning Brushes.



409B	Cat. No.	Availability	Format
	409B-140G	140 grams (5 oz)	aerosol
	409B-340G	340 grams (12 oz)	aerosol

Nu-trol™ Control Cleaner

Use when cleaning and lubricating controls.

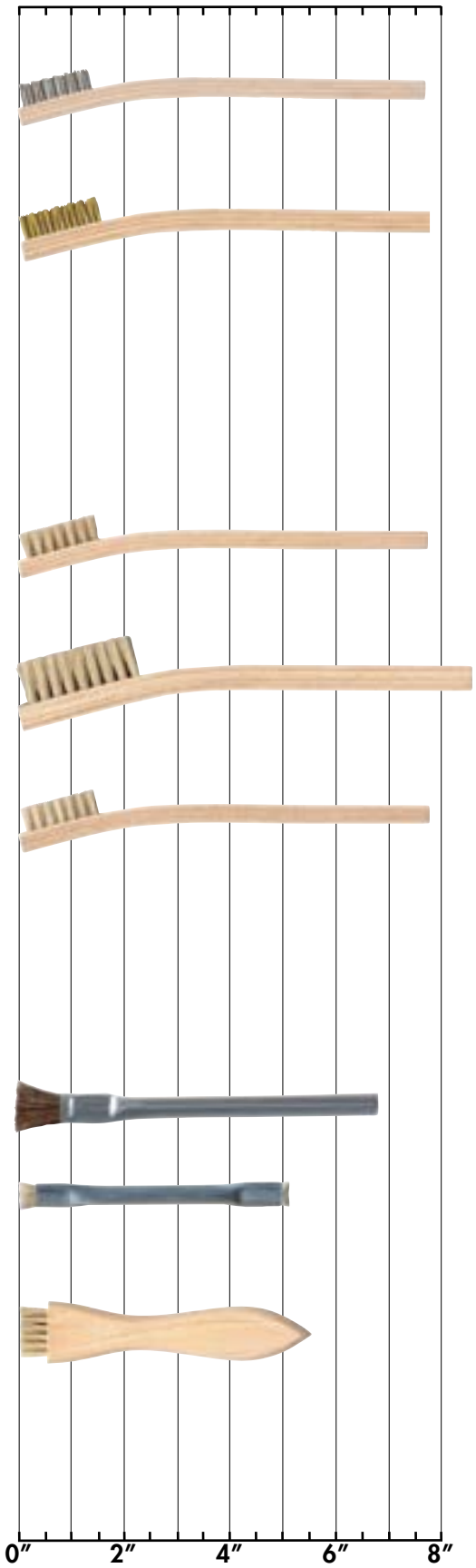
CFIA CERTIFIED

- **Fast dry**
- **Safe on plastics and elastomers**
- **Mineral oil lubrication**

Contains a light, electronic grade, mineral oil lubricant. Cleans and lubricates controls, locks, hinges, selector switches, office equipment, power tools, clock mechanisms, and delicate mechanical equipment. Not for use directly on electronic circuits.



401B	Cat. No.	Availability	Format
	401B-140G	140 grams (5 oz)	aerosol
	401B-340G	340 grams (12 oz)	aerosol



Abrasive

Cat. No.	Bristle Material	Handle Length Material	Brush Face	
850	Stainless Steel	7 ¾″ wood	1 3/8″ x 7/16″	Excellent utility brush. Great for cutting corrosion. Use for solder surface preparation. Also great for cleaning soldering iron tips.
851	Brass	7 ¾″ wood	1 3/8″ x 7/16″	Excellent utility brush. Great for removing oxides and corrosion from connector ends. Burnishes without removing base metal. Also great for cleaning soldering iron tips.

Non-abrasive

852	Hog Hair	7 ¾″ wood	1 3/8″ x 7/16″	Excellent for removing flux and general clean up. Can be used dry or wet. Works well with sticky or crusty materials.
853	Hog Hair	8 3/8″ wood	2 1/4″ x 1″ (large)	Excellent for removing flux and general clean up. Can be used dry or wet. Works well with sticky or crusty materials.
859	Horse Hair	7 ¾″ wood	1 3/8″ x 7/16″	Excellent for removing flux and general clean up. Can be used dry or wet. Works well with sticky or crusty materials.

Technical

855-5 855-144	Horse Hair	6″	1/4″ x 3/8″	Works well for dusting, cleaning with fluids, and general cleanup.
856	Horse Hair	4.5″ cad plated steel	Double Ended (chisel trim) 1/4″ x 5/16″	Excellent general cleaning brush with short bristles for heavy duty scrubbing. One end is chiseled to clean tight corners.
857	Hog Hair	5″ wood	3/4″ x 5/16″	Excellent for removing flux and general clean up. Use dry or with fluids.

Chamois Swab 810

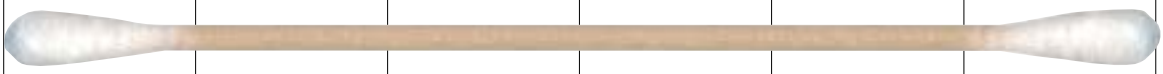


Chamois Swab (Double Ended) 810D



For cleaning sensitive tape and optical heads. Lint free synthetic suede bonded to a bendable handle allowing access to hard to reach areas.

Cotton Swabs (Double Ended) 811



Tapered Cotton Swabs (Double Ended) 8112



Pharmaceutical grade. Extra absorbent on a 6" birch shaft. Compatible with most solvents. Available in standard or tapered head.

Foam Over Cotton Swab 812



Absorbent precision cleaning applicator. Shred resistant, 100% Urethane foam head with 100 PPI porosity over extra absorbent U.S.P. pharmaceutical grade purified cotton. Bonded securely to a 6" birch shaft. Compatible with most solvents.

Anti-Static Foam Over Cotton Swab 812AS



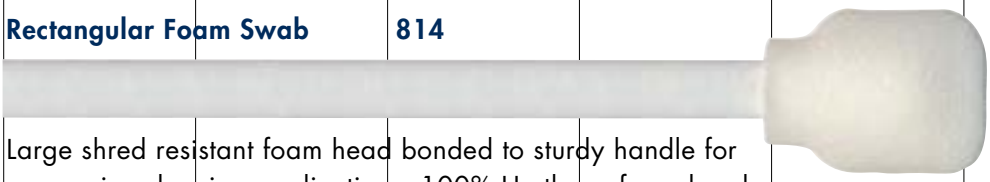
Absorbent precision cleaning applicator. Anti-static, shred resistant, 100% Urethane foam heads with 100 PPI porosity over extra absorbent U.S.P. pharmaceutical grade purified cotton. Bonded securely to a 6" birch shaft. Compatible with most solvents.

Foam Swab 813



Durable precision cleaning applicator. Shred resistant, 100% Urethane foam heads with 100 PPI porosity. Bonded securely to a 6" birch shaft.

Rectangular Foam Swab 814



Large shred resistant foam head bonded to sturdy handle for aggressive cleaning applications. 100% Urethane foam heads with 100 PPI porosity. Bonded securely to a 5" polypropylene shaft.

0" 1" 2" 3" 4" 5" 6"

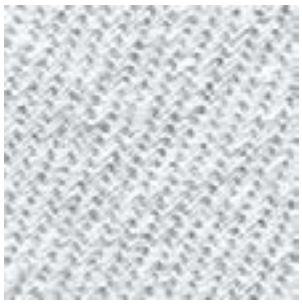
Available Sizes

Cat. No.	Availability
Chamois Swabs Single Headed	
810-15	15
810-50	50
810-500	500
Chamois Swabs Double Ended	
810D-15	15
810D-50	50
810D-500	500
Cotton Swab (Double Ended)	
811-100	100
Tapered Cotton Swab (Double Ended)	
8112-100	100
Foam over Cotton Swab	
812-10	10
812-50	50
812-250	250
812-1000	1000
Antistatic Foam over Cotton Swab	
812AS-10	10
812AS-250	250
812AS-1000	1000
Foam Swab	
813-10	10
813-50	50
813-250	250
813-1000	1000
Rectangular Foam Swab	
814-10	10
814-50	50
814-250	250
814-1000	1000

Dry Wipes

Twillwipes

Low linting 100% cotton twill weave. Excellent for abrasion-free cleaning and drying.



- **Class 1000 Cleanroom compliant**
- **Static free**
- **Absorbs 3 times it's own weight**

829	Cat. No.	Availability	Format
	829-4x4	100 wipes	wipes
	829-50	50 wipes	wipes

Hydrowipe

General purpose cleanroom wipe. Pure, versatile, and economical. A super absorbent hydro entangled non woven blend of cellulose and polyester. Dimensions 9″ x 9″.



8282	Cat. No.	Availability	Format
	8282-300	300 wipes	wipes

Optiwipe

Super Soft Hydroentangled Polyester Fiber. Use to clean optical surfaces, photo processing, lab equipment, and other precision instrumentation. Dimensions 4″ x 4″.

- **Zero lint**

828	Cat. No.	Availability	Format
	828-4X4	100 wipes	wipes

Presaturated Wipes

LCD Cleaning Wipes

Our new and improved cleaning wipe now looks and cleans better than ever. Tougher wipes to prevent ripping during dispensing and an air tight cap for extended shelf life after opening. Dimensions: 3" x 4"



- **Non-streaking**
- **Anti-static**
- **Safely cleans monitors, laptops, television**

8242-RT	Cat. No.	Availability	Format
	8242-RTS	50 wipes (Spanish)	tub
	8242-RTF	50 wipes (French)	tub

LCD Screen Cleaning Kit

MG Chemicals' LCD Screen Cleaning Kit includes a high quality microfiber cleaning cloth and an advanced Non Drip Gel formula that will safely and effectively clean the toughest residues from your LCD and Plasma screens. Includes bonus wipe for mobile devices.



- **Anti-static**
- **Non-streaking**
- **Alcohol and ammonia free**
- **Advanced non-drip formula**

8242-K	Cat. No.	Availability	Format
	8242-K	200 ml	bottle

Optical Wipe

This individually packaged wipe is formulated to clean lenses, glasses, goggles, and other optics. It has a special anti-fog formula to give you longer lasting clarity. Safe to use even on anti-glare coated surfaces.



8243-W	Cat. No.	Availability	Format
	8243-WX25	25 per box	wipes

LCD Cleaning Wipe

Clean your most expensive screens with confidence. Gentle formulation safely cleans LCD and plasma screens.

- **Non-streaking**
- **Anti-static**



8242-W	Cat. No.	Availability	Format
	8242-WX25	25 per box	wipes

Presaturated IPA Wipes

Handy wipes are pre-saturated with isopropyl alcohol. Convenient individual packs.

- **5" x 8"**
- **99.953% anhydrous IPA**
- **Cloth Type**
- **Lint Free**



824-W	Cat. No.	Availability	Format
	824-WX25	25 wipes per box	wipes
	824-WX50	50 wipes per jar	wipes
	824-WX500	500 wipes per bag	wipes

70/30 Isopropyl Alcohol Wipe

This convenient wipe is a blend of 70% Isopropyl Alcohol with 30% deionized water. Special packaging prevents wipe from drying out for more than 2 years. Great for cleaning and disinfecting office equipment and other electronics.



- **70/30 isopropyl alcohol blend**
- **Effective for removing dust, dirt, and grease from electronics and peripherals**
- **Complies to CARB**

8241-W	Cat. No.	Availability	Format
	8241-WX25	25 per box	wipes
	8241-T	75 wipes (tub)	tub

Clean Pad

Thick lint free wipe presaturated with 91% pure isopropyl alcohol and 9% deionized water. Cleans dirt, oxides, oils and other contaminants. Ideal for cleaning sensitive contact surfaces, computers, electronic equipment, magnetic tape heads, office equipment, instruments, fiber optic connectors and ferrules.



824P	Cat. No.	Availability	Format
	824P-50	50 wipes per box	wipes

Kimberly Clark Wipes

Kimtech Science Delicate Task Wipers

KIMTECH SCIENCE* KIMWIPES™ Delicate Task Wiper is a light duty wiper that can handle a variety of delicate tasks. Easily wipes up liquid and dust. Anti-stat dispensing reduces lint and electrostatic discharge, controls usage and portability reduces waste.



	Cat. No.	Availability	Format
830-34133	830-34133	196 wipes (11.8"x11.8")	pop-up box
830-34155	830-34155	280 wipes (4.4"x8.4")	pop-up box



Kimwipes Delicate Task Wipers

KIMTECH SCIENCE™ KIMWIPES™ Delicate Task Wiper, 2 ply, POP-UP™ Box, offers a unique combination of low-lint tissue softness and multi-ply absorbency that's perfect for a multitude of delicate tasks. Multi-ply absorbency, wipes up liquid and dust. Wipes clean, extra low-lint and extractable performance.

	Cat. No.	Availability	Format
830-34705	830-34705	119 wipes (11.8" x 11.8")	wipes

Kimtech Precision Wipers for fiber optic cleaning

- **Soft and absorbent**
- **Anti-static dispensing reduces lint**
- **1-ply economical choice for general low-lint cleaning tasks**
- **Coated packaging helps protect wipes from spills**



	Cat. No.	Availability	Format
830-05511	830-05511	280 wipes (4.4" x 8.4")	wipes



Silicone Conformal Coating

Ideal for high temperature environments. Silicone conformal coating is a flexible finish product that provides a protective coating for printed circuit boards against moisture, corrosion, and thermal shock. It protects and insulates electrical and electronic components and assemblies, including generators, motors, transformers, relays, and solenoid coils. For spraying, liquid can be thinned using Cat. No. 435-1L Thin up to one half part thinner to one part coating. Also available in a micro tip pen format (422B-P). UL Recognized (File #E203094).

422B Specifications	
Properties - Electrical	
Dielectric Strength (IPC-TM-650)	1056 volts/mil @ 0.150 inch thickness
Dielectric Constant (ASTM 150-98)	1.99 @ 1MHz 2.35 @ 60MHz
Dissipation Factor (ASTM 150-98)	0.012 @ 1MHz 0.037 @ 60MHz
Volume Resistivity (ASTM D 257)	1.2 x 10^{15} ohm · cm
Surface Resistivity (ASTM D 257)	4.5 x 10^{16} ohm · cm
Properties - Temperature	
Coefficient of Thermal Expansion (-40 °C to 160 °C) (IPC-TM-650)	253.3 ppm/0C
Softening Point	31.4 °C



422B	Cat. No.	Availability	Format
	422B-55ML	2 oz (55 ml)	liquid
	422B-340G	340 grams	aerosol
	422B-1L	945 ml	liquid
	422B-4L	3.78 litres	liquid
	422B-20L	18.9 litres	liquid
	422B-P	5 ml (0.16 oz)	pen

Acrylic Lacquer Conformal Coating

Acrylic Conformal Coating is a durable finish product that provides an all round protective coating for printed circuit boards against moisture, corrosion, and thermal shock. It protects and insulates electrical and electronic components and assemblies, including generators, motors, transformers, relays, and solenoid coils. For spraying, liquid can be thinned using Cat. No. 435-1L. Thin up to one half part thinner to one part coating. Also available in a micro tip pen format (419C-GP).

