

# Section 19: Chemicals

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# Chemicals - Cleaners & Degreasers



## General Duty Defluxer

A blend of advanced solvents and alcohols making it an excellent defluxer which is safe on most plastics and rapidly evaporates. The flux remover dissolves type R, RMA, SA and most no-clean fluxes. Can be used to remove light oils, silicones, waxes and similar contaminants. Available in 4 oz. aerosol with brush attachment included.



Part # RX1900-4

## Isopropyl Alcohol General Purpose Cleaner

Non-ozone depleting. Safe on plastics. Rapidly evaporating, zero residue and non-corrosive. Good for use on tape head cleaning, removal of fluxes and oils.



Part #	Description
RX1500-16	16 oz. plastic bottle
RX1500-100	100 pre-saturated wipes in pop up dispenser

## Electronics Degreaser and Wash

A blend of advanced solvents which quickly and safely removes dirt, grease, particulates and other contaminants from electronic/electrical parts and equipment. Safe on most plastics. Universal cleaner. Non aggressive. Improved formulations. Available in 20 oz. aerosol.



Part # RX200-20

## Electronics Contact Cleaner, Degreaser and Wash

A blend of advanced solvents forming a fast acting cleaner for use on electrical/electronic contacts and controls. It reduces arcing and noise caused by oxidation and other contaminants, which prevent good electrical continuity. Evaporates quickly and leaves no residue. Safe on most plastics. Available in a 20 oz. aerosol.



Part # RX400-20

## Electronics Contact Cleaner with Lube

A fast acting cleaner with lube for use on electronic/electrical contacts and controls. Reduces arcing and noise caused by oxidation and other contaminants. Not recommended for acrylic, polystyrene or polycarbonate materials. Formulated to penetrate and flush away grease, dirt, oil, dust and oxidized surface metals leaving a thin protective coating of silicone to lubricate and protect against corrosion.



Part #	Availability
RX500-12	12 oz. aerosol
RX500-6	6 oz. aerosol

## Heavy-Duty Cleaning Solvent

A strong cleaning and degreasing agent. Effective in removing contaminants from a broad range of equipment and parts. Leaves no residue. Available in 20 oz. aerosol.



Part # RX1400-20



## Computer Glass and Enclosure Cleaner

Cleans, polishes and provides antistatic protection for computer terminal CRT display screens and other glass and plastic surfaces. Nonstaining, nonstreaking and fast drying. Cleans scopes, dials, and other read-out faces. Do not use on plastic coated or nylon mesh antiglare screens. Safe for use on most materials and surfaces not harmed by water. Safe on most plastics. Strong foaming action. Removes film and nicotine. Available in 18 oz. aerosol.



Part # RX1800-18

## Label and Adhesive Remover

A specially formulated, hydrocarbon cleaner that safely removes labels and adhesive gums from equipment and products. Effectively removes gummy residue, labels, stickers, ink marks and other contaminants. Safe for use on most plastics.



Part #	Description
RX2600-P	Pen
RX2600-6	4.5 oz. aerosol

## Electronics Wash Cleaner

General purpose wash for electronic and electrical equipment. Wetting and penetrating action removes oxidation, dirt, grease and other contaminants. Cleans and degreases inaccessible areas and penetrates cracks and crevices. Safe for use on most plastics, paints and elastomers. Leaves no residue. Available in 12.5 oz. aerosol.



Part # RX3200-12



## Projection Tube Coolant

Designed for use in electronic cooling applications as a replacement for heat transfer fluid in projection tubes.



Part #	Availability
803-250ML	8 oz. liquid
803-500ML	16 oz. liquid

## Super Contact Cleaner Pen

Protects, lubricates, and deoxidizes ic's, contacts, jacks, connectors, switches, relays, plugs, controls, batteries, and potentiometers. Improves conductivity on all metals. Eliminates oxidation for years. Protect gold for life. Reduces contact scrubbing. Reduces connection, wear, and abrasion failures. Safe on plastics. Available in 0.34 oz. pen.



Part # 801B-P

## Silver Conductive Epoxy

This two part silver epoxy offers high electrical conductivity and strong conductive bonding. Use in place of traditional soldering on heat sensitive components. Good for repairing defective traces and creating jumpers on boards. Can be used as an effective heat sink adhesive. This Conductive Silver Epoxy comes in two 7g syringes.



Part #	Availability
8331-14G	14 g (0.35 oz)
8331-454G	454 g (1 lb)

# Chemicals - Cleaners & Degreasers



## NPB Heavy Duty Cleaner Degreaser

Use when a non-flammable extremely aggressive cleaner degreaser is required, and toxicity is not a concern. A cost effective 141B replacement. For use in exactly the same application as 827B, but where non-flammable is a requirement. Avoid inhalation. Respirator recommended. Suitable for use in vapor degreasers. Suitable for use as a cleaner degreaser, contact cleaner, or flux remover. Cleaner degreasers are extra effective with M.G. Chemicals' Hog Hair Cleaning Brushes.



Part #	Availability
4112-340G	12 oz. aerosol
4112-20L	5 gallon liquid
4112-200L	50 gallon liquid

## HFE Super Cleaner Degreaser

A reformulated HFE blend with a newly developed solvent that maintains the cleaning power, non-flammability, non-conductivity, and environmental friendliness while dramatically reducing the cost. For removing flux, greases, oils, oxides, silicones, carbon, dirt, smoke film and grime, where a non-flammable, non-conductive solvent is required. Test for plastic compatibility before use. If sprayed too liberally, liquid left behind may separate and become flammable. Extra effective with the use of M.G. Cat.#'s 852 & 853 Hog Hair cleaning brushes. Available in 16 oz. aerosol.



Part # 4120-450G

## Audio/Video Head Cleaner

Cleans and restores sensitive magnetic and optical read/write heads. Removes nicotine, tape residues, metallic oxides, carbon deposits, oils and dirt. Ozone safe. Zero residue. Safe on plastics.



Part #	Availability
407C-1L	34 oz. liquid
407C-250ML	8.8 oz. liquid
407C-340G	12 oz. aerosol

## Epoxy and Adhesive Cleaner

Very effective for cleaning up work area and mixing equipment of uncured epoxies. Just spray onto cloth or paper towel and wipe. Human and environment safe. Low odor. Slow evaporator. Safe on most plastics. Zero residue. Biodegradable. 17 oz. trigger pump.



Part # 8328-500ML

## Thinner/Cleaner Solvent

For thinning M.G. Chemicals Coatings up to 50%. Also use as a cleaner for cleaning workplace and equipment after using conformal coatings. Fast evaporating. Highly flammable.



Part #	Availability
435-1L	1 quart liquid
435-55ML	2 oz. liquid
435-4L	1 gal. liquid



## Nu-Trol Control Cleaner

Use when cleaning and lubricating controls. 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. Fast dry. Static free. Safe on plastics and elastomers. Mineral oil lubrication.



Part #	Availability
401B-140G	5 oz. aerosol
401B-340G	12 oz. aerosol

## Glass Cleaner

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. Available in 18.5 oz. aerosol.



Part # 825-500G

## Heavy Duty Cleaner Degreaser

Use when an aggressive cleaner degreaser is required and plastic compatibility or flammability is not a concern. Great for removing heavy oils and greases, burnt on flux, ionic residues, and difficult to remove soils. Very effective at cleaning and degreasing the solder side (non component) of PC boards. Extra effective with M.G. Cat. #'s 852 & 853 Hog Hair Cleaning Brushes. Aggressive cleaner. Cost effective. Test on plastics before using.



Part #	Availability
827B-1L	1 quart liquid
827B-20L	5 gallon liquid
827B-425G	15 oz. aerosol
827B-4L	1 gallon liquid

## Label and Adhesive Remover

Effectively removes adhesives and sticker residues. Newly formulated for improved performance on ink removal. Pleasant odor makes product easy to work with. Safe on plastics. Available in 5 oz. aerosol.



Part # 836-140G

## Safety Wash Cleaner Degreaser

A special blend of ethyl alcohol, Isopropanol and ethyl acetate. Strong enough to clean grease, oil, smoke, ink, organic and inorganic soils. An excellent choice when a cleaner slightly more aggressive than IPA is needed.



Part #	Availability
4050-1L	33 oz. liquid
4050-20L	5 gallon liquid
4050-4L	1 gallon liquid
4050-525G	18.5 oz. aerosol
4050-500ML	17.5 oz. liquid



# Chemicals - Cleaners & Degreasers



## Isopropyl Alcohol Cleaner

A great general-purpose cleaner degreaser. Also effective as a flux remover. Perfect for use with fiber optics. Extra effective with M.G. Chemicals' Cat. #'s 852 & 853 Hog Hair cleaning brushes. Also available in convenient 5 x 8 presaturated wipes. 99.953% pure anhydrous alcohol. Safe on plastics. Low toxicity. Contains no ozone-depleting substances. New aerosol format complies with California Air Resource Board VOC limits. Tri-lingual labeling.



Part #	Availability
824-1L	1 quart liquid
824-4L	1 gallon liquid (one per box)
824-W	Presaturated wipe (individually wrapped, 50 in jar)
824-1G	1 gallon - packaged 4 gallon per UN carton
824-20L	5 gallons
824-450G	450 gram aerosol
824-100ML	125 ml
824-500ML	17 oz. liquid
8241-20L	5 gallons, 70% IPA and 30% water

## Cleaner Degreaser - Immersion Super Solvent

Use when immersion cleaning or wipe cleaning. Being very human safe and biodegradable makes this a very environmentally friendly choice. Strong enough to easily strip most conformal coatings, uncured epoxies and adhesives, oils and greases. Great for cleaning parts or tools. Low flammability. Extremely slow evaporation. Safe on most plastics. Low toxicity. Bio-degradable. Available in 34 oz. liquid.



Part # 8260-1L

## Electrosolve Contact Cleaner

Use when a zero residue contact cleaner is required. 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. Chemicals Cat. #'s 852 & 853 Hog Hair brushes. Fast dry. Safe on plastics. Zero residue.



Part #	Availability
409B-140G	5 oz. aerosol
409B-340G	12 oz. aerosol

## 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. Safe on plastics. Meets Bellcore spec. RT-NWT-00078.



Part #	Availability
801B-100ML	4.2 oz. liquid
801B-125G	4.5 oz. aerosol

## Contact Cleaner With Silicones

Cleans and protects with electronic grade silicones for lubrication. Suitable for use on tuners, switches, locks, contacts, office equipment, keyboards, plastic parts, mold releases, battery terminals, ignition systems, rubber gaskets, and telescoping antennas. Safe on plastics. 100% ozone safe. Variable valve allows user to control rate of flow. Flammable-do not use on live circuits.



Part #	Availability
404B-140G	5 oz. aerosol



## Contact Cleaner With Silicones (cont.)

Part #	Availability
404B-340G	12 oz. aerosol
406B-45G	16 oz. aerosol



## Big Bath3 Contact Cleaner Degreaser

Big Bath3 is a non-flammable general purpose cleaner/degreaser. It is non-Ozone depleting (contains no HCFC's or CFC's) and replaces cleaner/degreasers containing HCFC 141b. Big Bath3 will dissipate moisture and is safe on some plastics. Test for compatibility with sensitive plastics. Incompatible with ABS, PS, and Lexan. Can be used on energized low voltage circuits.

Part # 19-905

## Big Bath3 Contact Cleaner

Big Bath3 Contact Cleaner is the replacement choice for HCFC 141b cleaners (contains no HCFC's or CFC's). It is non-flammable, non-ozone depleting, and is safe on some plastic. This non-residue cleaner is effective on switches, PC boards, motors, electrical and electronic components. Big Bath3 helps dissipate moisture, and is fast drying.

Part #	Description
19-912	12 oz. aerosol
19-913	16 oz. aerosol
19-907	16 oz. anti-static aerosol

## Dry Kleen

A dry contact cleaner formulated to clean all electrical controls, contacts, relays and other components where oil and grease are not desired. Leaves no deposits. Will not damage electrical parts when used properly. 16 oz. aerosol.



Part # 19-8669

## Component Bath

A non-flammable and quick evaporating general use cleaner/degreaser for removing dirt, oil, grease and fluxes from electronic and electrical contacts in switches, motors, PC boards, etc. Non-residual and formulated to dissolve contaminants.



Part #	Description
19-624	22 oz. aerosol
19-901	16 oz. aerosol

## GC Bath

Formulated with hydrocarbon/alcohol as a heavy duty cleaner/degreaser. Can be sprayed on the surface to break down, wash away, and clean grease from equipment, floors, work areas, engines, metal parts and any area needed to be cleaned. Removes adhesive and adhesive over spray from surfaces. Test for compatibility with sensitive plastics. Formulated with no chlorinated solvents and thus has no ozone depleting chemicals. 10 oz. aerosol.



Part # 19-725

# Chemicals - Cleaners & Degreasers



## Jiffy Bath

Consists of hydrocarbon solvents. Balanced ratio of cleaning solvents to lubricating and protecting ingredients. Contains silicone oils which will not oxidize and will remain active as protective coating and lubricating agent for years.



Part #	Description
19-638	4 oz. aerosol
19-640	10 oz. aerosol

## Glass and Plastic Cleaner

Wipes dirt, dust and grime from all glass and plastic surfaces without leaving streaks or dulling residue. Contains grease-cutting ammonia. 14 oz. aerosol.



Part # 10-9082

## DE-OX-ID

Solventless, light oil based contact treatment compound with active ingredients to counteract oxidation. Lowers contact resistance, inhibits arcing, lubricates and protects against corrosion. For use on connectors, sockets, potentiometers, switch contacts, battery connections, telescoping antennas, relay and thermostat contacts. Apply sparingly on dirty, dusty and heavily oxidized contacts.



Part #	Description
19-1902	2 fl. oz. bottle
19-1906	4 oz. aerosol



## Isopropyl Alcohol (Anhydrous)

This extremely pure alcohol is frequently the recommended cleaner by manufacturers of tape heads, disc drives, etc. Dissolves and removes oxides from recording heads, also a degreaser. Leaves no residue. This is not an aerosol, but an aerosol-style can with a screw on top. Suggested for use with swabs, clean cloth or by immersion or trigger sprayer.



Part #	Description
10-1507	16 fl. oz.
10-1507-G	1 gallon

## VCR/Magnetic Head Cleaner

Removes dust, dirt and oxide from record and playback heads on VCR's, cassette decks and computer drives. Evaporates quickly and leaves no residue.



Part #	Description
19-5302	6 fl. oz. non-aerosol
19-5302-G	1 gallon
19-5304	4 fl. oz. aerosol

## GC NBP<sup>3</sup> Cleaner and Degreaser

GC NPB3 – Cleaner and Degreaser is an aggressive cleaner used for removing a broad range of contaminants and heavy soils. Highly recommended for metal cleaning. Contains no HCFC's or CFC's and is non-ozone depleting. Is safe on most surfaces except polycarbonate, polystyrene, ABS and acrylic materials. (To insure complete compatibility, test before use.)

Part #	Description
19-801	12 oz. aerosol
19-802	16 oz. aerosol

# Chemicals - Duster & Freeze



## Jet Air Cleaner

A general purpose, high pressure, compressed gas which removes dust, lint, oxide particles and other dry contaminants from hard-to-reach places. Completely dry, inert, nonflammable and nonabrasive. CFC and HCFC free.



Part #	Description
RX1100-10	10 oz. aerosol
RX1100-12	12 oz. aerosol

## Antistatic Circuit Refrigerant

An inert, high-purity freezing agent which cools instantly, with very little spray. It protects static sensitive devices from potential damage caused by electrostatic charges. Safe to use on most rubber, polymers and metals. Vaporizes completely, is nonflammable, non-conductive and does not leave a residual film. CFC and HCFC free. Hot-cold intermittent testing of electronic components. Rapid detection of defective parts. Locates hairline cracks in PCBs. Protects parts during soldering. Cold testing of prototype circuits. Minimal static voltage generation. Freezes small areas to -62°F (-52°C). Cools molds quickly; rapid removal of adhesives. 10 oz. aerosol.



Part # RX100-10



## Super Duster 152a

Use for removing dust, lint and foreign particles. Not designed for use near ignition sources. For such circumstances, use Super Duster 134 (No. 402A). Zero residue. Variable valve allows greater user control. Ozone safe. Non-flammable gas. Caution: Do not tilt during use as flammable liquid may be dispensed. A non-flammable vapor is dispensed while the can is sprayed upright.



Part #	Availability
402B-340G	12 oz. aerosol
402B-450G	16 oz. aerosol

## Super Duster 134 Plus

Removes microscopic dust, lint and 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. 100% HFC 134A gas. Ozone safe. Non-flammable. Non-conductive. Zero residue. Variable valve allows greater user control.



Part #	Availability
402A-140G	5 oz. aerosol
402A-285G	10 oz. aerosol
402A-450G	16 oz. aerosol
402AR	10 oz. aerosol





# Chemicals - Duster & Freeze



## Super Cold 134 Plus

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. Chills to -51°C (-60°F). 100% HFC 134A gas. Ozone safe. Non-flammable. Non-conductive. Zero residue. Variable value allows greater user control.



Part #	Availability
403A-285G	10 oz. aerosol
403A-400G	14 oz. aerosol



## Air Jet®

Formulated for the dusting and cleaning of components and equipment. Contains no flammable additives. Used for blowing dust, dirt and residue out of hard to reach places without scratching. No ozone depleting chemicals. Anti static formulation minimizes the risk of electrostatic damage to sensitive components.



Part #	Description
19-8475	12 oz. aerosol
19-8475-10	10 oz. aerosol



## Air Jet® (cont.)

Part #	Description
19-8475-SF	12 oz. anti-static aerosol
19-8508	8 oz. aerosol

## Freeze Mist

A refrigerant spray used to locate thermal intermittents in electronic components such as capacitors, resistors and semi-conductors. Great for removing chewing gum from fabrics, freezing adhesives for easy removal, protecting heat sensitive components during soldering or for thermal fitting metal parts. The flow control trigger nozzle enables the user to apply the product with pinpoint accuracy and reduce product usage. Contains no ozone depleting chemicals. Anti static formulation minimizes the risk of electrostatic damage to sensitive components.



Part #	Description
19-8410	12 oz. aerosol
19-8410-10	10 oz. aerosol
19-8410-6	6 oz. aerosol
19-8410-SF	12 oz. anti-static aerosol

# Chemicals - Lubricants



## Silicone Lubricant

A multi-purpose, silicone lubricant that provides a thin, non-staining protective barrier. The rapidly penetrating formula eliminates sticking, squeaking, and seizing. Safe on most plastics and paints. Use on general purpose, waterproofs and non-staining. 14 oz. aerosol.



Part # RX2200-14



## Silicone Lubricant

A multi-purpose, silicone lubricant that provides a thin, non-staining protective barrier. The rapidly penetrating formula eliminates sticking, squeaking, and seizing. Safe on most plastics and paints. Use on general purpose, waterproofs and non-staining. 14 oz. aerosol.