*** This product replaces the 419B.**



419C Specifications	
UL94 Tested V-0 Rated	
UV Indicator for quality inspection	
IPC-CC-830B Tested	
Appearance (IPC-CC-830B 3.5.2)	pass
Flourescence (IPC-CC-830B 3.5.3)	pass
Flammability (IPC-CC-830B 3.5.6)	pass
Fugus Resistance (IPC-TM-650 2.6.1.1)	pass
Flexibility (IPC-TM-650 2.4.5.1)	pass
Dielectric Withstand Voltage (IPC-TM-650 2.5.7.1)	pass
Moisture & Insulation Resistance (IPC-TM-650 2.6.3.4)	pass
Thermal Shock (IPC-TM-650 2.6.7.1)	pass
Temperature Humidity Ageing (IPC-TM-650 2.6.11.1)	pass

419C	Cat. No.	Availability	Format
	419C-55ML	55 ml (2 oz)	bottle
	419C-340G	340 grams (12 oz)	aerosol
	419C-1L	945 ml (1 quart)	liquid
	419C-4L	3.78 litres (1 gallon)	liquid
	419C-20L	18.9 litres (5 gallons)	liquid
	419C-GP	5 ml (0.16 oz)	pen

Premium Acrylic Conformal Coating

A fast drying, xylene and toluene free product that provides an excellent finish. This one part coating is easy to use and repair: it does not require special or costly equipment or materials. It is ideal for high moisture environments and applications requiring easy repair and rework.

The 419D coating protects electric circuits against moisture, dirt, dust, thermal shocks, and scratches that could corrode, short circuit, or otherwise damage the electric components. It insulates against high-voltage arcing, shorts, and static discharges. As well, this coating provides a high dielectric withstand voltage that allows traces to be put closer together helping with miniaturization.

- NO HAZARDOUS AIR POLLUTANTS
- CERTIFIED UL 94V-0 (FILE# E202094)
- SMOOTH, HOMOGENEOUS, AND DURABLE CRYSTAL CLEAR COAT
- PROTECTS ELECTRONICS FROM MOISTURE, CORROSION, FUNGUS, AND STATIC DISCHARGES
- EASY TO INSPECT
- EASY REWORK AND REPAIRS
- REMOVE WITH MG 435 THINNER/CLEANER, 4354 THINNER 4, OR CONFORMAL COATING STRIPPER

419D	Cat. No.	Availability	Format
	419D-1L	945 ml (1 quart)	liquid
	419D-4L	3.8 litres (1 gallon)	liquid
	419D-20L	18.9 litres (5 gallons)	liquid

Urethane Conformal Coating

Ideal for aggressive chemical environments. Urethane conformal coating is a durable finish product that provides a protective coating for printed circuit boards against moisture, corrosion, and thermal shock. It protects and insulates electrical and electronic components and assemblies, including generators, motors, transformers, relays, and solenoid coils. For spraying, liquid can be thinned using Cat. No. 435-1L up to fifty percent.



- FUNGAL RESISTANT MIL SPEC MIL-V-173C-2
- FAST DRYING-UNITS CAN BE HANDLED IN 30 MIN.
- CLASS F TEMPERATURE RATING (160°C / 320°F)
- EXCELLENT CHEMICAL RESISTANCE
- OIL AND MOISTURE RESISTANT
- UV INDICATOR FOR QUALITY INSPECTION
- SUPERIOR ABRASION RESISTANCE
- EXCELLENT ADHESION
- GOOD FLEXIBILITY

4223	Cat. No.	Availability	Format
	4223-55ML	55 ml (2 oz)	bottle
	4223-1L	945 ml (1 quart)	liquid
	4223-4L	3.78 litres (1 gallon)	liquid
	4223-20L	18.9 litres (5 gallons)	liquid

Premium Polyurethane Conformal Coating

4223D Premium Polyurethane Conformal Coating is a heat curing, one part product that provides an excellent scratch and chemical resistant finish. This one part coating is easy to use and repair: it does not require special or costly equipment or materials. It is ideal for chemically challenging environments. The 4223D urethane protects electric circuits against aggressive chemicals, moisture, dirt, dust, thermal shocks, and scratches. This avoids corrosion and physical damages to electric components. It insulates against high-voltage arcing, shorts, and static discharges, allowing for traces to be put closer to one another.

- **Type UR**
- **Certified UL 94V-0 (File # E203094)**
- **Excellent finish—smooth, flexible, mar resistant**
- **High Chemical Resistance—resists water, solvents, and most household chemicals**
- **Durable—abrasion resistant**
- **Protects electronics from moisture, corrosion, fungus, and static discharges**
- **Easy to inspect—fluoresces under black light (UV light)**
- **Easy rework and repairs—can solder through coat**
- **Removable with MG 8312 Urethane Conformal Coating Stripper**
- **Free of isocyanate**

4223D	Cat. No.	Availability	Format
	4223D-1L	945 ml (32 fl. oz)	liquid
	4223D-4L	3.8 litres (1 gallon)	liquid
	4223D-20L	20 litres (5 gallons)	liquid

Optically Clear Conformal Coating Epoxy

Our 4224 Optically Clear Conformal Coating Epoxy offers a very strong and UV-resistant finish. This two part coating is easy to use: it does not require special or costly equipment to apply.

The 4224 epoxy coating protects electric circuits against corrosive chemicals, moisture, dirt, dust, thermal shocks, and scratches. This avoids corrosion and physical damages to electric components. It also insulates against high-voltage arcing, shorts, and static discharges.

- **Excellent Chemical and Abrasion Resistance**
- **Optically Clear:** Transmission @25 µm [1 mil] <4.5% loss in optical range
- **UV light stable:** non yellowing
- **Protects electronics** from chemicals corrosion, oil, moisture, fungus, and static discharges

4224	Cat. No.	Availability	Format
	4224-1	1125 mL (38 fl. oz)	liquid
	4224-2	4.5 L (1.2 gallon)	liquid
	4224-3	18.9 L (10.7 gallon)	liquid

4224 Specifications

Uncured Properties - Resin [Part A]	
Working Pot life @25 °C [77 °F]	3 h
Full Cure @80 °C [172 °F]	2 h
Storage Temperature	25 °C [77 °F]
Service Ranges	
Service Temperature	-40 to +100 °C [-40 to +212 °F]
Max Withstand Temperature	+115 °C [+239 °F]
Max coverage per gallon (for 50 µm [2 mil])	<840 000 cm^2 [<910 ft^2]
Cured Properties - Physical	
Color	Clear
Solderability	No
Abrasion Resistance	Superior
Fungus Resistance	Good
UV Resistant	Yes
Optical Transmission Loss @ 25 µm (1 mil)	<4.5%
Cured Properties - Thermal	
Glass Transition Temperature (ASTM D 115)	113 °C
Thermal Cycling Stability	-40 to 200 °C
Thermal Stability 24 h @ 80 °C (on Cu/Al substrates)	No yellowing
Thermal Stability 96 h @ 100 °C (on Cu/Al substrates)	Slight yellowing
Cured Properties - Electrical	
Dielectric Strength (dry)	600 volts/mil

Peelable Solder Mask

Synthetic acrylic latex. Designed to withstand fluxing, wave soldering, conformal coating and cleaning operations. Excellent for masking contacts, gold fingers, card edges and other desired areas. Contains no ammonia. Non corrosive to copper, gold, silver or presoldered surfaces. Opaque pink color turns red when cured. Can be used in water or solvent systems. Thixotropic paste.



- **Temporary, peelable**
- **Thixotropic, synthetic latex**
- **No ammonia**
- **Quick drying**

862	Cat. No.	Availability	Format
	862-250ML	250 ml (8.5 oz)	tube

Red Insulating Varnish

- **Protect motor windings, small dry type transformers, and coils from arcing,**
- **Discharge and oxidation**
- **Class F thermal protection (20,000 @ 150°C)**
- **High dielectric strength**



Protects electrical and electronic components from arcing and discharge. Thoroughly penetrates into windings and coils and seals out air, dust & moisture. Application: motor windings, transformers, switch board parts, field coils, stator windings, etc.

Dielectric Strength: 3000 volts/mil.

4228	Cat. No.	Availability	Format
	4228-55ML	55 ml (2 oz)	bottle
	4228-1L	945 ml (1 quart)	liquid
	4228-4L	3.78 litres (1 gallon)	liquid

Super Corona Dope

- **For high voltage applications**
- **Insulates components circuits and assemblies**
- **Excellent arc and corona resisting properties**
- **Protects motor windings and coils from**
- **arcing and discharge**
- **Protects against moisture and oxidation**

Excellent for high voltage applications. Protects electrical and electronic components from arcing and discharge. Thoroughly penetrates into windings and coils and seals out air, dust and moisture. Application: motor windings, transformers, switch board parts, field coils, stator windings, etc. Dielectric Strength: 4100 volts/mil when heat cure.



4226	Cat. No.	Availability	Format
	4226-55ML	55 ml (2 oz)	bottle
	4226-1L	945 ml (1 quart)	liquid
	4226-4L	3.78 litres (1 gallon)	liquid

Peelable Solder Mask

Our 863 Peelable Solder Mask is a latex product for temporary masking of circuit areas and contacts against solder, rosin, cleaning fluids. It consists of a high-temperature-resistant rubber latex.

863	Cat. No.	Availability	Format
	863-250ML	250 ml (8.5 oz)	tube
	863-1G	3.78 L (1 gallon)	tube

- **High SIR (Surface Insulation Resistance) value**
- **Moderate odor**
- **Non-Flammable**
- **VOC Free**
- **Easy to peel**
- **Non-toxic**

Conformal Coating Stripper

Removes protective coatings, urethane, silicones, and acrylics. Also removes carbon, tar, adhesives, rubber, and some plastics.



- **Extra strength**
- **Non-flammable**
- **Non-drip (gel type)**

8310	Cat. No.	Availability	Format
	8310-55ML	55 ml (2 oz)	liquid

Connector Coating

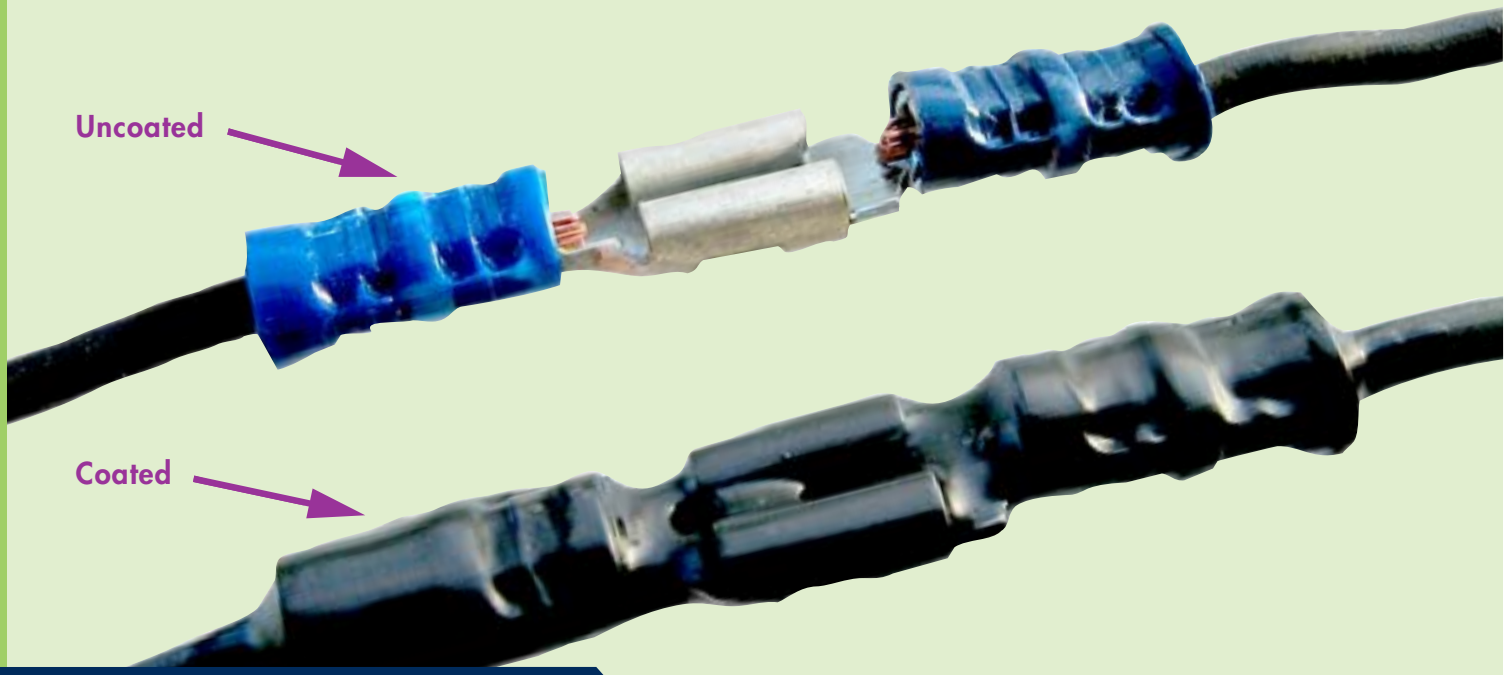
CFIA CERTIFIED

A high performance replacement for standard electrical tape and shrink wrap. Seals, insulates and protects exposed wires, metal, and plastic. Forms a strong, pliable moisture resistant bond. Will not crack. Great for hard to get at areas. Tack free in minutes. Resists detergents, acids, alkalis, and sunlight. Product remains flexible from -34°C to 93°C (30°F to 200°F).



- **Salt Spray tested (ASTM B-117)**
- **Moisture resistance (ASTM E-96)**
- **Weather tested (ASTM G-53-84)**
- **Dielectric strength (ASTM D-149): 1200 v/mil**

4229	Cat. No.	Availability	Format
	4229-55ML	55 ml (2 oz)	liquid
	4229-1L	1 litre (35 oz)	liquid
	4229-4L	4 litre (1 gallon)	liquid



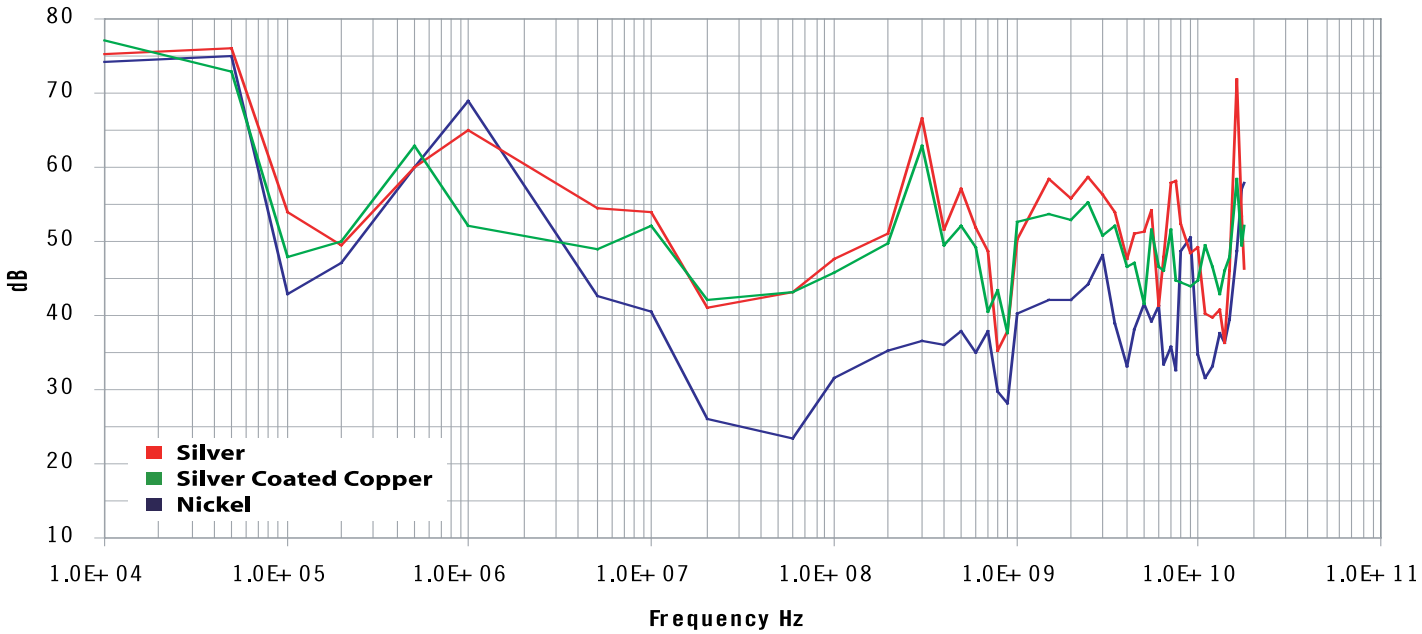
Super Shield™ Nickel Conductive Coating

Reduces or eliminates EMI / RFI interference. A general purpose EMI / RFI shielding spray for use on plastic electronics enclosures. Consists of a tough, durable acrylic base pigmented with a high purity nickel flake. Has resistivity of 0.7 ohms · mil.

- **UL recognized (File #E202609)**

841	Cat. No.	Availability	Format
	841-340G	340 grams (12 oz)	aerosol
	841-900ML	1.65 kg (3.6 lbs)	liquid
	841-1G	6.75 kg (14.9 lbs)	liquid





Nickel Conductive Pen

- **Resistivity: 1 Ohm · mil**
- **Quick drying**
- **Durable acrylic base pigmented with high purity flake**
- **Excellent for repairing and modifying printed circuits and EMI / RFI shielding applications**

841-P	Cat. No.	Availability	Format
	841-P	8.5 g (5.1 mL)	pen



Total Ground Carbon Conductive Coating

- HIGH CONDUCTIVITY—LOW SURFACE RESISTIVITY OF 250 Ω/SQ FOR ONE COAT (1 MIL)
- TOUGH AND DURABLE COATING
- CARBON DOES NOT RUB OFF
- STRONGER ADHESION THAN WATER BASED COATINGS
- LOW VOC'S

The 838 Total Ground Carbon Conductive Coating is an economical, acrylic paint that is used to create conductive, static free surfaces with excellent characteristics. Coated surfaces reduce electromagnetic or radio frequency interference (EMI/RFI). The carbon in the coat resists rubbing off to the touch. Further, the cured coat is designed to withstand large temperature changes without cracking.



838	Cat. No.	Availability	Format
	838-340G	320 g (12 oz)	aerosol
	838-900ML	900 ml (1.8 lb)	liquid
	838-1G	1 gallon (3.4 kg)	liquid

Super Shield™ Graphite Conductive Coating

- HIGH CONDUCTIVITY—LOW SURFACE RESISTIVITY OF 47 Ω/SQ FOR ONE COAT (1 MIL)
- TOUGH AND DURABLE COATING
- RUB OFF RESISTANT
- CORROSION RESISTANT COATING
- STRONGER ADHESION THAN WATER BASED COATINGS
- LOW VOC'S

The 839 Graphite Conductive Coating is an economical, acrylic paint that is used to create conductive, static free surfaces with excellent characteristics. Coated surfaces reduce electromagnetic or radio frequency interference (EMI/RFI). The graphite in the coat resists rubbing off to the touch. Further, the cured coat is designed to withstand large temperature changes without cracking.

839	Cat. No.	Availability	Format
	839-900ML	900 mL (0.24 gallon)	liquid
	839-1G	3.8 L (1 gallon)	liquid

Super Shield™ Silver Coated Copper Conductive Coating

Reduces or eliminates EMI / RFI interference. A general purpose EMI / RFI shielding for use on plastic electronics enclosures. Consists of a tough, durable acrylic base pigmented with a high purity silver coated copper. Has a resistivity of 0.3 ohms · mil.

843	Cat. No.	Availability	Format
	843-140G	140 g (5 oz)	aerosol
	843-340G	340 g (12 oz)	aerosol
	843-900ML	1.65 kg (3.6 lbs)	liquid
	843-1G	6.4 kg (1 gallon)	liquid

Super Shield™ Silver Conductive Coating

Highly conductive acrylic paint designed to reduce electromagnetic or radio frequency interference (EMI/RFI). Long-term protection from EMI/RFI is assured by its durable acrylic resin that minimizes loss of metallization through rubbing, and by the oxidation resistant silver that slows down conductivity degradation with age. The flake shape helps ensure maximum points of contact to ensure better conductivity. In addition, loss of shielding through paint peeling is unlikely since the acrylic resin system was shown, in UL related testing, to adhere to even difficult substrates like ABS and polycarbonates.

842	Cat. No.	Availability	Format
	842-900ML	1.9 kg (900 mL)	liquid
	842-1G	8.1 kg (1 gallon)	liquid

Thinner

The 435 Thinner is a super fast drying thinner, low VOC solvent for use with the MG Chemical's conformal and EMI/RFI shielding coating products. It is designed to ensure good adherence to plastic substrates.



- **Fast evaporating**
- **Highly flammable**

435	Cat. No.	Availability	Format
	435-55ML	55 mL (2 oz)	liquid
	435-1L	945 mL (32 fl. oz)	liquid
	435-4L	3.8 L (1 gal)	liquid

Thinner 1

The 4351 Thinner 1 is a mild diluents designed for MG Chemical's EMI/RFI shielding products.

- **Plastic Safe: compatible with most sensitive substrate used in electronic parts and enclosures**
- **Moderately Fast Evaporation Rate**

4351	Cat. No.	Availability	Format
	4351-1L	945 ml (1 quart)	liquid
	4351-4L	3.78 litres (1 gallon)	liquid

Thinner 3

- BLUSH RESISTANT
- FAST EVAPORATION RATE
- EXCELLENT LEVELING AND GLOSS
- HIGHLY MISCIBLE WITH OTHER COMMON ORGANIC SOLVENTS
- COMPATIBLE WITH MOST SUBSTRATES USED IN ELECTRONIC PARTS AND ENCLOSURES

The 4353 Thinner 3 is a moderate speed drying thinner for use with the MG Chemical's conformal products. The thinner promotes good flow properties and suppresses blushing.

4353	Cat. No.	Availability	Format
	4353-1L	945 ml (1 quart)	liquid
	4353-4L	3.78 litres (1 gallon)	liquid

Thinner 2

The 4352 Thinner 2 is a moderately fast drying thinner for use with MG Chemical's conformal products. It is compatible with film forming paint products with acrylic, alkyd, cellulose acetate butyrate, epoxy, nitrocellulose, or polyester resins. Together with these type of resin systems, the 4352 thinner promotes good flow properties and suppresses blushing.

4352	Cat. No.	Availability	Format
	4352-1L	945 ml (1 quart)	liquid
	4352-4L	3.78 litres (1 gallon)	liquid

Thinner 4

- BLUSH RESISTANT
- SLOW EVAPORATION RATE
- GOOD LEVELING AND GLOSS
- HIGHLY MISCIBLE WITH OTHER COMMON ORGANIC SOLVENTS
- COMPATIBLE WITH MOST SUBSTRATES USED IN ELECTRONIC PARTS AND ENCLOSURES

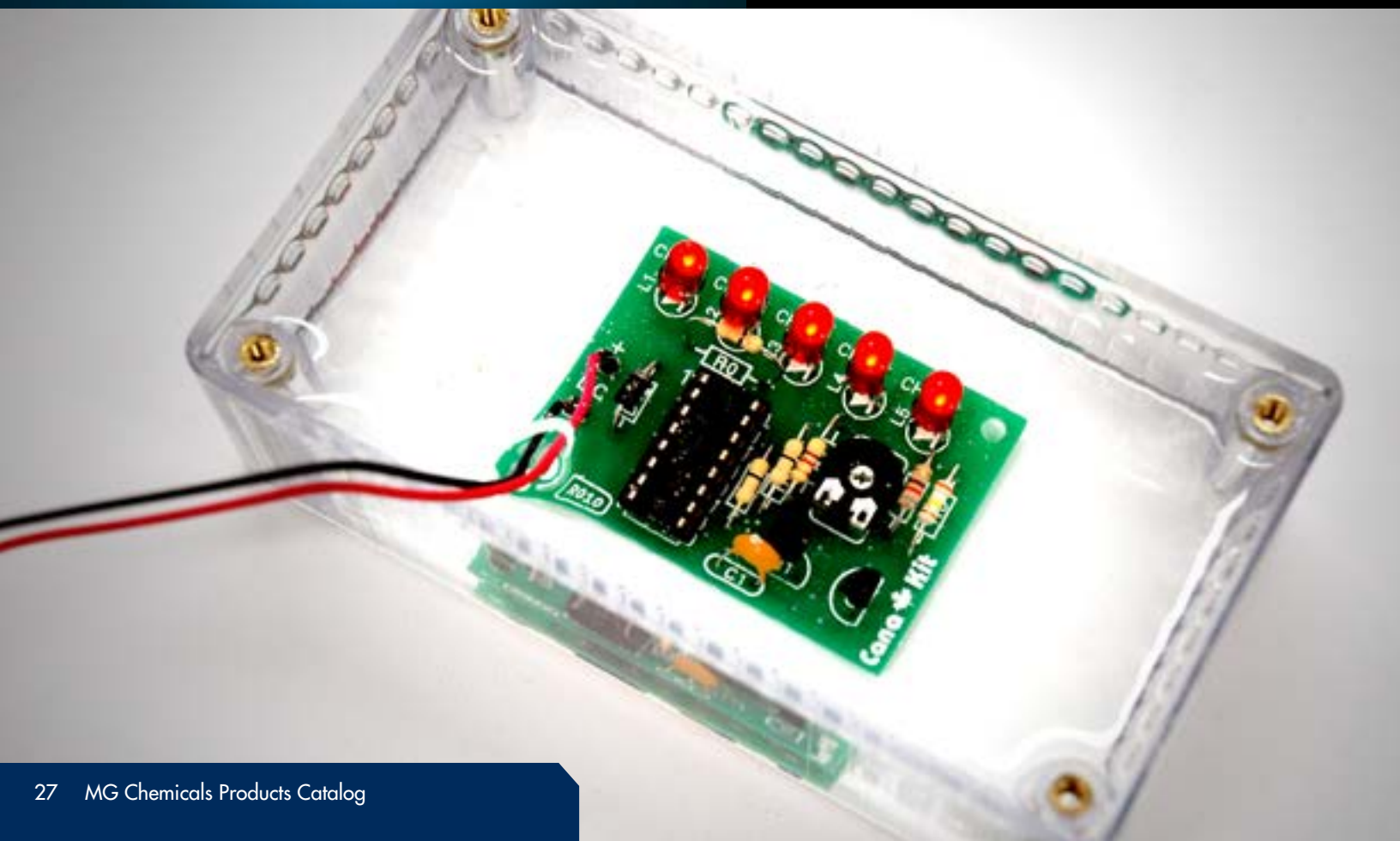
The 4354 Thinner 4 is a slower drying thinner for use with the MG Chemical's urethane and acrylic conformal products. The thinner as excellent solvent strength, making it a good oil and grease remover. It has very low water solubility, so it is unlikely to absorb water and create blush. Its drying speed is slow enough to promote excellent leveling, but it is fast enough to accommodate a reasonable assembly line speed.

4354	Cat. No.	Availability	Format
	4354-1L	945 ml (1 quart)	liquid
	4354-4L	3.78 litres (1 gallon)	liquid

Epoxies – Encapsulating and Potting



832B	Black Epoxy
832C	Translucent Epoxy
832TC	Thermally Conductive Epoxy
833FRB	Flame Retardant Epoxy
8321C	Optically Clear Epoxy
832HT	High Temperature Epoxy
834ATH	ATH Flame Retardant Epoxy
834FRB	Flame Retardant Epoxy



Black Epoxy - Encapsulating & Potting Compound



Provides excellent protection from impact, shock, conductivity, moisture, abuse, chemicals, and analysis. Provides technology security.

- **Extreme impact resistant**
- **Affords high technology protection**
- **Non-conductive, an electrical insulator**
- **Non-porous, water and chemical resistant**
- **Excellent machining properties**

832B	Cat. No.	Availability	Format
	832B-375ML	375 ml (12 oz)	liquid
	832B-3L	3 litres (0.8 gallons)	liquid
	832B-12L	11.34 litres (3.2 gallons)	liquid
	832B-60L	60 litres (16 gallons)	liquid

Translucent Epoxy - Encapsulating & Potting Compound



Provides excellent protection from impact, shock, conductivity, moisture, abuse, and chemicals.

- **Translucent finish**
- **Extreme impact resistant**
- **Non-porous, water and chemical resistant**
- **Non-conductive, an electrical insulator**
- **Excellent machining properties**

832C	Cat. No.	Availability	Format
	832C-375ML	375 ml (12 oz)	liquid
	832C-3L	3 litres (0.8 gallons)	liquid
	832C-60L	60 litres (16 gallons)	liquid

832B Specifications	
Uncured Properties - Resin [Part A]	
Viscosity	2,500 cps
Specific Gravity	1.1273
Color	Black
Uncured Properties - Hardener [Part B]	
Viscosity	11,000 cps
Specific Gravity	0.9564
Color	Clear, amber tint
Cured Properties - Physical	
Mixed Viscosity	3,300 cps
Mixed Specific Gravity	1.0577
Volume Mix Ratio (resin:hardener)	2.0:1
Mass Mix Ratio (resin:hardener)	2.3:1
Shore Hardness	80 - 82 Shore D
Tensile strength (ASTM D 638)	8475 psi
Elongation	3.3%
Compression strength (ASTM D 695)	14,675 psi
Modulus	375,000 psi
Flexural strength (ASTM D 790)	16,500 psi
Modulus	427,000 psi
Izod impact strength (ASTM D 256)	0.443 ft-lbs/inch notch 0.259″ thick
Lap Shear Strength (ASTM D 732)	957 psi
Working time (100g)	60 min.
Curing Time (100g)	
@ room temp.	24 hours
@ 65°C	60 minutes
@ 80°C	45 minutes
@ 100°C	35 minutes
Cured Properties - Temperature	
Coefficient of Thermal Expansion (ASTM E 831)	0.036″ / 10″ @ 32 °F, 0.013″ / 10″ @ 72 °F
Constant Service Temperature	-30 °C (-22 °F) to 140 °C (284 °F)
Intermediate Service Temperature	145 °C (293 °F)
Heat Deflection Temp. (264 psi) (ASTM D 648)	46.638 °C (115.95 °F)
Cured Properties - Electrical	
Surface Resistivity (ASTM D 257)	5.3 x 10^{12} ohm · cm
Corrected Dissipation Factor, D (ASTM D150-98)	0.008 @ 1KHz 0.013 @ 10KHz 0.018 @ 100KHz 0.017 @ 1MKHz
Dielectric Constant (ASTM D150-98)	2.95 @ 1KHz 2.89 @ 10KHz 2.83 @ 100KHz 2.77 @ 1MKHz
Insulative	Yes
Conductive	No
Breakdown Voltage (ASTM D149-97a)	51.9 kV
Dielectric Strength (ASTM D149-97a)	471 V/mil

For more specifications, visit **www.mgchemicals.com**

Thermally Conductive Epoxy - Encapsulating & Potting Compound

Formulated with undiluted Bis F resin for superior physical properties, and pigmented with high purity aluminum oxide pigment to provide excellent thermal conductivity at reasonable cost. Pigmented black for excellent thermal absorption and emission. Provides superior protection from impact, shock, conductivity, moisture, abuse, chemicals, and analysis.