Part # 8472-125G

## 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. Available in 7 grams (0.25 oz.) syringe.



Part # 8463-7G

## 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". Meet MIL S-8660. Broad temperature range (-70°F to 400°F). Excellent dielectric properties. Prevents high voltage arcing.



Part #	Availability
8462-85ML	85 ml (3 oz.) tube
8462-1P	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.



Part #	Availability
8461-85ML	85 ml (3 oz.) tube
8461-140G	5 oz. aerosol
8461-1P	1 pint tub

## 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.



Part #	Availability
846-80G	3 oz. tube
846-1P	1 pint tub



## Loctite® Spray Silicone

This all purpose lubricant is great for many household uses. It will not stain or discolor. It provides an environmentally safe lubricant for locks, hinges, garage door openers, and many other uses. 10.25 oz.



Part # LT-30809



# Chemicals - Lubricants



## Monster Wipes

Cleans dirt, grease, lube and grime. Pre-moistened wipes with sealing, moisture retaining canister. Extra-large towel for even the biggest jobs. Non-scratching, textured scrubbing side for cleaning with soft & smooth wiping surface on opposite side. Infused with natural hand moisturizers and vitamin E to soften rough skin. Durable heavy duty fabric scrubs without tearing.



Part # 38-500

## Aqua-Gel® CW Cable Pulling Lubricant

Polymer-based, cold-weather formula remains stable to -25°F (-32°C). Safe to use on all cable types. Cleans up easily with soap and water. Dries to a semi-fluid film. Clings to cable throughout long pulls. Can be diluted with water to customize viscosity. Non-toxic, non-flammable and non-corrosive.



Part #	Description
31-291	1 gal. jug
31-295	5 gal. bucket
31-298	1 qt. squeeze bottle

## Aqua-Gel® IIP Cable Pulling Lubricant

Features the same qualities as Aqua-Gel® II Cable Pulling Lubricant with a lower viscosity. Pourable formula clings to cable. Compatible with all cable types. Cleans up easily with soap and water. Non-toxic, non-flammable and non-corrosive.



Part #	Description
31-421	1-Gal. jug
31-425	5-Gal. bucket
31-435	55-Gal. drum

## ClearGlide™ Wire Pulling Lubricant

Clear and colorless. Exceptional lubricity for super-fast pulls. Polymer-based formula. Safe to use with all cable types. Remains stable over wide temperature range - usable from 30°F to 180°F (-1°C to 82°C). Dries to a semi-fluid film that won't clog conduit. Clings to cable throughout long pulls. Easy to apply by hand, brush or pump. Non-toxic, non-flammable and non-corrosive.



Part #	Description
31-381	1-Gal. bucket
31-385	5-Gal. bucket
31-388	1-Qt. squeeze bottle
31-389	6-pack of 4 oz. bottles

## Yellow 77® Plus Wire Pulling Lubricant

Rapid Glide™ additive provides greater lubricity than other wax-based lubricants. Safe to use with all cable types. Remains stable in high temperatures - usable from 30°F to 190°F (-1°C to 88°C). Dries slowly to a thin, non-conducting film that won't harden in conduit. Clings to cable throughout long runs. Easy to apply by hand or with pump. Creamy texture applies easily and uniformly. Homogeneous blend requires no mixing. Won't dry out - surface coat forms to control evaporation. Environmentally safe - non-toxic, non-flammable and non-corrosive.



Part #	Description
31-391	1-Gal. bucket
31-395	5-Gal. bucket
31-398	1-Qt. squeeze bottle



## Yellow 77® Wiring Pulling Lubricant

Wax-based formula. Safe to use with most cable types except low-density polyethylene and semi-conducting jackets. Won't breakdown or separate after repeated exposure to freezing temperatures. Dries to a thin, non-conductive film that won't clog conduit. Clings to cable throughout long pulls. Applies easily and uniformly. Homogeneous blend requires no mixing. Won't dry out - surface coat forms no control evaporation. Non-toxic, non-flammable and non-corrosive.



Part #	Description
31-350	1 qt container
31-351	1 gal pail
31-355	5 gal pail
31-358	1 qt squeeze bottle
31-365	55 gal drum

## Aqua-Gel® II Cable Pulling Lubricant

Polymer-based formula provides maximum tension reduction in high-stress electrical and communications cable-pulling operations. Compatible with all cable types. Cleans up easily with soap and water. Remains stable over wide temperature range - usable from 28°F to 180°F (-2°C to 82°C). Dries to a semi-fluid film that won't clog conduit. Clings to cable throughout long pulls. Non-toxic, non-flammable and non-corrosive.



Part #	Description
31-371	1 gal pail
31-375	5 gal pail
31-376	1 qt bag (12 bags per pail)
31-377	1/2 gal bag (6 bags per pail)
31-378	1 qt squeeze bottle
31-3855	55 gal drum



## Sili-Spray

Quality silicone lubricant. Handy aerosol features adjustable 3-way valve. Dispenses lubricating film either light, medium, or heavy according to need. Leaves no residue buildup. Ideal for home, office, workshop, hinges, slides, and other moving parts on automobiles, boats, appliances, toys and drawers (wooden types). May be painted over. 4 oz. Net Wt. [113.4 gms.] Aerosol

Part # 19-600



## Why Use Lubricants?



- ✓ To provide a moisture barrier or seal
- ✓ Protect high performance bearings, joints & gears under sliding and rolling friction conditions
- ✓ Improve electrical connections
- ✓ Corrosion protection
- ✓ EMI shielding applications

# Chemicals - Coatings, Corrosion Inhibitors



## Green Overcoat Pen

Protects printed circuit boards against moisture, corrosion, and thermal shock. Protects and insulates electrical and electronic components and assemblies, including generators, motors, transformers, relays, and solenoid coils. Convenient pen applicator for precision work. Available in 0.16 oz. pen.



Part # 4190-GP

## Conformal Coating Stripper

Removes protective coatings, including epoxy, urethane, silicones, and acrylics. Also removes carbon, tar, adhesives, rubber, and some plastics. Extra strength. • abNon-flammable. Non-drip (gel type). Safe on metals. Avoid contact with skin. Available in 3.4 oz. liquid.



Part # 8310-100ML

## Red Insulating Varnish

Dielectric Strength (dry): 3000 V / mil. 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.



Part #	Availability
4228-55ML	2 oz. liquid
4228-1L	1 quart liquid
4228-4L	1 gallon liquid

## Super Corona Dope

Dielectric Strength : 4100 V / mil. Useful 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.



Part #	Availability
4226-55ML	2 oz. liquid
4226-1L	1 quart liquid
4226-4L	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 resistance of 0.15 ohms/cm. 1.6 kg liquid.

Part # 843-900ML

## Urethane Conformal Coating

Ideal for extreme chemical conditions. 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. # 435-1L. Thin up to one half part thinner to one part coating.



Part #	Availability
4223-4L	1 gallon liquid
4223-55ML	2 oz. liquid
4223-1L	1 quart liquid
4223-20L	5 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 a resistance of 0.25 ohms cm.



Part #	Availability
841-900ML	4 lbs
841-1G	1 gallon
841-340G	12 oz. aerosol

## 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. # 435-1L Thin up to one half part thinner to one part coating.



Part #	Availability
422-1L	1 quart
422-20L	5 gallon liquid
422-4L	1 gallon liquid
422-55ML	2 oz. liquid
422A-340G	12 oz. aerosol
422A-P	Pen

## Connector Coating

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 -34C° to 93°C (-30F° to 200°F).



Part #	Availability
4229-55ML	2 oz. liquid
4229-1L	33 oz. liquid
4229-4L	1 gallon liquid

## 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. # 435-1L Thin up to one half part thinner to one part coating.



Part #	Availability
419B-1L	1 quart
419B-20L	5 gallon liquid
419B-340G	12 oz. aerosol
419B-4L	1 gallon liquid
419B-55ML	2 oz. liquid



# Chemicals - Coatings, Corrosion Inhibitors



## Red Insulating Varnish

Alkyd-based compound, especially resistant to environmental extremes including oils, water and most acids and alkalis. Retains its high dielectric strength even if wet and is, therefore, especially adaptable to the insulation of electrical and electronic components which may be operated in a very humid climate and up to 250°F (121°C). For general insulation of coils, transformers, motor windings and for all-around protection against oxidation and atmospheric attacks.



Part #	Description
10-9002	2 fl. oz. bottle with brush
10-9008	8 fl. oz. can

## Insulating Coating

Heavy-bodied, black insulating coating which replaces insulating tape in applications where wrap-around tape could not readily be applied. This compound dries quickly to a strong pliable finish that will not crack, peel or chip. It is water and oil proof and may be used outdoors to insulate any electrical terminal, connection or wire splice. Excellent for providing insulation on handles, etc. Voltage rating 700v/mil (min.).



Part #	Description
10-1762	2 fl. oz. bottle with brush
10-1766	16 fl. oz. bottle



## Corona Dope

This lacquer has excellent dielectric, arc and corona resisting properties, and protects surfaces against moisture. Achieved with a quick drying, black lacquer insulating coating, based on a cellulose resin. Temperature range is to 325°F (163°C). This lacquer is used to coat fly-backs, coils, transformers to improve the insulation and weather resistant properties of wire. Dielectric strength is 3,800 volts/mil. min.



Part #	Description
10-4702	2 fl. oz. (59 ml) bottle with brush

## Why Should You Use Coatings?

- ✓ To protect all electrical and electronic components.
- ✓ Use for everything from transformers to circuit boards.
- ✓ Resist arcing when voltages jumps from one surface to another.
- ✓ Resist environment & physical forces such as mold, water, solvents, static discharge & scratching.