- **Non-porous, water and chemical resistant**
- **Thermally conductive**
- **Extreme impact resistant**
- **Non-conductive, an electrical insulator**
- **Excellent machining properties**

832 TC

Cat. No.	Availability	Format
832TC-450ML	450 ml (16 oz)	liquid
832TC-2L	2 litres (0.5 gallons)	liquid
832TC-8L	8 litres (2.1 gallons)	liquid
832TC-40L	40 litres (10 gallons)	liquid

832TC Specifications

Uncured Properties - Resin [Part A]	
Viscosity	17,920 cps
Specific Gravity	1.8019
Color	Black
Uncured Properties - Hardener [Part B]	
Viscosity	23,070 cps
Specific Gravity	1.5036
Color	Black
Cured Properties - Physical	
Mixed Viscosity	38,000 - 40,000 cps
Mixed Specific Gravity	1.6156
Volume Mix Ratio (resin:hardener)	1:1
Working time (100g)	120 min.
Cure Time (150 g)	
@ 20 °C	96 hours
@ 45 °C	8 hours
@ 55 °C	4 hours
@ 65 °C	2 hours
Shore Hardness 82	82 Shore D
Cured Properties - Thermal	
Constant Service Temperature	200-225 °C (392-437 °F)
Heat Deflection Temperature	35.35 °C (95.6 °F)
Maximum Withstand Temperature	250 °C (482 °F)

For more specifications, visit **www.mgchemicals.com**

Flame Retardant Epoxy - Encapsulating & Potting Compound

A two component self extinguishing epoxy compound. Provides insulation and protects sensitive components and circuits from: static discharge, impact, heat, shock, conductivity, abuse, vibration, moisture, fresh and salt water, chemicals and analysis.

- **Non-porous, water and chemical resistant**
- **Meets UL94V-0 Flame Test**
- **Extreme impact resistant**
- **Non-conductive, an electrical insulator**
- **Excellent machining properties**

833 FRB

Cat. No.	Availability	Format
833FRB-375ML	375 ml (12 oz)	liquid
833FRB-3L	3 litres (0.8 gallons)	liquid
833FRB-60L	60 litres (16 gallons)	liquid

833FRB Specifications

Uncured Properties - Resin [Part A]	
Viscosity @ 24°C Brookfield 30	4000 cps
Color	Black
Specific Gravity	1.24
Odor	Mild
Flash Point	190 °C
Uncured Properties - Hardener [Part B]	
Viscosity @ 24°C Brookfield 30	14000 cps
Color	Grey
Specific Gravity	1.13
Odor	Musty
Flash Point	105 °C
Uncured Properties – Mixed	
Viscosity @ 20°C Brookfield 50	11500 cps
Color	Black
Specific Gravity	1.21
Cured Properties - Physical	
Compressive Strength (ASTM D695)	1310 kg/cm²
Lap shear Strength (ASTM 790)	59.3 kg/cm²
Hardness (shore D)	78-80
Cured Properties - Thermal	
Tg (Glass Transition Temp.) (ASTM D3418)	56 °C
Maximum withstand Temp.	225 °C
Constant Service Temp.	175 °C

For more specifications, visit **www.mgchemicals.com**

Optically Clear Epoxy - Encapsulating & Potting Compound

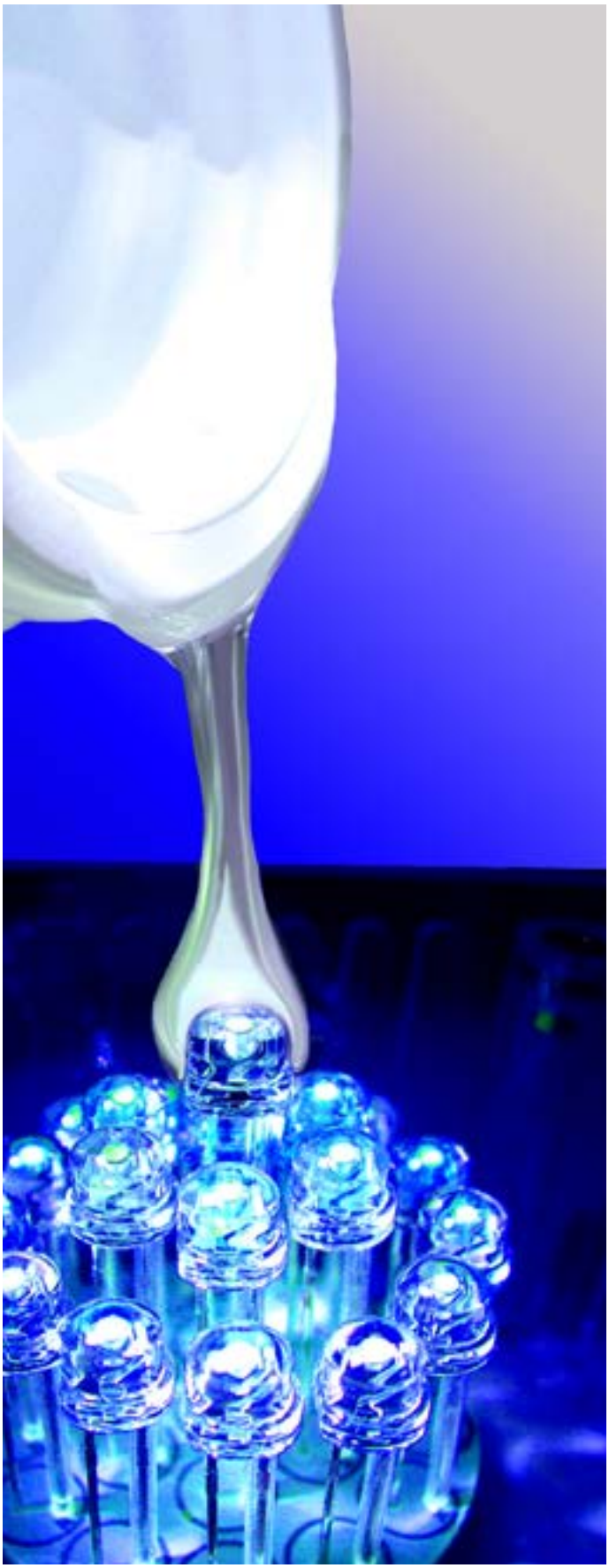
Our 8322 Optically Clear Epoxy offers a very strong and UV-resistant finish. This two part coating is simple to mix and use: it does not require special or costly equipment to apply.

The 8322 epoxy protects against static discharges, shocks, vibrations, and mechanical impacts. It insulates against heat and conductivity. It is extremely resistant to environmental humidity, salt water, and many harsh chemicals.

- **Excellent Chemical**
- **Extreme resistance to water and humidity**
- **Optically Clear**
- **UV light stable: non yellowing**

8322	Cat. No.	Availability	Format
	8322-1	1125 mL (38 fl. oz)	liquid
	8322-2	4.5 L (1.2 gallon)	liquid
	8322-3	18.9 L (10.7 gallon)	liquid

8322 Specifications	
Uncured Properties - Resin [Part A]	
Viscosity	2500 cP [2.5 Pa·s]
Color	Colorless
Uncured Properties - Hardener [Part B]	
Viscosity	20 cP [0.020 Pa·s]
Color	Colorless
Uncured Properties – Mixed	
Color	Colorless
Curing and Work Schedule	
Full Cure @65 °C [149 °F]	4 hours
Full Cure @80 °C [176 °F]	2 hours
Working Pot life @25 °C [77 °F]	2 hours
Cured Properties - Physical	
Hardness (shore D)	86
UV Resistant	Yes
Optical Transmission Loss @ 25 µm (1 mil)	<4.5%
Cured Properties - Thermal	
Glass Transition Temperature (Tg) by DSC	109 °C / 228.2 °F
Thermal Cycling Stability	Passed
Thermal Stability 24 h @ 80 °C (on Cu/Al substrates)	No yellowing
Thermal Stability 96 h @ 100 °C (on Cu/Al substrates)	Slight yellowing



High Temperature Epoxy - Encapsulating & Potting Compound



For encapsulating and potting electronics in high temperature environments, aggressive chemical environments, or where technology protection is desired. Bonds to a wide variety of substrates, including metals, glass, ceramics and many plastics.

- **Non-porous, water and chemical resistant**
- **Maximum service temperature of 275 °C (527 °F)**
- **Extreme impact resistant**
- **Non-conductive, an electrical insulator**
- **Excellent machining properties**

832HT	Cat. No.	Availability	Format
	832HT-375ML	375 ml (12 oz)	liquid
	832HT-3L	3 litres (0.8 gallons)	liquid

Epoxy Mold Release - Non Silicone



For use with all types of epoxies and phenolic resins. Creates a non stick surface for easy removal of molds.

8329	Cat. No.	Availability	Format
	8329-350G	350 grams (12.3 oz)	aerosol

832HT Specifications

Curing & Work Schedule	
Working Life	60 minutes
Shelf Life	5 year
Full Cure (at 20 °C [68 °F])	24 hours
Full Cure (at 65 °C [149 °F])	60 minutes
Full Cure (at 80 °C [176 °F])	45 minutes
Full Cure (at 100 °C [212 °F])	35 minutes
Full Cure (at 130°C [266 °F])	25 minutes
Full Cure (at 160°C [320 °F])	15 minutes
Full Cure (at 200°C [392 °F])	10 minutes
Storage Temperature of Unmixed Parts	16 to 27°C [60 to 80°F]
Cured Properties - Thermal	
Thermal Conductivity @25 °C [77 °C]	0.218 W/m·K Glass
Transition Temperature (Tg)	68 °C
Coefficient of Thermal Expansion (CTE)	104 ppm/°C
-40 °C to +50 °C	75.7 ppm/°C
+25 °C to +250 °C	140.2 ppm/°C
+100 °C to +250 °C	154.0 ppm/°C
-40 °C to +250 °C	125.3 ppm/°C
Thermal Diffusivity @25 °C [77 °C]	1.33 x 10-7 m2/s
Specific Heat Capacity @25 °C [77 °C]	1,419 J/(kg·K)
Heat Deflection Temperature (HDT)	53.9 °C [129 °F]
Cured Properties - Physical [Part A]	
Color	Black Clear
Viscosity at 25°C [77°F]	46,000 cP
Density	1.198 g/mL
Flash Point	150 °C [302 °F]
% Solids	~98%
Odor	Mild
Cured Properties - Physical [Part B]	
Color	Amber Tint
Viscosity at 25°C [77°F]	5,800 cP
Density	0.963 g/mL
Flash Point	110°C [230°F]
% Solids	100%
Odor	Musty
Cured Properties - Physical [Mixture]	
Color	Black
Viscosity at 24°C [73°F]	40,000 cP [40.0 Pa·s]
Density (mixture)	1.2 g/cm^3
Mix Ratio by Volume (A:B)	1.7:1.0
Mix Ratio by Weight (A:B)	2.0:1.0

For more specifications, visit **www.mgchemicals.com**

Flame Retardant Epoxy (REACH)

The 834FRB Flame Retardant Epoxy Encapsulating and Potting Compound is a UL 94V-0 recognized electric grade epoxy in the QMFZ2 category. This two part self-extinguishing epoxy provides a black finish with great insulation and protection value. It protects against static discharges, shocks, vibrations, and mechanical impacts. It insulates against heat and conductivity. It is extremely resistant to environmental humidity, salt water, and many harsh chemicals.

- CERTIFIED UL 94V-0 (FILE # E334302)
- SPECIFICATION VERIFIED AS PER UL 746A
- MIX RATIO 2A:1B COMPATIBLE WITH MOST DISPENSING EQUIPMENT
- EXTREME RESISTANCE TO WATER AND HUMIDITY ALLOWING SUBMERSION IF NEEDED
- PROTECTS ELECTRONICS FROM MOISTURE, CORROSION, FUNGUS, THERMAL SHOCK, AND STATIC DISCHARGES
- FREE OF SOLVENTS

834 FRB	Cat. No.	Availability	Format
	834FRB-375ML	375 ml (12 oz)	liquid
	834FRB-3L	3 litres (0.8 gallons)	liquid

834FRB Specifications

Curing & Work Schedule	
Working Life	60 minutes
Shelf Life	≥3 years
Full Cure (at 20 °C [68 °F])	24 hours
Full Cure (at 65 °C [149 °F])	60 minutes
Full Cure (at 80 °C [176 °F])	45 minutes
Full Cure (at 100 °C [212 °F])	35 minutes
Storage Temperature of Unmixed Parts	16 to 27 °C [60 to 80 °F]
Cured Properties - Physical [Part A]	
Color Dark	Grey
Viscosity at 24°C [73°F]	1,600 cP [1.6 Pa·s]
Density	1.39 g/mL
Flash Point	150 °C [302 °F]
Odor	Musty
Cured Properties - Physical [Part B]	
Color	Black
Viscosity at 24°C [73°F]	3,600 cP [3.6 Pa·s]
Density	1.16 g/mL
Flash Point	148 °C [221 °F]
Odor	Mild
Cured Properties - Physical [Mixture]	
Color	Black
Viscosity at 24°C [73°F]	2,600 cP [2.6 Pa·s]
Density (mixture)	1.3 g/cm^3
Mix Ratio by Volume (A:B)	2.0:1.0
Mix Ratio by Weight (A:B)	2.403:1.000
Solids Content (w/w)	~96%

For more specifications, visit **www.mgchemicals.com**

ATH Flame Retardant Epoxy

The 834ATH Flame Retardant Epoxy Encapsulating and Potting Compound is a two-part, economical, electronic-grade, self-extinguishing, flame retardant epoxy that provides excellent physical, chemical, and electrical protection and offers a degree of thermal conductivity.

- CERTIFIED UL 94V-0 (FILE # E334302)
- SPECIFICATION VERIFIED AS PER UL 746A
- COST EFFECTIVE
- INCREASED THERMAL CONDUCTIVITY
- MIX RATIO 2A:1B COMPATIBLE WITH MOST DISPENSING EQUIPMENT
- RESISTANCE TO WATER AND HUMIDITY ALLOWING SUBMERSION IF NEEDED
- PROTECTS ELECTRONICS FROM MOISTURE, CORROSION, FUNGUS, THERMAL SHOCK, AND STATIC DISCHARGES
- FREE OF SOLVENTS

834 ATH	Cat. No.	Availability	Format
	834ATH-375ML	375 ml (12 oz)	liquid
	834ATH-3L	3 litres (0.8 gallons)	liquid

834ATH Specifications

Curing & Work Schedule	
Working Life	2 hours
Shelf Life	5 years
Full Cure (at 20 °C [68 °F])	24 hours
Full Cure (at 80 °C [176 °F])	60 minutes
Full Cure (at 100 °C [212 °F])	45 minutes
Storage Temperature of Unmixed Parts	16 to 27 °C [60 to 80 °F]
Cured Properties - Physical [Mixture]	
Color Black Viscosity @20 °C [73 °F]	5,900 cP [5.9 Pa·s]
Density	1.39 g/mL
Mix Ratio by volume (A:B)	2.0:1.0
Mix Ratio by weight (A:B)	2.25:1.00

For more specifications, visit **www.mgchemicals.com**

Prototyping and Circuit Repair



Photofabrication Kit

Produce printed circuit boards using the Positive Photofabrication method. Contains: One 3"x 5" presensitized single sided PCB (Cat. No. 603), one 4"x6" presensitized single sided PCB (Cat. No 606), one 6"x6" presensitized single sided PCB (Cat. No. 609), Developer (Cat. No. 418-500ML), a plastic development tray, Ferric Chloride (Cat. No. 415-500ML), vinyl gloves, two foam brushes, and an instruction sheet. Additional items recommended: Exposure Kit (Cat. No. 416-X), Etching Process Kit (Cat. No. 416-E), Laser Printer Transparencies (Cat. No. 416-T), and eye protection.



	Cat. No.	Format
416-K	416-K	photofabrication kit

Exposure Kit

Convenient kit includes major components required to expose presensitized copper-clad boards. Includes: exposure tube, clear acrylic weight for artwork, fluorescent light fixture with stand (brackets), and complete instructions.

	Cat. No.	Format
416-X	416-X	complete exposure kit

Premium Etching Process Kit

Etch copper clad boards professionally. Accommodates two 8" x 12" double sided CCBs. Contains: 7 litre capacity heavy-duty polyethylene etching tank, sturdy mounting bracket, clear acrylic lid, heavy duty air pump, sparging unit with 3 way adjustable air manifold, thermometer, and heater.



	Cat. No.	Format
416-E	416-E	etching process kit

Economy Etching Process Kit

Etch copper clad boards like a professional. Accommodates two 8"x9" double sided CCBs. Ideal for students and hobbyists. An inexpensive etching solution. Contains: 5 litre heavy duty polyethylene etching tank, air pump and tubing, sparging unit, bag of vinyl gloves, complete instructions.



	Cat. No.	Format
416-ES	416-ES	economy etching process kit

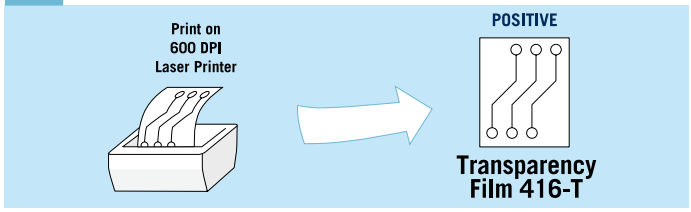
Accessories

Accessories for prototyping series products

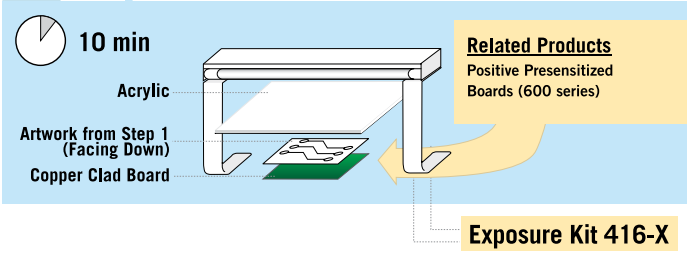
416-AP	**Heavy Duty Air Pump** Replacement part for the Professional Etching Kit (Cat. No. 416-E)
416-B	**Replacement Bulb** Replacement part for the Exposure Kit (Cat. No. 416-X)
416-G	**Latex Gloves** Nitrile disposable gloves (10 gloves)
416-H	**Etchant Heater-200Watt** Replacement heater for Premium Etching Kit (Cat. No. 416-E)
416-RP	**Etch Resist Pen** For drawing or touching up etch resist circuits on PC boards and on positive films. Draws lines 1/32" wide. Dries instantly. Not for use with ammonium persulfate.
416-S	**Foam Brush** Gently brush the surface of the board to accelerate the developing and etching process.
416-T	**Laser Print Transparency Film** 8½" x 11" heat stabilized film sheets for use in most laser printers. For use in producing the artwork required within the photofabrication process.

Positive Process

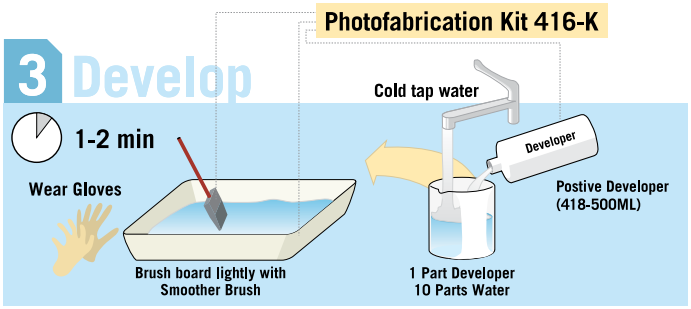
1 Create Artwork



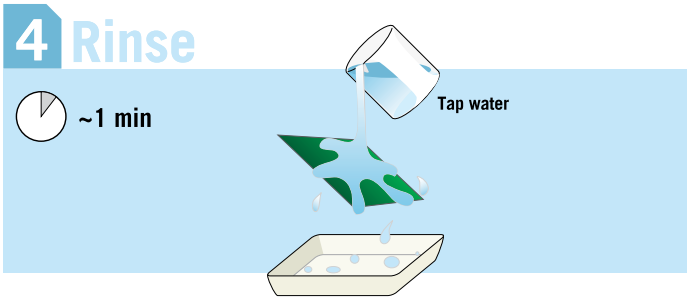
2 Expose



3 Develop

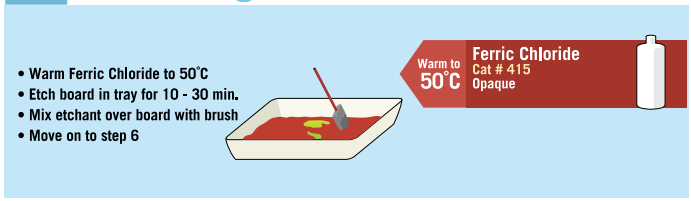


4 Rinse

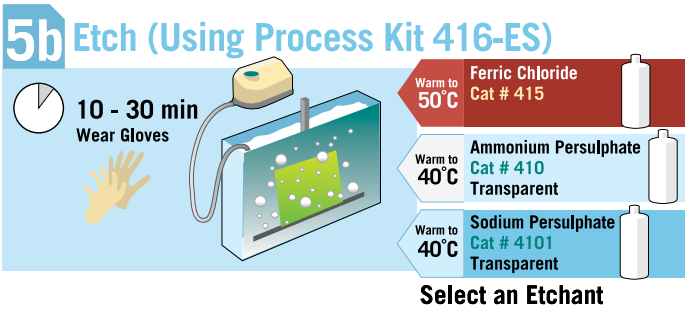


Select Step 5 based on which kit you are using:

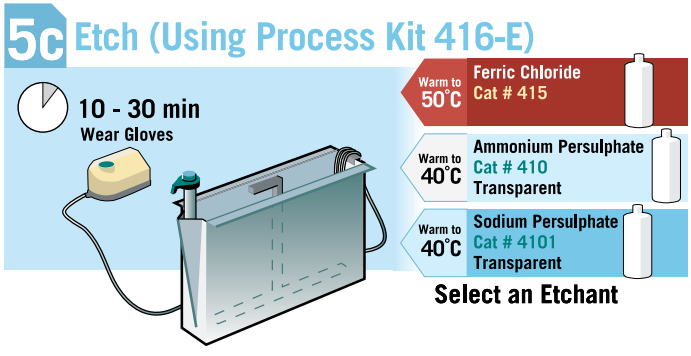
5a Etch (Using Photofabrication Kit 416-K)



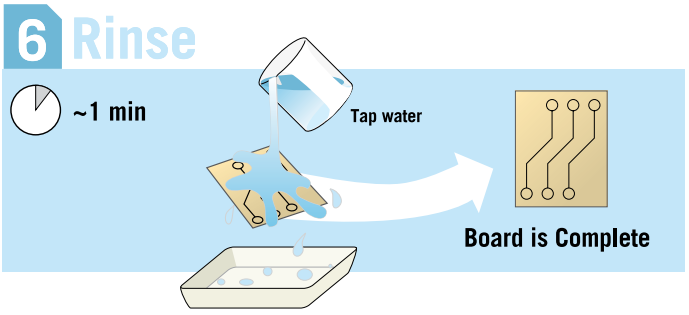
5b Etch (Using Process Kit 416-ES)



5c Etch (Using Process Kit 416-E)



6 Rinse



Plain Copper Clad Boards - 500 Series



A 1/16", 1/32", 1/64" laminate with 1 once copper. This flame retardant laminate is translucent in colour and made of continuous woven glass cloth impregnated with epoxy resin. Developed specifically for the circuit processing industry's requirements.

Plain 1 oz

Format	Cat. No.	Size
Single Sided, 1/16"	503	3" x 5"
	506	4" x 6"
	509	6" x 6"
	512	6" x 9"
	515	8" x 10"
	521	12" x 12"
	575	24" x 36"
	580	36" x 48"
Single Sided, 1/32"	586	4" x 6"
	588	6" x 9"
	590	12" x 12"
Double Sided, 1/16"	540	3" x 5"
	550	6" x 6"
	555	12" x 12"
Double Sided, 1/32"	587	4" x 6"
	589	6" x 9"
	591	12" x 12"

Positive Presensitized Copper Clad Boards - 600 Series

We offer 1/16", 1/32" and 1/64" FR4 laminate with 1 ounce copper per square foot. This flame retardant laminate is translucent in color and made of continuous woven glass cloth impregnated with epoxy resin. The copper on 1 ounce boards is 1.34mil thick (0.0341mm, 34.1 microns). The boards are made of FR4 which is a flame retardant version of G-10 material. Our presensitized boards provide high resolution and excellent fine line control. They are ideal for prototypes, small production runs, and student training.

Positive 1 oz

Format	Cat. No.	Size
Single Sided, 1/16"	603	3" x 5"
	606	4" x 6"
	609	6" x 6"
	612	6" x 9"
	630	8" x 12"
Single Sided, 1/32"	687	4" x 6"
	689	6" x 9"
Double Sided, 1/16"	650	6" x 6"
	660	6" x 9"
Double Sided, 1/32"	690	6" x 9"
Double Sided, 1/64"	698	6" x 9"
Paper Phenolic Single Sided, 1/32" Presensitized	675	12" x 18"

Etchants

Ferric Chloride (Copper Etchant)



After exposing and developing process, immerse copper board in solution and agitate until etching action is completed. Can be heated to speed up process.

- **42° baume copper etchant solution**
- **Ready to use**

415	Cat. No.	Availability	Format
	415-500ML	500 ml (17 oz)	liquid
	415-1L	1 litre (33 oz)	liquid
	415-4L	4 litres (1 gallon)	liquid
	415-20L	20 litres (5 gallons)	liquid

Sodium Persulfate (Copper Etchant)



Similar to Ammonium Persulfate but will not dissolve etch resist inks. 1 kilogram of crystals will produce 1 gallon of etching solution.

4101	Cat. No.	Availability	Format
	4101-1KG	1 kilogram (2.2 lbs.)	crystals
	4101-25KG	25 kilogram (55 lbs.)	crystals

Ammonium Persulfate (Copper Etchant)



Ammonium Persulfate crystals are used as an alternative to traditional ferric chloride to produce a cleaner copper etchant solution. Will not stain clothing or work area. 1 kilogram of crystals will produce 1 gallon of etching solution.

410	Cat. No.	Availability	Format
	410-1KG	1 kilogram (2.2 lbs.)	crystals
	410-25KG	25 kilogram (55 lbs.)	crystals

Liquid Tin

Tin plates copper circuits in 5 minutes or less at room temperature. Protects against corrosion. Provides excellent solderability. No mixing or dilution required.

421	Cat. No.	Availability	Format
	421-125ML	125 ml (4.2 oz)	liquid
	421-500ML	500 ml (16.9 oz)	liquid

Positive Developer



For use with MG Chemicals' 600 series positive presensitized boards. Concentrated formulation. Dilute one part developer to ten parts of tap water. The image appears quickly as the exposed photo resist is dissolved. After developing is complete, rinse with water and the board is ready for etching. Use 416-S Foam Brush for best results.

418	Cat. No.	Availability	Format
	418-500ML	500 ml (17 oz)	liquid

Rub-On Etch Resist

Create your very own circuit with Rub-On Etch Resist. It comes with 7 unique sheets of the most commonly used shapes and a sheet for you to custom cut your own shapes. Rub-On the shapes and lines onto a plain copper clad board and you are ready for etching.

	Cat. No.	Format
416-ER	416-ER	sheets



Silver Conductive Pen

Quick drying, tough, durable acrylic base pigmented with high purity silver. Excellent for repairing and modifying printed circuits. Silver content provides superior corrosion resistance. The microtip dispensing pen is ideal for precision application

- **Resistivity: 0.2 ohm·mil**
- **Excellent for repairing and modifying printed circuits**
- **Quick drying**
- **Durable acrylic base pigmented with high purity silver flakes**
- **EMI/RFI shielding applications**
- **Convenient microtip pen format allows precision dispensing**



	Cat. No.	Availability	Format
8420-P	8420-P	8.5 grams (0.3 oz)	microtip pen

Nickel Print



Excellent for repairing and modifying printed circuits. Quick drying. Durable acrylic base pigmented with high purity nickel flakes. EMI/RFI shielding applications. Has a resistivity of 0.7 ohms · mil. If thinning is required use 435-55ML Thinner.

	Cat. No.	Availability	Format
840	840-20G	20 grams (0.7 oz)	liquid
	840-250G	250 grams (8.8 oz)	liquid

Silver Print

Resistivity: 0.2 ohms · mil. Excellent for repairing and modifying printed circuits. Quick drying. Durable acrylic base pigmented with high purity silver flakes. EMI/RFI shielding applications. If thinning is required use 435-55ML Thinner.