# Chemicals - Thinners & Solvents



## HFE Solvent

Use when requiring an absolute 100% non-flammable, zero toxicity, or when requiring a cleaner degreaser that is both non-flammable and safe on plastics. Cleans energized circuits, contacts, motors and other electronic equipment. A TF Solvent replacement. Approved by SNAP without restrictions. Excellent for use with Vapor Degreasers and Ultrasonics. Extra effective with the use of M.G. Chemicals Cat. #'s 852 & 853 Hog Hair cleaning brushes. 100% non-flammable and 100% non-conductive, and non-toxic. 10.6 oz. aerosol.



Part # 411-300G



## Polystyrene Q-Dope Thinner

For thinning polystyrene base coil dopes and cements. Can also be used for cementing polystyrene parts. 2 fl. oz. (59 ml) bottle.



Part # 10-4102



## Radio-TV Cement Solvent

Fast acting solvent formulated for use in speaker repair. Dissolves cement on speaker cones, spiders, frames, voice-coils. May also be used as a thinner for all lacquer type cements.



Part #	Description
10-312	2 fl. oz. bottle
10-318	8 fl. oz. bottle
10-320	16 fl. oz. bottle
10-321	1 gallon can

## Paint Thinner

All purpose mineral spirit type thinner and solvent for paint and varnish base products. 2 fl. oz. (59 ml) bottle.



Part # 10-6702

## Print Kote Solvent

A solvent to remove silicone and other types of protective coatings from PC boards. Required when modifying PC boards or replacing components where the protective coating interferes with the desoldering and resoldering operation. Availability - 2 fl. oz. bottle.



Part # 22-209



# Chemicals - Adhesives & Sealants



## 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. Available in 2 oz. liquid. Two free applicator brushes included.



Part # 8337-55ML

## Rubber Keypad Repair Kit

This easy to use kit permanently repairs rubber keypads. Kit comes with everything you will need: stir sticks, applicator swabs, contact cleaner and two part solutions. Restores electrical conductivity to worn carbon contacts. Typical applications include: remotes for TV and stereo, home security keypad, garage door opener keypad, etc.

Part # 8339

## Encapsulating and Potting Epoxy Compound

Protects from impact, vibration, heat, shock, conductivity, moisture, abuse, chemicals and analysis. Provides technology security. Excellent adhesion to most surfaces. Non conductive and electrical insulator. Non porous, water and chemical resistant. Extremely impact resistant. Affords total security, once cast it can not be removed easily. Excellent machining properties. Suitable for explosion proof components (spark arresting). Less than half of 1% shrinkage during cure. Easy and simple to mix. Long pot life.



Part #	Description	Availability
832B-375ML	Black epoxy	375ml (12 oz.) kit
832B-3L	Black epoxy	3 liter (0.8 gal) kit
832C-375ML	Clear epoxy	375 ml (12 oz.) kit
832C-3L	Clear epoxy	3 liter (0.8 gal) kit
832B-60L	Black epoxy	60 liter (15 gallon) kit
832C-60L	Clear epoxy	60 liter (15 gallon) kit
832FRB-375ML	Flame retardant epoxy	375 ml (12 oz.) kit
832FRB-3L	Flame retardant epoxy	3 liter (0.8 gal) kit
832FRB-60L	Flame retardant epoxy	60 liter (15 gallon) kit
832TC-450ML	Thermally conductive epoxy	450 ml (16 oz.) kit
832TC-2L	Thermally conductive epoxy	2 liter (0.5 gal) kit
832TC-40L	Thermally conductive epoxy	40 liter (10 gallon) kit
832HT-375ML	High temperature epoxy, max temp 275°C (527°F)	375 ml (12 oz.) kit
832HT-3L	High temperature epoxy, max temp 275°C (527°F)	3 liter (0.8 gal) kit

## Fast Set Epoxy

Provides 2300 psi bonding strength to paper, wood, metal and ceramics. Conveniently packaged in a 25ml dual syringe with a twist off cap for easy mixing. It gives good resistance to water, salt spray, inorganic acids and bases and most organic solvents.



Part # 8332-25ML

## Super Contact Cement

Quick drying, water proof, clear, and vibration-resistant bond with minimal shrinkage. For shop, industry, home and hobby use. Available in 2 oz. liquid.



Part # 8336-55ML



## Super Glue Gel

Super Cyanoacrylate Adhesive has been formulated to quickly bond plastics, metal and ceramics. It offers excellent strength characteristics. Available in 3 ml (0.1 oz.) liquid.



Part # 8334-3ML

## Super Glue Liquid

This Cyanoacrylate adhesive has been formulated to quickly bond plastics, metal, and ceramics. It offers excellent strength characteristics.



Part #	Availability
8333-3G	3 ml 0.1 oz. liquid
8333-20G	20g (1 oz.) liquid

## Threadlocking

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



## Low Strength

For fasteners up to 1/4". Low strength threadlocking. One drop prevents loosening and ensures a secure hold. Pick the strength you need, to stop corrosion, seal threads, improve torque control, reduce galling, and minimize inventories. Only cures in the absence of air (anaerobic) making cleanup of excess product easy. Threadlockers can drive reliability up and costs down. Threadlockers provide lubricity to achieve controlled torque during assembly and operation. They hold critical clamp load pressures under the most severe environments.

Part #	Availability
8701-10ML	0.2 oz. liquid
8701-50ML	2 oz. liquid
8701-10ML-C	0.2 oz. liquid in clamshell

## High Strength

Ideal for fasteners up to 1". High strength, permanent threadlocking. One drop prevents loosening and ensures a secure hold. Pick the strength you need, to stop corrosion, seal threads, improve torque control, reduce galling, and minimize inventories. Only cures in the absence of air (anaerobic) making cleanup of excess product easy. Threadlockers can drive reliability up and costs down. Threadlockers provide lubricity to achieve controlled torque during assembly and operation. They hold critical clamp load pressures under the most severe environments.

Part #	Availability
8703-10ML	0.2 oz. liquid
8703-50ML	2 oz. liquid
8703-10ML-C	0.2 oz. liquid in clamshell

# Chemicals - Adhesives & Sealants



## Threadlocking (cont.)

### High Strength Wicking Grade

For fasteners up to 1". High strength, wicking grade Ideal for post application to pre assembled fasteners. Penetrates threads by capillary action. Secures screws, bolts, seal welds, porous metal parts. One drop prevents loosening and ensures a secure hold. Pick the strength you need, to stop corrosion, seal threads, improve torque control, reduce galling, and minimize inventories. Only cures in the absence of air (anaerobic) making cleanup of excess product easy. Threadlockers can drive reliability up and costs down. Threadlockers provide lubricity to achieve controlled torque during assembly and operation. They hold critical clamp load pressures under the most severe environments.

Part #	Availability
8704-10ML	0.2 oz. liquid
8704-50ML	2 oz. liquid
8704-10ML-C	0.2 oz. liquid in clamshell

### Medium Strength

Ideal for fasteners 3/4" or smaller. General purpose, medium strength, removable. One drop prevents loosening and ensures a secure hold. Pick the strength you need, to stop corrosion, seal threads, improve torque control, reduce galling, and minimize inventories. Only cures in the absence of air (anaerobic) making cleanup of excess product easy. Threadlockers can drive reliability up and costs down. Threadlockers provide lubricity to achieve controlled torque during assembly and operation. They hold critical clamp load pressures under the most severe environments.

Part #	Availability
8702-10ML	0.2 oz. liquid
8702-50ML	2 oz. liquid
8702-10ML-C	0.2 oz. liquid in clamshell

## RTV Silicones

### Adhesive Sealant - General Use

Excellent for insulating, sealing, bonding and formed-in-place gaskets. Can be applied to vertical and overhead surfaces. Not for use in delicate electrical and electronic applications in which corrosion of copper, brass, or other sensitive metals is undesirable. Can be used in food contact applications where FDA regulations apply. Reference CDS4319 "Food Contact Applications", "Silicone Rubber Compounds."



Part #	Availability
RTV102-85ML	3 oz. tube, white, paste
RTV102-300ML	10.1 oz tube, white, paste
RTV103-85ML	3 oz. tube, black, paste
RTV103-300ML	10.1 oz. tube, black, paste
RTV108-85ML	3 oz. tube, translucent, paste
RTV108-300ML	10.1 oz. tube, translucent, paste
RTV112-85ML	3 oz. tube, black, flowable
RTV118-85ML	3 oz. tube, translucent, flowable

### Adhesive Sealant - Non-Corrosive

Non-Corrosive. Bond capacitors, resistors and integrated circuits to PCBs' seals exposed wires, fraying surfaces, and connectors.

Part #	Availability
RTV162-85ML	3 oz. tube, white, paste
RTV162-300ML	10.1 oz. cartridge, white, paste
RTV167-85ML	3 oz. tube, gray, paste, high strength
1035-85ML	3 oz. tube, translucent, paste, fast cure
RTV5818-300ML	10.1 oz. cartridge, translucent, paste, fast cure
RTV6708-85ML	3 oz. tube, translucent, paste, economical

## RTV Silicones (cont.)

### Adhesive Sealants - Special Application

Two part potting compounds. Type RTV615 is optically clear. Excellent for potting solar cells for maximum light transmission and electronic assemblies where component identification is desirable. Type RTV630 is extreme high strength potting where extra durability is required. The high tear resistance and inherent release ability make it well suited to the manufacture of intricate castings, by producing each part exactly to detail.