	Cat. No.	Availability	Format
842	842-20G	20 grams (0.7 oz)	liquid
	842-250G	250 grams (8.8 oz)	liquid

Solder Wires

M.G. Chemicals' Rosin Activated and No Clean flux formula's rapid wetting and fast flowing. This results in consistent and reliable soldering every time. Cleaning becomes optional with solder wires as the residue left behind is non-corrosive and non-conductive.

All our solder wires are manufactured in the USA and comply with the highest quality standards. Meets J-STD-004 / J-STD-006.

With a huge selection of both leaded and lead free solder wires, we can be your one stop shop for all your solder wire needs.



Full Line of Solder Wires

Leaded (RA Core)

Sn63/Pb37 Solder

* Meets J-STD-004 / J-STD-006
* Standard Flux Core Percentage at 2.2%
* Non-corrosive and electrically non conductive flux core (RA Flux)
* Melting Point: 183 °C / 361 °F

Cat. no.	Gauge	Diameter	Weight
4884-227G	23	0.025"	1/2 lb
4884-454G	23	0.025"	1 lb
4885-227G	22	0.032"	1/2 lb
4885-454G	22	0.032"	1 lb
4886-227G	20	0.04"	1/2 lb
4886-454G	20	0.04"	1 lb
4887-227G	18	0.05"	1/2 lb
4887-454G	18	0.05"	1 lb
4888-227G	16	0.062"	1/2 lb
4888-454G	16	0.062"	1 lb
4880-18G	22	0.032"	Pocket Pack (0.6 oz)

Sn60/Pb40 Solder

* Meets J-STD-004 / J-STD-006
* Standard Flux Core Percentage at 2.2%
* Non-corrosive and electrically non conductive flux core (RA Flux)
* Melting Point: 183 °C / 361 °F

Cat. no.	Gauge	Diameter	Weight
4894-227G	23	0.025"	1/2 lb
4894-454G	23	0.025"	1 lb
4895-227G	22	0.032"	1/2 lb
4895-454G	22	0.032"	1 lb
4896-227G	20	0.04"	1/2 lb
4896-454G	20	0.04"	1 lb
4897-227G	18	0.05"	1/2 lb
4897-454G	18	0.05"	1 lb
4898-227G	16	0.062"	1/2 lb
4898-454G	16	0.062"	1 lb
4890-18G	22	0.032"	Pocket Pack (0.6 oz)

Lead Free (No Clean)

Sn96 (SAC305)

* 96.3% tin, 0.7% copper and 3% Silver
* RoHS compliant
* Meets J-Std-006
* No Clean Flux (JSTD-004)
* Meets Bellcore GR-78-CORE 13.1.4
* Melting Point: 217 - 221° C (422.6 - 429.8 ° F)

Cat. no.	Gauge	Diameter	Weight
4900-35G	21	0.032 "	Pocket Pack (0.6 oz)
4900-112G	21	0.032 "	1/4 lb
4900-227G	21	0.032 "	1/2 lb
4900-454G	21	0.032 "	1 lb

Sn99

* 99.3% tin, 0.7% copper
* RoHS compliant
* Meets J-Std-006
* No Clean Flux (JSTD-004)
* Meets Bellcore GR-78-CORE 13.1.4
* Melting Point: 227 ° C (441 ° F)

Cat. no.	Gauge	Diameter	Weight
4901-112G	21	0.032 "	1/4 lb
4901-227G	21	0.032 "	1/2 lb
4901-454G	21	0.032 "	1 lb
4901-2LB	n/a	n/a	2 lb (bar)

Leaded (No Clean)

Sn63 / Pb37 Solder

* Meets J-STD-004 / J-STD-006
* Non-corrosive and electrically non conductive flux core (No Clean)
* Standard Flux Core Percentage at 2.2%
* Melting Point: 183 °C / 361 °F

Cat. no.	Gauge	Diameter	Weight
4865-227G	22	0.032"	1/2 lb
4865-454G	22	0.032"	1 lb
4866-227G	20	0.04"	1/2 lb
4867-227G	18	0.05"	1/2 lb
4860-18G	22	0.032"	Pocket Pack (0.6 oz)

Sn60 / Pb40 Solder

* Meets J-STD-004 / J-STD-006
* Non-corrosive and electrically non conductive flux core (No Clean)
* Standard Flux Core Percentage at 2.2%
* Melting Point: 183 °C / 361 °F

Cat. no.	Gauge	Diameter	Weight
4875-227G	22	0.032"	1/2 lb
4875-454G	22	0.032"	1 lb
4876-227G	20	0.04"	1/2 lb
4870-18G	22	0.032"	Pocket Pack (0.6 oz)

Sundries

RA Flux (Liquid)

* Superior fluxing ability
* Instant wetting
* Meets Mil. Spec. #RA 14256
* ANSI Spec. 004
* ROMI class, J Standard
* RoHS Compliant

Stock Code	Product Name	Size	Form
835-100ML	Liquid Rosin Flux	125 mL	Liquid
835-1L	Liquid Rosin Flux	1 L	Liquid
835-4L	Liquid Rosin Flux	4 L	Liquid
835-P	Rosin Flux Pen	10 mL	Pen

No Clean Flux Paste (Syringe)

* JSTD-004
* Bellcore (Telecordia)
* No Clean
* RoHS Compliant
* Thixotropic Paste
* Compatible with lead free and leaded systems

Stock Code	Product Name	Size	Form
8341-10ML	No Clean Flux Paste	10 mL	Syringe

Tip Tinner (SAC305)

* RoHS Compliant
* Effective at repairing oxidized iron tips
* Prolongs life of new iron tips
* 96.5% Tin / 3.5% Silver
* No Clean

Stock Code	Product Name	Size	Form
4910-28G	Tip Tinner	25 g	Solid

Desoldering Braids

Static Free Super Wick

Any place you can put solder in, you can take it out with SUPER WICK. Remove the most expensive circuitry with confidence. Just lay the SUPER WICK on the soldered joint, apply tip of soldering iron to topside till solder melts, and lift iron and SUPER WICK together to leave a clean connection ready for component removal or replacement. SUPER WICK is pure copper, specially wound in static free bobbins.

- **RMA Type Flux**
- **Static Dissipative Spools**
- **Meets MIL-F-14256F (ANSI/J-STD-0004)**
- **RoHS Compliant**

Static Free No Clean Super Wick

Same superior performance as our regular Super Wick but with No Clean Flux. Residue remaining on board is non conductive and non corrosive and requires no cleaning.

- **No Clean flux**
- **Static Dissipative Spools**
- **Meets MIL-F-14256F (ANSI/J-STD-0004)**
- **RoHS Compliant**

Lead Free Super Wick with No Clean Flux

Designed to with stand the high temperatures associated with lead free soldering. Also works great with conventional tin/lead solders. More strands of copper (more surface area) per square inch. Able to transfer heat to solder joints more quickly and efficiently than conventional desoldering braids.

- **No Clean flux**
- **Static Dissipative Spools**
- **RoHS Compliant**

Static Free Super Wick

Format	Cat. No.	Width	Color code
Fine Braid Super Wick	423	.025″	#1 white (SMT)
5 ft. lengths (1.52 m)	424	.050″	#2 yellow
	425	.075″	#3 green
	426	.100″	#4 blue
	427	.125″	#5 brown
Fine Braid Super Wick	442	.050″	#2 yellow
25 ft. lengths (7.62 m)	443	.075″	#3 green
	444	.100″	#4 blue
Fine Braid Super Wick	452	.050″	#2 yellow
50 ft. lengths (15.24 m)	453	.075″	#3 green
	454	.100″	#4 blue
Fine Braid Super Wick	462	.050″	#2 yellow
100 ft. lengths (30.48 m)	463	.075″	#3 green
	464	.100″	#4 blue
Fine Braid Super Wick	472	.050″	#2 yellow
500 ft. lengths (152.4 m)	473	.075″	#3 green
	474	.100″	#4 blue

Static Free No Clean Super Wick

Format	Cat. No.	Width	Color code
No Clean Super Wick	424-NS	.050″	#2 yellow
5 ft. lengths (1.52 m)	425-NS	.075″	#3 green
	426-NS	.100″	#4 blue
No Clean Super Wick	453-NS	.075″	#3 green
50 ft lengths (15.24 m)	454-NS	.100″	#4 blue

Lead Free Super Wick with No Clean Flux

Format	Cat. No.	Width	Color code
No Clean Super Wick	424-LF	.050″	#2 yellow
5 ft lengths (1.52 m)	425-LF	.075″	#3 green
	426-LF	.100″	#4 blue



Liquid Rosin Flux

Fully Activated. Offers superior fluxing ability. Instant wetting. After soldering, the rosin residue is non-corrosive, non-conductive, moisture and fungus resistant. Also available in micro-tip dispensing pen format (835-P).

- **Mil spec # RA14256, ANSI Spec 004, ROMI Class 1 Standard**

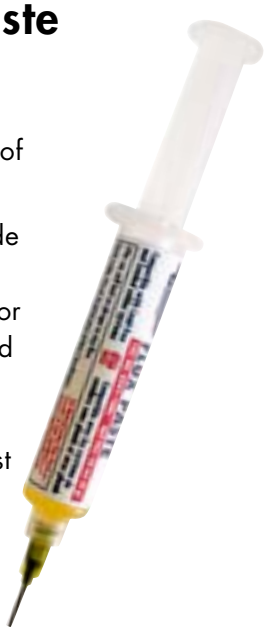


835	Cat. No.	Availability	Format
	835-100ML	125 ml (4.2 oz)	liquid
	835-1L	1 litre (33 oz)	liquid
	835-4L	4 litres (1 gallon)	liquid
	835-P	10 ml (0.34 oz)	pen

No Clean Flux Paste

Convenient syringe dispenser ideal for touch up and repair of surface mount assemblies.

A 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 the fluxing activity levels that promote fast wetting action and maximum wetting spread.



- EXCELLENT WETTABILITY
- NO CLEAN
- NON-CONDUCTIVE, NON- TACKY RESIDUES
- COMPATIBLE WITH LEAD FREE & LEADED SOLDER SYSTEMS
- THIXOTROPIC PASTE
- ROHS COMPLIANT

8341	Cat. No.	Availability	Format
	8341-10ML	10 ml	paste

Solder Wires

SEE THE SOLDER WIRE SECTION FOR MORE DETAILS.

Leaded (RA Core)
Sn63/Pb37, Sn60/Pb40

Leaded(No Clean)
Sn63/Pb37, Sn60/Pb40

Lead Free(No Clean)
Sn96, Sn99

Sundries
RA Flux, No Clean Paste, Tip Tinner



Carbon Conductive Grease

Lubricates and improves electrical and thermal connections between sliding surfaces, while providing protection from moisture & corrosion. Excellent for use on switches and EMI shielding applications. Prevents normally closed switches from corroding in place, reduces make-break arcing and pitting of switch contact surfaces, improves the connection between irregular or pitted contact surfaces, and reduces EMI noise by maintaining a continuous path between conductive surfaces. Thermally stable over a large temperature range.

- **Electric Resistivity of 117 ohm · cm**



846	Cat. No.	Availability	Format
	846-80G	80 grams (2.8 oz)	tube
	846-1P	1 pint (16 oz)	grease

Silver Conductive Grease

This Silver Grease provides maximum electrical and thermal conductivity between sliding surfaces, while providing protection from moisture and corrosion. Typical applications include lubrication of substation switches or circuit breakers, heat dissipation from transformers, or static grounding on seals or O-rings.

- TEMP. RANGE: -50°C TO 200°C (-58°F TO 392°F)
- PROTECTS FROM MOISTURE AND CORROSION
- ELECTRICALLY CONDUCTIVE

8463	Cat. No.	Availability	Format
	8463-7G	7 grams (0.25 oz)	syringe

Carbon Conductive Assembly Paste

The 847 Carbon Conductive Assembly Paste is an electrically conductive, non-bleeding grease for improving electrical connections between non-moving surfaces and parts. It inhibits corrosion, is economical, has a wide operating temperature range, long service life, and does not contain silicone.

- **Improves electrical connections between irregular surfaces**
- **Ensures electrical contact between loose or vibrating parts and small gaps**
- **Resistivity of 82 Ω·cm**
- **Does not separate or bleed, even at high temp.**
- **Contains special corrosion inhibiting compounds**

847	Cat. No.	Availability	Format
	847-40G	40 g (1.3 oz)	paste (jar)
	847-1P	500 g (1.1 lb)	paste (jar)
	847-1G	3.7 L (8.2 lb)	paste (can)

Static Dissipative, Anti-Corrosive Grease

- DESIGNED TO MEET AEROSPACE SPECIFICATIONS FOR ANTI-CORROSIVE GREASES
- HIGH TEMPERATURE STABILITY
- NON-BLEEDING — OIL SEPARATION RESISTANT
- SEPARATION RESISTANT
- SILICONE FREE
- SAFE ON PLASTICS

The 8464 Static Dissipative, Anti-Corrosive Grease is a non-bleeding grease that is produced with an extremely temperature stable, low-volatility synthetic oil. This grease inhibits corrosion and has easily passed a 1000 h salt spray corrosion test. Low weight loss after extended periods at high temperature suggests very high vacuum stability.

8464	Cat. No.	Availability	Format
	8464-85ML	85 ml (3 fl. oz)	tube
	8464-1P	454 mL (15.4 fl. oz)	tub

Premium Carbon Conductive Grease

The 8481 Premium Carbon Conductive Grease is an electrically conductive grease with a synthetic oil base. This product is similar to the MG 846 silicone conductive grease, but unlike its silicone counterpart the 8481 synthetic-oil grease is essentially non-bleeding. Further, it includes corrosion inhibitors that provide superior corrosion resistance. The 8481 grease lubricates and improves electrical connections between sliding surfaces and parts, ensuring good grounding connection. It is also used to improve electrical continuity between irregular and pitted surfaces, as well as providing an economical way to protect switches against corrosion.

- **Improves electrical connections between irregular surfaces**
- **Extends the life of contacts**
- **Resistivity better than 400 Ω**
- **Silicone Free**
- **Safe on plastics**

8481	Cat. No.	Availability	Format
	8481-1	85 mL, 3 oz	tube
	8481-2	454 mL, 16 g	jar
	8481-3	3.74 L, 1 gallon	tub

8481 Specifications	
Physical Properties	
Color	Black
Odor	Odorless
Density @25 °C [77 °F]	1.03 g/mL
Viscosity at 25 °C [77 °F]	630,000 cP [615,000 cSt]
Drop Point	302°C [575 °F]
Oil Separation (Boeing test)	Slight oil separation
Corrosivity	Non-Corrosive
%Filler	15%
%Evaporation loss @ 25 °C, 44 h	0.6% (wt)
VOC (Volatile Organic Compound)	Calculated 5%
Lubricant	Yes
Bleed Resistant	Yes

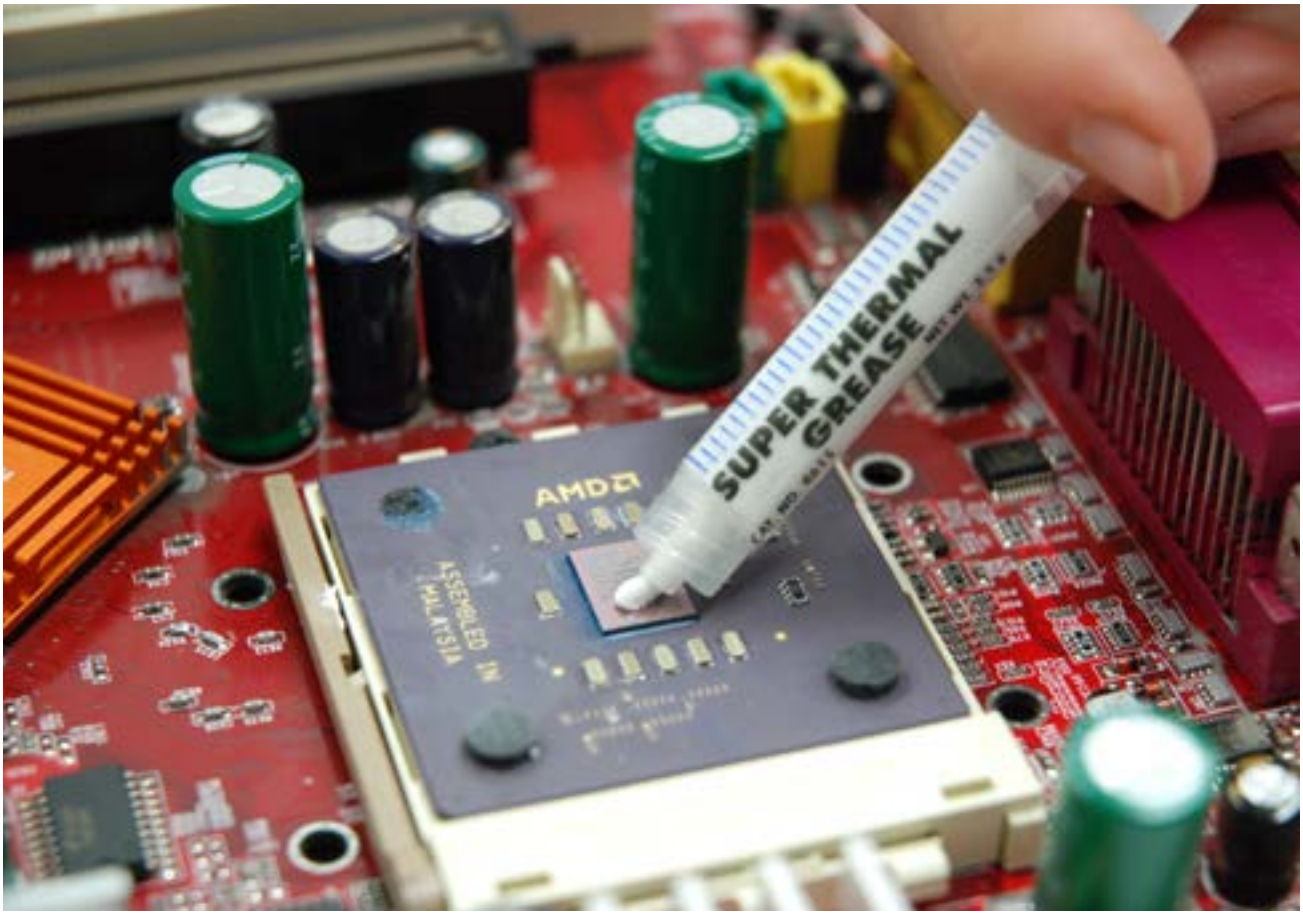
Translucent Silicone Grease

Provides superior corrosion protection. Lubricates and protects against moisture. Compatible with most plastics and elastomers. Conforms to the requirement of 21 CFR section 178.3570, "Lubricants for incidental food contact".



- IMPROVES ELECTRICAL CONNECTIONS BETWEEN IRREGULAR SURFACES
- ENSURES ELECTRICAL CONTACT BETWEEN LOOSE OR VIBRATING PARTS AND SMALL GAPS
- RESISTIVITY OF 82 Ω·CM
- DOES NOT SEPARATE OR BLEED, EVEN AT HIGH TEMP.
- CONTAINS SPECIAL CORROSION INHIBITING COMPOUNDS

8462	Cat. No.	Availability	Format
	8462-85ML	85 ml (3 oz)	tube
	8462-1P	1 pint (16 oz)	tub



Super Thermal Grease II

The 8616 Super Thermal Grease is low thermal resistance grease with a synthetic oil base that is electrically insulating and non-corrosive. It is use to improve the thermal interface contact conductivity between heat sinks, LEDs, motors, and heat-generating electronic components such as CPUs, GPU chipsets, power components, and so on. It improves the thermal interface between irregular and pitted surfaces.

- **High thermal conductivity**
- **Silicone Free and non-bleeding**
- **Lowers the contact resistance between irregular surfaces**
- **Extends the life of electronic components**
- **High dielectric strength**
- **1.8 w/(m·k)**

8616 Specifications	
Physical Properties	
Phase	Paste
Shelf Life	5 year
Storage Temperature Limits	-10 to +40 °C [14 to +104°F]
Service Temperature	-68 to +165 °C [-90 to +329 °F]
Odor	Odorless
Color	White, silvery cream-like
Density @25 °C	2.74 g/mL
Drop Point (ASTM D 2265)	> 300°C [> 572 °F]
VOC	5% to 18%
Corrosiveness	Non-corrosive
Bleed resistant	Yes
Flash Point	> 290 °C [550 °F]
Thermal Properties	
Thermal Conductivity @25 °C	1.8 W/(m· K)

8616	Cat. No.	Availability	Format
	8616-3ML	8.2 g (0.3 oz)	Syringe

Silicone Heat Transfer Compound

Designed for use in transferring heat away from electrical and electronic devices such as; CPUs, transistors, power diodes, semi-conductors, ballast's and thermocouple wells. High thermal conductivity, high dielectric constant, high dissipation factor, use with heat sinks or metal chassis, will not dry or harden. Contains zinc oxide and polydimethyl siloxane.

- **Thermal Conductivity of 0.657 w/m · k**

860	Cat. No.	Availability	Format
	860-4G	4 grams (0.14 oz)	pouch
	860-60G	60 gram (2 oz)	jar
	860-150G	150 gram (5.3 oz)	tube
	860-1P	1 pint (16 oz)	tub

Non-Silicone Heat Transfer Compound

Designed to eliminate the potential problems of silicone-based compounds: migration and component contamination. Designed for use in transferring heat away from electrical and electronic devices such as CPUs, transistors, power diodes, semi-conductors, ballast's and thermocouple wells. High thermal conductivity, high dielectric constant, high dissipation factor, use with heat sinks or metal chassis. Will not dry or harden.



- **Thermal Conductivity of 0.773 w/m · k**

8610	Cat. No.	Availability	Format
	8610-60G	60 gram (2 oz)	tube
	8610-1P	473 ml (1 pint)	tub

White Lithium Grease

Provides superior lubrication and protection against corrosion and oxidation. Reduces friction and wear. Retains consistency over a wide range of temperatures.



8461	Cat. No.	Availability	Format
	8461-85ML	85ml (3 oz)	tube
	8461-1P	1 pint	tub

Penetrating Oil

The 8472 Penetrating Oil rapidly dissolves corrosion and rust. It creeps into tiny spaces between close fitting parts and quickly releases seized nuts, bolts, and other mechanical parts. It also cleans and lubricates metal parts and protects them from corroding again the future. It is distinguished from competitors by the extreme corrosion resistance it imparts, being non-volatile, containing no VOC's, and because it is safe on plastics and painted surfaces.

8472	Cat. No.	Availability	Format
	8472-450G	450 grams (16 oz)	aerosol
	8472-4L	4 L (1 gal)	liquid
	8472-20L	20 L (5.3 gal)	liquid

- DISSOLVES RUST QUICKLY
- CREEPS INTO TINY SPACES
- PROVIDES EXTREME PROTECTION AGAINST RUST AND CORROSION
- EXCELLENT LONG LASTING GENERAL PURPOSE LUBRICANT
  CLEANS GRIME, GREASE, RUST, AND ADHESIVES
- SAFE ON SEALS, PLASTICS, RUBBER, PAINT, AND COATINGS
- NON-VOLATILE, WILL NOT DRY OUT QUICKLY
  DISPLACES MOISTURE
- LUBRICATING FILM REPELS WATER AND PROTECTS AGAINST
  ABRASIVE PARTICLES
- REDUCES WEAR, INCREASING EQUIPMENT LIFESPAN
- NO VOC'S, CFC'S OR CHLORINATED SOLVENTS
- NON TOXIC
- SILICONE-FREE

Silver Conductive Epoxy

4 HR. WORKING TIME / HIGH CONDUCTIVITY

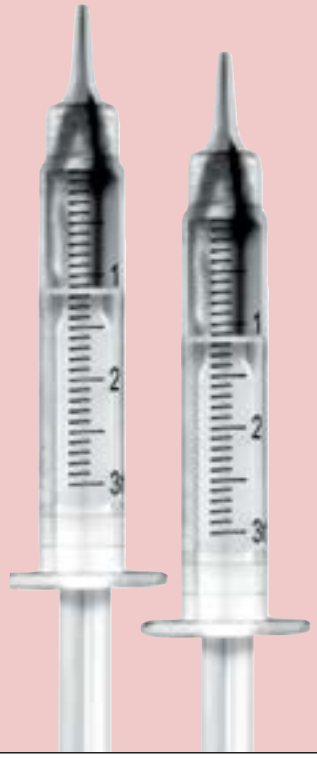
The 8330S Silver Conductive Epoxy Adhesive: Slow Cure / Extreme Conductivity is an electronic grade epoxy that combines long working time and high conductivity with ease of use. It has a convenient 1-to-1 mix ratio and 4–5 hours pot life, which once mixed behaves essentially like a 1-part adhesive for the duration of a work shift. However, unlike 1-part adhesives that often require high heat (130–170 °C), it will cure at 65 °C in less than 2 hours.

10 MINS. WORKING TIME / HIGH CONDUCTIVITY

The 8331 Silver Conductive Epoxy Adhesive: Moderate Cure is an economical electronic epoxy with good electrical and thermal conductivities. This adhesive bonds very well to a variety of surfaces. It has a convenient 1-to-1 ratio, a workable ten minutes pot life, and a moderate curing rate. It achieves an operational level in five hours at room temperature. With heat, the 8331 cures in less than 15 minutes and maximizes its conductivity.

4 HR. WORKING TIME / HIGH CONDUCTIVITY

The 8331S Silver Conductive Epoxy Adhesive: Slow Cure is an economical electronic grade epoxy that combines long working time and good conductivity with ease of use. It has a convenient 1-to-1 mix ratio and 4–5 hours pot life, which once mixed behaves essentially like a 1-part adhesive for the duration of a work shift. However, unlike 1-part adhesives that often require high heat (130–170 °C), it will cure at 65 °C in less than 2 hours.



	Cat. No.	Availability	Format
8330S	8330S-21G	21 g (0.66 oz)	2 syringes
	8330S-200ML	690 g (24 oz)	paste
8331	8331-14G	14 g, 0.35 oz	2 syringes
	8331-40G	40 g, 1.30 oz	paste
	8331-50ML	66 g, 25 mL	paste
	8331-454G	454 g, 336 mL	paste
8331S	8331S-15G	15 g (0.48 oz)	2 syringes
	8331S-200ML	486 g (17 oz)	paste

Thermally Conductive Epoxy - Encapsulating & Potting Compound

Formulated with undiluted Bis F resin for superior physical properties, and pigmented with high purity aluminum oxide pigment to provide excellent thermal conductivity at reasonable cost. Pigmented black for excellent thermal absorption and emission. Provides superior protection from impact, shock, conductivity, moisture, abuse, chemicals, and analysis.

- **Non-porous, water and chemical resistant**
- **Thermally conductive**
- **Extreme impact resistant**
- **Non-conductive, an electrical insulator**
- **Excellent machining properties**



	Cat. No.	Availability	Format
832TC	832TC-450ML	450 ml (16 oz)	liquid
	832TC-2L	2 litres (0.5 gallons)	liquid
	832TC-40L	40 litres (10 gallons)	liquid

Thermally Conductive Silicone Adhesive

SPECIAL ORDER

Excellent high thermal conductivity. White paste. Has UL flammability rating of V-1 using the UL 94 test. Has outstanding adhesion and electrical properties. Resistant to heat, cold, moisture, UV, ozone and chemicals. When cured, retains elastomeric properties throughout the operating temperature range of -55°C to 200°C (-67°F to 392°F). Use for bonding components and devices to heat sinks as well as in other bonding applications where flexibility, thermal conductivity, and flame retardance are of concern. Requires no primer.



TSE 3941	Cat. No.	Availability	Format
	TSE3941-150G	150 g (5.3 oz)	tube
	TSE3941-333ML	333 ml (10.5 oz)	cartridge

Super Glue Liquid

This cyanoacrylate adhesive has been formulated to instantly bond rubber, plastics, metal, and ceramics. It offers excellent strength characteristics. Liquid format ideal for bonding smooth surfaces.



8333	Cat. No.	Availability	Format
	8333-3G	3 grams (0.1 oz)	liquid
	8333-20G	20 grams (0.7 oz)	liquid

Fast Set Epoxy

Working time: 5 minutes, Handling time: 15 minutes, Full Cure 1 hour. Conveniently packaged in a 25ml dual syringe with a snap open cap. Provides 1500 PSI bonding strength to paper, wood, metal, and ceramics.



- **Easy 1:1 mixing ratio**
- **Fast setting (5 minutes)**
- **2300 psi of bonding strength**
- **Resistant to water, salt spray, inorganic acids and bases and most organic solvents**

8332	Cat. No.	Availability	Format
	8332-25ML	25 ml (0.85 oz)	dual syringes

Super Glue Gel



This hybrid cyanoacrylate adhesive has been formulated to quickly bond rubber, plastics, metal, and ceramics. It offers excellent strength characteristics. Choose gel when bonding uneven or vertical surfaces.

8334	Cat. No.	Availability	Format
	8334-3ML	3 ml (0.1 oz)	gel

Super Contact Cement

Quick drying, water proof, clear, and vibration-resistant bond with minimal shrinkage. For shop, industry, home and hobby use.



8336	Cat. No.	Availability	Format
	8336-55ML	55 ml (2 oz)	bottle

Speaker Service Cement

A quick drying adhesive that is specially designed for speaker repair. It forms a hard, durable and vibration resistant bond with minimal shrinkage. Use for repairing Cones, foam surrounds, and more.



8337	Cat. No.	Availability	Format
	8337-55ML	55 ml (2 oz)	bottle

Thermal Conductive Adhesive

SLOW CURE

The 8329TCS Slow Cure Thermal Conductive Adhesive is an electronically insulating epoxy that combines long working time and high conductivity with ease of use. It has a convenient 1-to-1 mix ratio and 4 hours pot life. Due to this long pot life, the mixed adhesive essentially behaves like a 1-part adhesive for the duration of a work shift. However, unlike 1-part adhesives, it doesn't require temperatures as high as 130 and 170 °C, and it will cure at a more moderate 80 °C in less than 1 hour. The cured adhesive bonds very well to most substrates used in electronic assemblies; and resists thermal and mechanical shocks.