Part #	Availability/Color
RTV615-1P	1 pint, Optically Clear, flowable, addition cure
RTV615-1G	1 pint, Optically Clear, flowable, addition cure
RTV630-1P	1 pint, 2 Part Potting/Encapsulating Compound

### Potting and Encapsulating Compounds - General Purpose

General purpose potting for electronics. The excellent electrical properties make it a candidate material for both high and low voltage electrical assemblies. Will cure in deep sections. Type RTV12A offers primerless adhesion.

Part #	Availability/Color
RTV11-1P	1 pint, white, flowable, condensation cure
RTV12A-1G	1 gallon, translucent, flowable, condensation cure, RTV12C catalyst required

### Potting and Encapsulating Compounds - Extreme High Temp

Aerospace industry silicones. Ideal for potting and encapsulating in high temperature applications.

Part #	Availability
RTV31-1P	1 pint, red, flowable, condensation cure
RTV60-1P	1 pint, red, flowable, condensation cure
RTV88-1P	1 pint, red, thixotropic paste, condensation cure

### Adhesive Sealant - Thermally Conductive

Type TSE3941 is an excellent high thermal conductivity. 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. Type RTV133 is a high temperature flame retardant silicone.

Part #	Availability
TSE3941-333ML	10.1 oz. cartridge, 1-part, white, paste
TSE3941-150G	5.3 oz. tube, 1-part, white, paste

### RTV Silicone Primers

Primers are formulated for use with RTV silicone rubber adhesive sealants. With most two-part silicones, a primer is required when an adhesive bond is needed between the silicone rubber compound and a non-silicone surface. Type SS4004P help promote adhesion to metals and porous materials. Type SS4120 help promote adhesion to addition cure RTV's and is used where clarity is needed. Type SS4155 is a general purpose primer for use with any RTV.

Part #	Availability
SS4155-1P	1 pint liquid, blue
SS44120-1P	1 pint liquid, optically clear
SS4004P-1P	1 pint liquid, pink



# Chemicals - Adhesives & Sealants



## RTV Silicones (cont.)

### Adhesive Sealant - Thin Section Potting

Excellent for thin section potting, filling small surface voids, self leveling, and protective coating. Non-corrosive (MIL-A-46146A)\* to electronic metals, including copper and brass. Excellent electrical insulating properties. Resistant to heat, cold, moisture, UV, and ozone.

Part #	Availability
TSE397C-100G	3.5 oz. tube, translucent, flowable, fast cure, non corrosive

### Adhesive Sealant - High Temperature

Excellent for insulating, sealing, bonding and formed-in-place gaskets. Can be applied to vertical and overhead surfaces. Not for use in delicate electrical and electronic applications in which corrosion of copper, brass, or other sensitive metals is undesirable.

Part #	Availability
IS806-300ML	10.1 oz. cartridge, red, paste, economical
RTV106-85ML	3 oz. tube, red, paste, FDA approved
RTV106-300ML	10.1 oz. tube, red, paste, FDA approved

### Super Glue Accelerator

Developed as a treating agent for use with M.G. Chemicals Super Cyanoacrylate products (available in liquid or gel). When curing beads or in applications where the adhesive is not between two parts, it will allow for faster uniform curing. The Accelerator will aid the bonding of porous materials such as fabrics or woods. It is useful when bonding acidic surfaces or in low humidity conditions promoting consistent curing times.



Part # 83351



### Contact Cement

This tough fast drying cement is great for bonding or laminating cardboard, ceramic tile, leather, and rubber. It is heat and water resistant. Requires no clamping. 1.5 fl oz.



Part # LT-81524

### DURO Clear Silicone Sealer

This product provides permanent waterproof bonds for sealing and insulation. It withstands heat, solvents, and vibration. It dries clear.



Part # LT-80242

### Glass Glue

This product works well on all glass. It bonds instantly and is dishwasher safe. .07 fl oz tube.



Part # LT-29175

### Handymans Choice

This all purpose non-toxic adhesive sealant is strong, dries clear, water resistant, microwave safe and odor free. Use this product to mend brick, glassware, loose tiles and shoe soles. Two fl oz.



Part # LT-25827

## Loctite Quicktite® Super Glue

This super glue has proven superior performance over ordinary super glues. This works faster and holds stronger than others thanks to a patented additive.



Part #	Description
LT-21309	Super glue liquid .18 oz bottle
LT-26441	Brush-on liquid .18 oz bottle
LT-30379	Super glue gel .14 oz
LT-30622	Super glue liquid .14 oz
LT-82192	Super glue pen .07 oz tube
LT-82196	Super glue gel .07 oz tube

## Loctite® Quick Set Epoxy

Super high strength, waterproof, sets in 5 minutes, and is solvent resistant. Bonds to wood, metal, ceramic, glass, plastic and tile. 1 oz syringe.



Part # LT-81501

## Loctite® Superflex RTV Sealer

These general purpose RTV sealants are usable indoor and out. They seal bond and secure on metal, glass, rubber, and vinyl. They cure at room temperature, and are safe on Electrical wiring. Clear 3 fl oz tube.



Part # LT-30808

## Loctite® Threadlocker

These products lock and seal threaded parts against vibration loosening, corrosion, and rust lock. They may also be used as an anti-tamper indicator. They are available in several grades and put ups.



Part #	Description	Availability
LT-27100	High strength (red) #271	.20 fl. oz (6ml)
LT-24200	Removable medium grade (blue)	20 oz. tube

## Mirror Adhesive Kit

Use this two part kit to attach mirrors to glass, plastic, or metal. Great for attaching mirrors to windshields. .01 oz adhesive and .02 oz primer.



Part # LT-30814

## Plastix Bonder

This advanced plastic repair kit repairs any plastic--Guaranteed No mixing required, just brush the surface with the activator and apply the fast-acting bonding agent. Formulated for vinyl, plexiglass, phenolics, PVC, styrene, acrylic, ABS & others. .10 oz activator and .07 oz bonder.



Part # LT-82565

# Chemicals - Adhesives & Sealants



## Stick' N Seal

This water proof all purpose adhesive bonds all surfaces subjected to water and moisture. Seals leaks, repairs tears, and secures tile. Great on brick, aluminum, fiberglass, pool liners, and rain slickers. One fl oz.



Part # LT-23782

## DURO Quick Gel Super Glue

No run quick gel super glue. Works on wood, metal, rubber, plastics, vinyl, fabrics, and other such materials. The gel works best on porous and vertical surfaces with small gaps. Bonds in 15 - 30 seconds. Two .07 oz. tubes.



Part # LT-81954

## DURO Super Glue

America's favorite traditional super glue. Super strong, bonds in seconds. It is permanent and clear. Bonds in 15 - 30 seconds. Two .07 oz. tubes.



Part # LT-81742

## Adhesive Remover

Safe on all types of surfaces. Sponge applicator for easy application. Convenient built-in scraper tool. Removes all types of adhesive residue: duct tape, masking tape, carpet tape, labels, tar, gum and caulk. Easy to handle bottle. Citrus scent and a built-in scraper top. 5.45 fl. oz.

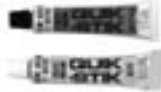


Part # LT-01560



## Quik Stik

Clear, fast curing epoxy adhesive. In view of its short pott life, use is recommended when a single repair must be made and the mixed adhesives can be used within one or two minutes. Cemented items can be safely handled within eight to twelve minutes, with full hardness obtained after several hours. Available in a pkg. of two ½ fl. oz. tubes.



Part # 10-114

## GR-R-RIP

World famous Ethyl Cyanoacrylate rapid bonding adhesive. Bond strength not affected by temperatures from -112°F to 212°F (-80°C to 100°C). 0.075 fl. oz. bottle.



Part # 19-115

## General Purpose Plastic Cement

A solvent-release adhesive with a special Nitrocellulose Lacquer Base. The bond is usually invisible and hard, but not brittle. Adheres especially well to plastics, paper, leather, ceramics and metal. Quickly-drying and waterproof.



Part #	Description
10-327	2 fl. oz bottle with brush
10-323	8 fl. oz bottle with brush



## GC Bond

Thermoplastic adhesive based on synthetic components with unusually strong bonding characteristics to most materials. Produces a water-proof, resilient and long-lasting flexible bond. Light tan in color. Uses range from cementing electronic components to circuit boards and chassis. Sticks well to all metals and glass. Dries in 15 to 30 minutes.



Part #	Description
10-4302	2 fl. oz. bottle with brush
10-4308	8 fl. oz. bottle with brush

## Silicone Rubber Adhesive/Sealant

One-component elastomer cures to a tough, rubbery solid when exposed to moisture in the air. Designed to fulfill industrial and electronic service sealing and bonding requirements, this sealant has excellent adhesive strength, high elongation and outstanding insulation and heat resistance qualities. Develops primerless adhesion to a variety of materials, including metal, glass, most wood, silicone resin, vulcanized silicone rubber, ceramic, natural and synthetic fibers, most plastics and painted surfaces. Resists weathering, vibration and exposure to oil, moisture, ozone and temperatures from sub-zero to 450°F. Cures to a tack-free surface in 20 minutes. 3 fl. oz. tube with dispensing nozzle clear.



Part # 10-150

## Epoxy Glue

Sets in five hours. Provides an exceptionally hard and strong bond. Good dielectric properties. Gray-white in color with fillers added to increase viscosity and make it thixotropic (non-running). May be used to fill gaps or to replace broken sections. Bonds may be over-filled and filed or sanded after curing. Package of two 2 fl. oz. tubes.



Part # 10-347

## GC Potting Epoxy

Black opaque highly filled epoxy used for potting and encapsulating electronic circuits. Use to environmentally protect or conceal circuits. Working time (pott life) is one hour. Mix ratio is 1 to 1. Temperature range is -40°F to 180°F. 2 gallon kit.



Part # 19-824-2G





# Chemicals - Static Control



## AntiStatic Screen Cleaner

Neutralizes and eliminates build up of static electricity. Eliminates static charge from sensitive areas and provides long-term static protection. Spray on and wipe off fingerprints, grease, oils, inks, smoke, nicotine, carbon, organic and inorganic soils. For use on: CRT's, bar code readers, office equipment, ceramics, monitors, terminals, glass. Available in 16 oz. trigger pump.



Part # 4200-500ML



## Static Null

Neutralizes and prevents static electricity in a wide variety of applications. May be used on circuit boards, carpeting, clothing, cabinetry or generators of static electricity. One application lasts for weeks. An excellent maintenance area product for use on test equipment, circuits being serviced and work surfaces. Availability - 8 oz. net wt. aerosol.



Part # 19-1004



## Static-Free High Strength Flux Remover

A powerful Flux Remover that will dissolve and flush away all know fluxes immediately. May cause loss of nomenclature from capacitors or like products. Can discolor some plastics. Will not harm circuit performance. Static-free formulation. Contains Methylene Chloride and Isopropyl Alcohol. Comes in 18 oz. aerosol can.

Part # 19-7522

See Tools Section  
for more  
Anti-Static Products



# Chemicals - Board Etching



## Sodium Persulfate (Copper Etchant)

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



Part #	Availability
4101-1KG	2.2 lb
4101-25KG	55 lbs.

## Photofabrication Kit

Produce printed circuit boards using the Positive Photofabrication method. Contains: One 3"x5" M.G. Chemicals Cat. #603 presensitized single sided PCB, one 4"x6" M.G. Chemicals Cat.# 606 presensitized single sided "PCB", one 6"x6" M.G. Chemicals Cat. #609 presensitized single sided PCB, 418-500ml Developer, a plastic development tray, 415-500ml Ferric Chloride, vinyl gloves, two foam brushes, and an instruction sheet. Additional items required: 416-X exposure kit, 416-E etchant process kit, 416-T laser printer transparencies, and eye protection.



Part # 416-K

## 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.



Part #	Description
416-X	Complete Exposure kit
416-B	Replacement bulb



## Etching Process Kit

### Premium Etching Process Kit

Etch copper clad circuits professionally. Accommodates two 8" x 12" double sided CCB's. 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.



Part # 416-E

### Economy Etching Process Kit

Etch copper clad circuits professionally. Accommodates two 8"x 9" double sided CCB's. 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.

Part # 416-ES

### Etchant Heater - 200 Watt

Replacement heater for Premium Etching Kit (416-E).

Part # 416-H

### Etchant Syphon Hose

Replacement hose for Premium Etching Kit (416-E).

Part # 416-D

## Ammonium Persulphate (Copper Etchant)

Ammonium Persulphate crystals are used as an alternative to traditional ferric chloride to produce a cleaner copper etchant solution. One kilogram of crystals will produce one gallon of etching solution.



Part #	Availability
410-1KG	2.2 lb. powder
410-25KG	55 lb

# Chemicals - Board Etching



## Ferric Chloride (Copper Etchant)

42°C baume copper etchant solution. Ready to use. After exposing and developing process, immerse copper board in solution and agitate until etching action is completed. Can be heated to speed up process.



Part #	Availability
415-1L	34 oz. liquid
415-20L	5 gallon liquid
415-4L	1 gallon
415-500ML	17 oz. liquid

## Liquid Tin

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



Part #	Availability
421-500ml	17 oz. liquid
421-125ML	4.2 oz. liquid

## Copper Clad Boards



### Plain 1/32" Copper Clad Board

A 1/32" laminate with one ounce copper. This flame retardant laminate is translucent in color and made of continuous woven glass cloth impregnated with epoxy resin. Dielectric constant (1MHz) is 4.75. Peel strength (lb/in) is 10.25.

Part #	Type	Approx. size (inches)
586	Single sided - plain	4 x 6
587	Double sided - plain	4 x 6
588	Single sided - plain	6 x 9
589	Double sided - plain	6 x 9
590	Single sided - plain	12 x 12
591	Double sided - plain	12 x 12
596	Double sided - plain	36 x 48

### Plain Copper Clad Board

Developed specifically for the circuit processing industries requirements. Complies with Mil-S-13949H-GFK. Provides ultraviolet blocking and fluorescence when using automated optical inspection (AOI). A 1/16 inch laminate with 1 ounce copper. This flame retardant laminate is translucent in color and made of continuous woven glass cloth impregnated with epoxy resin.

Part #	Type	Approx. size (inches)
503	Single sided - plain	3 x 5
506	Single sided - plain	4 x 6
509	Single sided - plain	6 x 6
512	Single sided - plain	6 x 9
515	Single sided - plain	8 x 10
521	Single sided - plain	12 x 12
550	Double sided - plain	6 x 6
555	Double sided - plain	12 x 12
575	Single sided - plain	24 x 36
576	Double sided - plain	24 x 36
580	Single sided - plain	36 x 48
585	Double sided - plain	36 x 48

### Presensitized Copper Clad Boards (Positive)

Provide high resolution and excellent fine line control. Ideal for prototypes, small production runs and student training.

Part #	Type	Approx. size (inches)
603	Single sided, 1/16"	3 x 5
606	Single sided, 1/16"	4 x 6



## Copper Clad Boards

### Presensitized Copper Clad Boards (Positive) (cont.)

Part #	Type	Approx. size (inches)
609	Single sided, 1/16"	6 x 6
612	Single sided, 1/16"	6 x 9
630	Single sided, 1/16"	8 x 12
687	Single sided, 1/32"	4 x 6
689	Single sided, 1/32"	6 x 9
650	Double sided, 1/16"	6 x 6
660	Double sided, 1/16"	6 x 9
690	Double sided, 1/32"	6 x 9

## 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. Available in 17 oz. liquid.



Part # 418-500ML

## Prototyping Accessories

### Laser Print Transparency Film

8 1/2" x 11" heat stabilized film sheets for use in most laser printers. For use with producing the artwork required within the photofabrication process. Available in 5 sheets.



Part # 416-T

### 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.



Part # 416-RP

### Latex Disposable Gloves

Excellent for use with all corrosive chemicals. Available in 10 gloves.

Part # 416-G



### Dry Concentrate Etchant (Ferric Chloride)

Ferric chloride is the best choice for etching copper PC boards. A dry, powder form - just add to water to make the etching solutions. The 1/4 lbs. package products 1 pint which will etch approx. 200 sq. inches of standard copper board.



Part #	Availability
ER-3	1/4 lb. powder
ER-21	1 lb. powder
ER-22	2 lb. powder

### Negative Acting Liquid Photo Resist

A liquid, spray-on coating in its own spray bottle. When a coated board is exposed to UV light, it is then developed in the ER-8 liquid developer. A remaining etch resist will protect the copper from an etchant bath, thus producing your circuit. Coats approx. 1700 sq. inches. 4 oz. bottle.



Part # ER-71



# Chemicals - Board Etching



## Negative Resist Developer

Will develop the ER-71 Negative Acting Resist; resist areas not hardened via UV light are dissolved away. UV hardened areas remain to resist the etchant. 16 oz. can.



Part # ER-8

## PC Board etching Solution - Liquid Ferric Chloride

One of the most popular and safest etching materials for copper clad boards available. A quart of etching solution will etch approximately 960 sq. inches of PC board. Caution: use only with plastic or glass trays.



Part #	Availability
12-2038	Quart (32 oz.)
12-2039	Gallon (128 oz.)

## PC Board Etching Solution

This ferric chloride solution is one of the most effective and safest etching materials for copper clad PC boards. 6 oz. will etch about 180 sq. inches of PC board. Use only in plastic or glass trays. pH. 1.57.

Part #	Availability
22-237	6 fl. oz. bottle
22-238	32 fl. oz. bottle
22-239	1 gallon container

## Positive Type Developer Concentrate

For developing photo sensitized PC boards coated with positive type etch resist. To be diluted with 9 parts of water to 1 part of developer. 6 oz. will develop 10 to 20 sq. ft. of PC board.

Part #	Availability
22-225	2 fl. oz. bottle
22-226	6 fl. oz. bottle

# Chemicals - Board Repair



## Silver Print Pen

Resistivity: 0.2 Ohm.mil. Excellent for repairing and modifying printed circuits. Quick drying. Durable acrylic base pigmented with high purity silver flakes. EMI/RFTI shielding applications. Convenient microtip pen format allows precision dispensing. Available in 0.3 oz. Microtip Pen.



Part # 8420-P

## Super Shield Silver 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 resistance of 0.01 ohms • cm. Available in 1.6 kg liquid.

Part # 8420-900ML

## Nickel & Silver Print

Excellent for repairing and modifying printed circuits. Quick drying. Durable acrylic base pigmented with high purity nickel flakes. EMI/RFTI shielding applications.



Part #	Availability
840-20G	Nickel Print - 0.75 oz. liquid
840-250G	Nickel Print - 250 grams
842-20G	Silver Print - 0.75 oz. liquid
842-250G	Silver Print - 250 grams

## Silver Print

For PC repair or add-on circuit traces. Pure silver in lacquer based carrier may be brushed on for either conductors or shielding. Connections have equal or better conductivity than copper (0.1 ohms per square). 1 troy oz. bottle.