8329 TCS	Cat. No.	Availability	Format
	8329TCS-6ML	6 ml, 0.2 oz	paste
	8329TCS-200ML	200 ml, 6.8 oz	paste

MEDIUM CURE

The 8329TCM Medium Cure Thermal Conductive Adhesive is an electronically insulating epoxy that combines moderate curing rate and high thermal conductivity. It has a convenient 1-to-1 ratio, a workable 45 minutes pot life, and a moderate curing rate. It may achieve a minimal service cure in seven hours at room temperature. The cured adhesive bonds very well to most substrates used in electronic assemblies; and resists thermal and mechanical shocks.



8329 TCM	Cat. No.	Availability	Format
	8329TCM-6ML	6 ml, 0.2 oz	paste
	8329TCM-200ML	200 ml, 6.8 oz	paste

Threadlockers

The solution to vibrational loosening. Loosening of fasteners creates warranty problems, reliability issues and unscheduled shutdown of equipment. Threadlockers completely fill in thread paths to eliminate the movements that cause parts to shake and vibrate loose.



8701

- Low
- Removable
- Ideal for small screws, ¼" and smaller



8702

- Medium
- Removable
- Ideal for fasteners ¾" or smaller



8703

- High
- Permanent
- Ideal for fasteners up to 1"



8704

- High strength wicking
- Permanent
- Ideal for post application to pre assembled fasteners
- Penetrates threads by capillary action. Secures screws, bolts, or porous metal parts.

8700 series	Cat. No.	Availability	Format
	8701-10ML	10 ml (0.2 oz)	liquid
	8702-10ML	10 ml (0.2 oz)	liquid
	8703-10ML	10 ml (0.2 oz)	liquid
	8704-10ML	10 ml (0.2 oz)	liquid

Touch & Go Plastic Pump

Dispenser comes with a high-density polyethylene 8 oz. bottle suitable for many solvents. Compact design provides stability and saves storage space. Dispenser is also wide opening and allows for easy fill. Translucent bottle allows for easy viewing of contents.



8232	Cat. No.	Availability	Format
	8232-8	237 ml (8 oz)	pump bottle

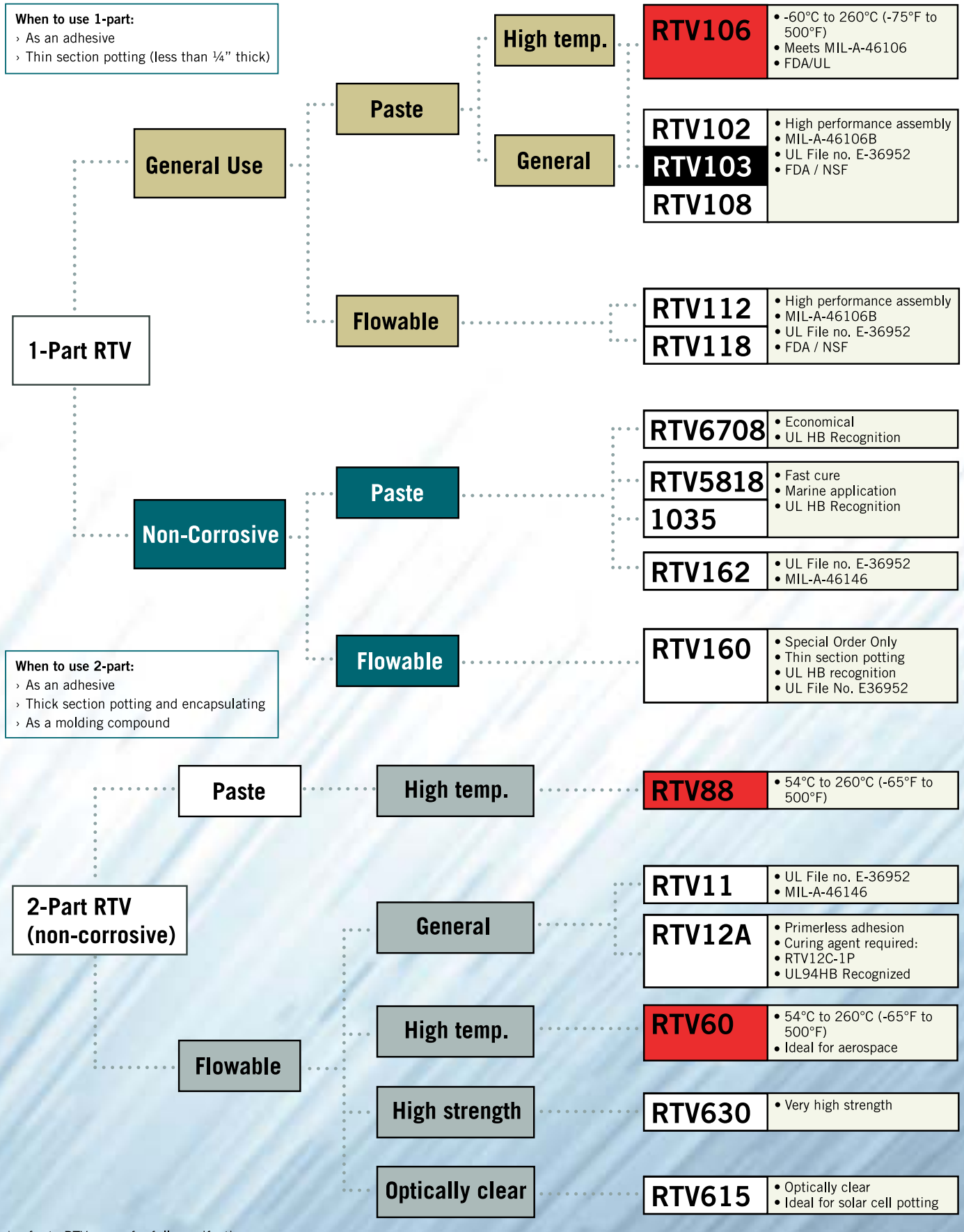
Rubber Keypad Repair Kit

- Restores electrical conductivity to worn carbon contacts
- Formulated for maximum conductivity
- Repairs over 200 rubber button contacts
- Guaranteed to work over 500,000 keystrokes
- Reusable



8339	Cat. No.	Availability	Format
	8339	kit	n/a

RTV Silicone Selection Chart



* refer to RTV pages for full specifcations

General Use (1-Part)

Economical, general purpose silicones for all industries. Excellent for insulating, weather proofing, sealing, bonding and formed-in-place gaskets. Temperature Range: -60 °C to 205 °C (-75 °F to 400 °F)

Stock Number	Size	Form	Features	Color	Tack Free Time (min.)	Dielectric Str. (V/mil)	Dielectric Constant	Elongation	Tensile Strength (psi)	Hardness (Shore A)	Viscosity
RTV102-85ML RTV102-300ML	2.8 oz tube 10.1 oz cartridge	Paste	▸ High strength ▸ High performance assembly ▸ Acetoxy cure ▸ MIL-A-46106B ▸ UL File no. E-36952 ▸ FDA / NSF	White	20	500	2.8 @ 60Hz	450%	400	30	400 g/min.
RTV103-85ML RTV103-300ML	2.8 oz tube 10.1 oz cartridge	Paste		Black							
RTV108-85ML RTV108-300ML	2.8 oz tube 10.1 oz Cartridge	Paste		Translucent White							
RTV112-85ML	2.8 oz tube	Flowable	▸ High strength ▸ High performance assembly ▸ Acetoxy cure ▸ MIL-A-46106B ▸ UL File no. E-36952 ▸ FDA / NSF	White	20	400	2.8 @ 60Hz	325%	325	25	20,000 cps
RTV118-85ML	2.8 oz tube	Flowable		Translucent							

Non-Corrosive (1-Part)

Safe for use on sensitive electronics. Excellent for bonding capacitors, resistors and integrated circuits to PCBs'. Seals exposed wires, fraying surfaces, and connectors. Suitable for all industries. Temperature range: -60 °C to 205 °C (-75 °F to 400 °F)

Stock Number	Size	Form	Features	Color	Tack Free Time (min.)	Dielectric Str. (V/mil)	Dielectric Constant	Elongation	Tensile Strength (psi)	Hardness (Shore A)	Viscosity
RTV162-85ML RTV162-300ML	2.8 oz tube 10.1 oz cartridge	Paste	▸ Alkoxy neutral cure ▸ UL File no. E-36952 ▸ MIL-A-46146, group 1, type 1	White	240	450	2.8 @ 60Hz	400%	550	35	350 g/min.
RTV167-85ML	2.8 oz tube	Paste	▸ **High strength** ▸ Alkoxy neutral cure ▸ MIL-A-46146, group 1, type 1 ▸ UL HB recognition ▸ UL File No. E36952	Grey	240	500	2.8 @ 60Hz	600%	800	37	180 g/min.
1035-85ML RTV5818-300ML	2.8 oz tube 10.1 oz cartridge	Paste	▸ **Excellent chemical resistance** ▸ **Fast cure** ▸ Marine application ▸ Modified alkoxy (neutral) cure ▸ UL HB Recognition ▸ UL File No. E36952	Translucent	15	425	2.8 @100Hz	500%	275	21	480 g/min.
RTV6708-300ML	2.8 oz tube	Paste	▸ Economical ▸ High strength ▸ Modified alkoxy (neutral) cure ▸ UL HB Recognition ▸ UL File No. E36952	Translucent	25	409	2.9 @100Hz	450%	225	18	175 g/min.
TSE397C-100G	3.5 oz tube	Flowable	▸ **Fast cure** ▸ Alkoxy neutral cure ▸ MIL-A-46146, group 1, type 1 ▸ UL HB recognition ▸ UL File No. E36952	Translucent	10	560	2.9 @ 60Hz	360%	156	20	50,000 cps

Special Applications (1-Part)

High Temperature, Flame Retardant, High Strength (resist ozone and chemicals), and Thermally Conductive. Suitable for all industries.

Stock Number	Size	Form	Features	Color	Tack Free Time (min.)	Dielectric Str. (V/mil)	Dielectric Constant	Elongation	Tensile Strength (psi)	Hardness (Shore A)	Viscosity
RTV106-85ML	2.8 oz tube	Paste	▸ **High Temp.** (-60°C to 260°C / -75°F to 500°F) ▸ Acetoxy cure ▸ Meets MIL-A-46106 ▸ UL File no. E-36952 ▸ FDA 21 CFR 177.2600	Red	25	500	2.8 @ 60Hz	400%	375	30	400 g/min.
RTV133-300ML	10.1 oz cartridge	Paste	▸ Non-corrosive ▸ **Flame retardant** ▸ Alkoxy cure ▸ UL V-1 and V-0 recognition ▸ UL File No. E36952	Black	60	500	2.8 @ 60Hz	250%	650	45	650 g/min.
RTV157-85ML	2.8 oz tube	Paste	▸ Excellent weatherability ▸ Resists ozone and chemicals ▸ **High Strength** ▸ Acetoxy cure	Grey	45	525	2.9 @ 60Hz	825%	975	28	155 g/min.
TSE3941-150G TSE3941-333ML	5.3 oz tube 10.5 oz cartridge	Paste	▸ **Thermally Conductive** (0.83 W/m • °K) ▸ Neutral cure ▸ **Flame Retardant** ▸ UL-94 V-1 Recognized (file E56745) ▸ MIL-A-46146B (corrosion only)	White	5	560	4 @ 60Hz	100%	426	60	Paste

Primer Guide

1-Part RTV Silicones: One-part RTV silicone products have adhesion promoters in their formulation and consequently have good adhesion to a variety of substrates. For 1-part products, it is generally suggested that testing be done without a primer first and if adhesion is acceptable then no primer is required.

2-Part RTV Silicones: Generally, two-part RTV silicone products do not have adhesion promoters in their formulation and consequently have minimal adhesion to substrates. Two-part products have adhesion that is usually acceptable for potting or encapsulating applications but is not sufficient for many sealing or adhering applications. If better adhesion is required, a primer can be used.

Stock Number	Features	Specific Gravity	Solid Contents	Solvents	Dry Time (min.)	Use With:
SS4004P-1P	General purpose, pink in color to help identify areas where primer has been applied. Meets MIL-A-46106B, MIL-A-46146B, MIL-S-23586E.	0.85	15%	Acetone Isopropanol Xylene N-butanol	30	1 & 2 Part Condensation Cure
SS4120-1P	General purpose, clear, can be used in food contact applications where FDA regulations apply. Meets MIL-A-46106B, MIL-A-46146A, MIL-A-46146B, MIL-S-23586E.	0.82	3%	Ethanol Methanol	30	1 & 2 Part Addition Cure
SS4155-1P	General purpose, blue, forms chalky white haze when dry	0.85	10%	Mineral Spirits	30	All cure types

Potting and Encapsulating Compounds (2-Part)

Use when deep cross section curing is required. Applications include, potting and encapsulation of electronics, molding making or to protect against shock and vibration. Suitable for all industries. Temperature Range: -60°C to 205°C (-75°F to 400°F)

Stock Number	Size	Form	Features	Color	Mix Ratio (by weight)	Viscosity (cps)	Hardness (Shore A)	Tensile Str. (psi)	Elongation	Dielectric Str. (V/mil)	Dielectric Constant	Work Life (hrs) @ 25 °C (77°F)	Cure Time @ 25 °C (77°F)
RTV11-1P	1 Pint	Flowable	▸**General purpose potting** ▸Medical mold making ▸Primer required ▸Condensation cure ▸FDA	White	100:.05	11,000	41	300	160%	515	3.3 @ 1000 Hz	1.5	24 hrs
RTV12A-1G	1 Gallon	Flowable	▸**General purpose potting** ▸**Primerless adhesion** ▸Condensation cure ▸Curing agent required: RTV12C-1P ▸UL94HB Recognized	Translucent	20:1	1300	18	n/a	200%	400	3.0 @ 1000 Hz	1.6	24 hrs
RTV60-1P	1 Pint	Flowable	▸**Extreme high temp.** (-54°C to 260°C /-65°F to 500°F) ▸Condensation cure ▸Ideal for aerospace applications ▸Primer required	Red	100:0.5	47,000	57	990	120%	450	4.0 @ 1000 Hz	2.0	24 hrs
RTV88-1P	1 Pint	Thixotropic Paste	▸**Extreme high temp.** (-54°C to 260°C /-65°F to 500°F) ▸Condensation cure ▸Ideal for aerospace applications ▸Primer required	Red	100:0.5	880,000	58	830	120%	440	4.3 @ 1000 Hz	45 min.	24 hrs
RTV615-1P RTV615-1G	1 Pint 1 Gallon	Flowable	▸**Optically clear** ▸Addition cure ▸**Ideal for solar cell potting** ▸Primer required ▸FDA approved	Optically clear	10:1	4000	44	920	120%	500	2.7 @ 1000 Hz	4.0	6 – 7 days (15 min. @ 150°C)
RTV630-1P	1 Pint	Flowable	▸**Very high strength** ▸Addition cure ▸**Exceptional deep section curing** ▸Primer required	Blue	10:1	150,000	60	820	250%	450	3.5 @ 1000 Hz	4.0	7 days (15 min @ 150°C)

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