Part # 22-024

## Nickel Print

A quick drying lacquer-based coating, pigmented with powdered nickel. For repair and modification of printed circuits. Conductivity is 5 to 6 ohms per square. Availability - 2 fl. oz. bottle.



Part # 22-207

# Chemicals - Specialty



## Epoxy Mold Release

For use with all types of epoxies and phenolic resins. No silicones. Available in a 13 oz. can.



Part # 8329-370G

## 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 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. Meets MIL-DTL-47113D.



Part #	Availability
8610-60G	2 oz. jar
8610-1P	2.5 lbs.

## Silicone Heat Transfer Compound

Designed for use in transferring heat away from electrical and electronic devices such as; transistors, power diodes, semi-conductors, ballasts 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. MIL-DTL-47113D.



Part #	Availability
860-150G	5.2 oz. tube
860-1P	2.5 lbs.
860-60G	2 oz. jar
860-4G	0.14 oz. pouch

## Rubber Renue

Rejuvenates and conditions rubber. Rubs off oxidation film. Apply with cloth, brush, or swab. Excellent for use on belts, platens, rollers, rubber parts. Zero residue. Contains no ozone-depleting substances. Fast evaporating.



Part #	Availability
408A-100ML	4.4 oz. liquid
408A-1L	33 oz.
408A-250ML	8.8 oz. liquid

## HTC (High Thermal Conductivity)

Higher thermal conductivity formula has all the same benefits of conventional heat sink greases, plus is exceptionally stable in high humidity applications. Available in silicone and non-silicone versions.



Part #	Description
10-8135	Silicone based, 1 oz. avdp. syringe
10-8135-1	1 lb. jar
10-8120	Non-silicone based, 1 oz. avdp. syringe

## Belt and Drive Non-Slip

Prevents slippage in mechanical or electro-mechanical devices which are driven with cords, belts, pulleys and drives. Restores proper functions on belts and drive pulleys in turntables, record changers and tape recorders, especially where the rubber parts have hardened and/or become slick and cause slippage. Availability - 2 fl. oz. bottle with brush.

Part # 10-8602

## Silicone Compound

Soft, inert silicone grease with excellent dielectric properties. Usable over a wide range of temperatures. Its consistency is vaseline-like and it is white opaque in color. It provides an excellent dielectric coating which excludes moisture and prevents high voltage arcing. Applicable to components in the high voltage section of TV receivers. Protects ignition systems in automobiles and boats, in addition to providing an outstanding corrosion resistant coating on exposed metal surfaces, such as TV antenna terminals as well as general rustproofing. Makes an excellent lubricant for rubber or plastic.



Part #	Description
10-568	1/3 fl. oz. Chem-O-Jector
10-8101	1 fl. oz. tube
10-8102	1 gallon can

## Silicone (Z9)

Industry standard zinc oxide filled silicone heat sink grease for most applications. Will not soften at elevated temperatures or dry out or harden. Meets Mil. Spec. C-47113.



Part #	Description
10-8108	6.5 gms avdp. tube
10-8109	1 fl. oz. tube

# Chemicals - Chemical Accessories



## Hydroentangled Cellulose/Polyester C-Fold Wipes

Extremely low particle generation. Ultra low chemical extractables. No chemical or thermal binders. Resistant to rot and mildew. Extra absorbent, non-raveling, static free, non-abrasive and non-allergenic. Resistant to solvents. Use on clean room maintenance, dislodgement of heavy soils, solvent and aqueous absorbent and static free environments. 48 (9" x 9") wipes.



Part # RX2100-48

## Brushes

### Abrasive Brushes

Part #	Description	Bristle Material	Handle Length/Material	Brush Face (L x W)
850	Excellent utility brush. Great for cutting corrosion. Use for solder surface preparation. Also great for cleaning soldering iron tips.	Stainless Steel	7 3/4" wood	1 3/8" x 7/16"



# Chemicals - Chemical Accessories



## Brushes (cont.)

### Abrasive Brushes (cont.)

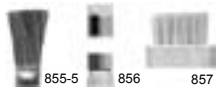


Part #	Description	Bristle Material	Handle Length/Material	Brush Face (L x W)
851	Excellent utility brush. Great for removing oxides and corrosion from connector ends. Burnishes without removing base metal. Also great for cleaning soldering iron tips.	Brass	7 3/4" wood	1 3/8" x 7/16"
858	"No ESD" brush. Burnish contacts without removing base metals. An excellent gold contact cleaner. Great for removing oxides and deposits.	Stainless steel	6.5" stainless steel	1 1/8" x 1/4"

### Non-Abrasive Brushes

Part #	Description	Bristle Material	Handle Length/Material	Brush Face (L x W)
852	Excellent for removing flux and general clean up. Can be used dry or wet. Works well with sticky or crusty materials.	Hog hair	7 3/4" wood	1 3/8" x 7/16"
853	Same as 852	Hog hair	8 3/8" wood	2 1/4" x 1" (large)
859	Same as 852	Horse hair	5 1/4" wood	1 3/8" x 7/16"
845	Ideal for precision application of conformal coatings, adhesives and solvents.	Kanegoat	Polypropylene	3.3" in Length

### Technical Cleaning Brushes



Part #	Description	Bristle Material	Handle Length/Material	Brush Face (L x W)
855-5	Works well for dusting, cleaning with fluids, and general cleanup.	Horse hair	6" tin	1/4" x 3/8"
856	Excellent general cleaning brush with short bristles for heavy duty scrubbing. One end is chiseled to clean tight corners.	Horse hair	4.5" cad plated steel	Double ended (chisel trim) 1/4" x 5/16"
857	Excellent for removing flux and general clean up. Use dry or with fluids.	Hog hair	5" wood, chiseled style	3/4" x 5/16"

### Foam Brush

Replacement foam brush for use with 416-K Photofabrication Kit.



Part # 416-S



### Hydrowipe

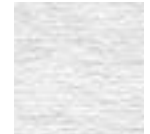
General purpose cleanroom wipe. Pure, versatile, and economical. A super absorbent hydro entangled non woven blend of cellulose and polyester. Available in 100 wipes.



Part # 8282-100

### Optiwipe

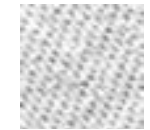
Super Soft Hydroentangled Polyester Fiber. Use to clean optical surfaces, photo processing, lab equipment, and other precision instrumentation. Dimensions 4" x 4". Zero lint. Available in 100 wipes.



Part # 828-4x4

### Twilwipes

Low linting 100% cotton twill weave. Excellent for abrasion-free cleaning and drying. Class 1000 Cleanroom compliant. Static free. Absorbs three times its own weight.



Part #	Availability
829-4x4	100 wipes
829-50	50 wipes

### Presaturated IPA Wipes

Zero residue, water free all purpose cleaning wipe. 99.953% pure anhydrous. Safe on plastics and elastomers. Dimensions are 8" x 5".



Part #	Availability
824W-500	500 wipes
824W-50	50 wipes

### LCD Cleaning Wipes

Clean your most expensive screens with confidence. Gentle formula cleans LCD screens on TVs, laptops, MP3 players and cell phones, as well as plasma screens. Cleans fingerprints, oils and greases, residues, dust and smoke film. The special wipes don't leave lint or streak and will not drip. The resulting antistatic barrier repels dust. Also effective for killing germs on telephones, keyboards, peripherals, or desktops. Available in 90 wipes per tub dispenser.



Part # 8242-T

### Antistatic Foam Over Cotton Swab

Antistatic foam heads over extra absorbent U.S.B. pharmaceutical grade purified cotton. Bonded securely to a 6" birch staff. Compatible with most solvents.



Part #	Availability
812AS-10	10 swabs
812AS-250	250 swabs
812AS-1000	1000 swabs

### Cotton Swabs (Double Headed)

For general and precision cleaning. Low lint, extra absorbent U.S.P. pharmaceutical grade purified cotton bonded on a 6" white birch staff for extra rigidity. Compatible with all solvents.



Part #	Availability
811-100	100 pack
8112-100	100 pack tapered head



# Chemicals - Chemical Accessories



## Chamois Swabs

For cleaning sensitive tape heads. Lint Free Synthetic suede bonded to a bendable handle allowing access to hard to reach areas. Use with M.G. Chemicals Cat. #407C Audio/Video Head Cleaner.

Part #	Description
810-15	Single headed, 15 swabs
810-500	Single headed, 500 swabs
810D-50	Double headed, 50 swabs
810D-500	Double headed, 500 swabs
810D-15	Double headed, 15 swabs
810-50	Single headed, 50 swabs

## Foam Over Cotton Swab

Absorbent precision cleaning applicator. 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.

Part #	Availability
812-10	10 swabs
812-250	250 swabs
812-50	50 swabs
812-1000	1000 pack

## Foam Swab

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

Part #	Availability
813-10	10 swabs
813-250	250 swabs
813-50	50 swabs
813-1000	1000 pack

## Rectangular Foam Swab

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

Part #	Availability
814-10	10 swabs
814-250	250 swabs
814-50	50 swabs
814-1000	1000 pack

## Self Saturating Alcohol Swabs

Swab combines solvent and applicator in one convenient unit. Simply squeeze the handle to break the patented seal and allow liquid to flow to the urethane foam head. Comes filled with 70% isopropyl alcohol and 30% deionized water. Non-abrasive, safe on plastics. Complies with California Air Resource Board VOC regulations for electronics cleaners.

Part #	Availability
8241S-5	5 pack
8241S-25	25 pack
8241S-50	50 pack



## Touch and Go Pump

This pump features 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 bottles allow for easy viewing of contents. Easy twist-lock for safe storage. Convenient drop-at-a time dispensing. Available in 8 oz.

Part # 8232



## Presaturated Cleaning Cards

This Presaturated Cleaning Card is designed to safely and effectively remove all dirt, magnetic oxides, oils, lotions, and other contaminants from all types of concealed magnetic, photo and optic sensors on all types of reader mechanisms. Individually packaged, non-abrasive, safe on plastics, zero residue and fast evaporation. Available with 50 per box.

Part # 8301-50



## WYPALL® Waterless Hand Wipes

Pre-moistened hand cleaning wipes are waterless and ideal for hand cleaning anywhere. Now in 75 count bucket. 75 wipes (10.5" x 12.25").

Part # 830-91371



## WYPALL® X80 Towels

Towels have been upgraded with SuperCharged technology, making it the choice for the toughest jobs. Made using our patented HYDROKNIT® Fast-Absorbing Material. 80 wipes (9.10" x 16.8").

Part # 830-41048



## Kimwipes Delicate Task Wipers - Double ply

Availability: 11.8", 119 wipes per box

Part # 830-34705



## KimtechScience Delicate Task Wipers

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.

Part #	Availability
830-34133	196 wipes (11.8"x11.8")
830-34155	280 wipes (4.4"x8.4")



## Kimtech PURE Critical Task Wipers

Delivered double-wrapped in anti-stat packaging. Meets the USDA requirements for food processing establishments. Can be autoclave and ETO sterilized. 100% polypropylene. 100 wipes (9"x9").

Part #	Description
830-33390	Suited for ISO Class 4 or higher cleanrooms
830-06179	Suited for ISO Class 5 or higher cleanrooms

# Chemicals - Chemical Accessories



## Kimtech Science Lens Cleaning Station

A disposable, self-contained system, ideal anywhere glasses or safety lenses are worn. Contains an anti-static, anti-fog, silicone-free cleaning solution to remove dirt quickly and easily. 560 wipes (4.4" x 8.4").



Part # 830-34623



## Ultra-Chem Swabs

Part #	Description
50-150	Double tipped 6" (100 pk)
50-288	Chamois 3/8" x 3 1/2" (25 pk)

## Foam Cleaning Swabs

By keeping heads clean on recorders, the equipment will operate longer. These swabs are not cotton but soft foam, making them lintless, as well as reusable. Six inch long with 20 to blister card.

Part #	Description
SC20	Swabs
SC20B	Package of 100 swabs



## Syringes

### Air Operated

Industrial syringes for micro-air dispensing. Available in Luer Lok™ and tapered tip styles. Unassembled and non-calibrated. Available with rubber or plastic stoppers. Includes barrel and stopper.

Part #	Size	Stopper	Tip
A3LLPS	3cc	Plastic	Luer Lok™
A5LLPS	5cc	Plastic	Luer Lok™
A10LLPS	10cc	Plastic	Luer Lok™
A30LLPS	30cc	Plastic	Luer Lok™

### Manual Assembled Calibrated Syringes

Includes graduated barrel, rubber stopper, plunger rod and tip cap. Available in Luer Lok™ and tapered tip styles (50cc only). All syringes have a rubber stopper.

Part #	Size	Tip	QTY
M3LLASSM	3CC	Luer Lok™	20
M3LLBA	3CC	Luer Lok™	1600
M5LLASSM	5cc	Luer Lok™	20
M10LLASSM	10CC	Luer Lok™	15
M10LLBA	10CC	Luer Lok™	850
M20LLBA	20CC	Luer Lok™	325
M30LLASSM	30CC	Luer Lok™	10
M50LLASSM	50CC	Luer Lok™	5
M50TBA	50CC	Tapered	125

### Manual Un-assembled

Includes barrel, rubber stopper and plunger rod. Available in Luer Lok™ and tapered tip styles. Unassembled and non-calibrated

Part #	Description
M30T	30cc manual syringe with taper tip
M6T	6cc manual syringe with taper tip



## Stainless Steel Plastic Hub Dispensing Needles

Sizes ranges from 14 through 22 gauge. Lengths range from 1/2" (12.7mm) to 1 1/2" (38.1mm). 18 and 20 gauge available in 2" (50.8mm) lengths. Dimensions in inches (mm).



Part #	Description
KDS1412P	14 gauge
KDS1612P	16 gauge
KDS1812P	18 gauge
KDS2012P	20 gauge
KDS2212P	22 gauge
KDS2512P	25 gauge
KDSSAMPLEPAC	Assorted colors

## Stainless Steel Plastic Hub Dispensing Needles

Size range from 14 through 22 gauge. Lengths range from 1/2" (12.7mm) to 1 1/2" (38.1mm). 18 and 20 gauge available in 2" (50.8mm) length.



### 15 Gauge

ID length is 0.060 inches (1.52mm). OD length is 0.072 inches (1.83mm). Hub color is orange. Length is 1/2 in. (12.70mm).

Part # KDS1512BT

### 18 Gauge

ID length is 0.038 inches (0.97mm). OD length is 0.050 inches (1.27mm). Hub color is pink.

Part # KDS181BT

### 21 Gauge

ID length is 0.023 inches (0.58mm). OD length is 0.032 inches (0.89mm). Hub color is green. Length is 1/2 in. (12.70mm).

Part # KDS2112BT

## 30 Gauge x 1/2" Threaded Teflon Hub Dispensing Needle

Product Features: Teflon® material won't scratch delicate surfaces. Teflon resists bonding of most adhesives. Lavender hub. Length: 1/2". 30 gauge. Inside gauge is .006 in./0.15mm.



Part # KDS3012TT

## Bulk Syringe Components

Disposable un-assembled non-calibrated components. Plastic or lubricated rubber stoppers. Luer Slip™ (1cc), Luer Lok™, and tapered tip styles.



Part #	Type	Tip	QTY
30T1	Barrel	Tapered	500
30T2A	Dry air-operated stopper	Tapered	500

## Rubber Tip Cap

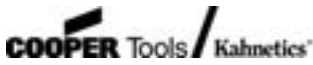
Used to seal needles and syringes when not in use. Luer Lok™ and press fit styles available for all styles of syringes. Quantity is 100.



Part # 982



# Chemicals - Chemical Accessories



## Plastic Adapters Assemblies

Plastic syringe adapter with 6' air line and fitting. Plugs directly into any Kahnetics® shot meter. Airline diameter is 3/32 inch (2.4mm). Bagged.



Part #	Description
KDS503S6	3cc
KDS505S6	5cc
KDS510S6	10cc
KDS530S6	30cc

## Deluxe Kit for Shot Meters/Foot Valves

A starter kit for users who do not know which size syringes will be used or when size requirements change. Kit is available separately or as an option with most shot meters. Kit Contents: Four plastic adapter assemblies (3, 5, 10 and 30cc); Samples of Luer Lok™ and tapered syringes; Syringe tip caps; Needle samples (non-sterile, blunt) in stainless, Teflon and plastic tapered tip; Syringe stand; Material line filter; 2-oz. squeeze bottle and Industrial vinyl gloves.



Part # KDSDELUXEKIT

## Needles

### Plastic Tapered Needles

Sizes range from 14 through 24 gauge. Overall length-1-1/2". Tapered feature helps alleviate dripping problems. Prevents surface scratches.



Part #	Gauge	ID inch (mm)	Hub Color
KDS16TN25	16	0.048 (1.22)	Gray
KDS18TN25	18	0.034 (0.86)	Green
KDS20TN25	20	0.024 (0.61)	Pink
KDS22TN25	22	0.017 (0.43)	Blue

## Dispensers

### Foot Valve

Basic ON-OFF function. "Eyeball" accuracy. Foot actuated for excellent ergonomics. Works on compressed air input only - no electricity required. Zero to one hundred PSI regulator and gauge. Easy to set up and operate. Sits on the floor, thus using no table space. Order syringe adapters, kits and other accessories separately.



Part # KDS806

### Shot Meter with Vacuum

Basic low cost system. Easy to set up and operate. "Eyeball" accuracy. Electrically actuated foot pedal. Vacuum feature prevents dripping. Zero to one-hundred PSI regulators and gauges with locking ring. Benchtop unit for easy reading of dials and adjusting of the air pressure and vacuum. Low voltage unit for safety. Slide switch easily changes unit from 115 to 230 volts. Order syringe adapters, kits and other accessories separately.



Part # KDS808



## Dispensers (cont.)

### Syringe Holder Stand

Keeps materials from accidentally flowing back up the airline when syringe is not in use. Can be used with all sizes of syringe adapters. Keeps work area neat and clean.



Part # KDS816

### Deluxe Shot Meter

Digital timer control for repeatability. Shot time duration adjustable from 0.01 to 99.99 seconds. Adjustable four position push button timer switch. Vacuum feature prevents dripping. Electrically actuated foot pedal. Optional KDS805FS finger switch available. Two 0 - 100 PSI regulators and gauges with locking ring. Benchtop unit for easy reading of dials and adjustment of air pressure and vacuum. Low voltage unit for safety. Slide switch easily changes unit from 115 to 230 volts.



Part # KDS824A

### Economy Shot Meter

Digital timer control for reproducibility. Time duration from .01 to 99.99 seconds. Adjustable four-position push button timer switch. Vacuum feature to prevent dripping. Time duration indicator light (LED). Electrical foot pedal actuation for excellent ergonomics (optional finger switch available). Zero to one hundred PSI regulator and gauge with locking ring. Slide switch for easy change from 110-220 volts. Benchtop unit for easy reading of dials and adjustment of air pressure and vacuum. Low voltage unit. Order syringe adapters, kits and other accessories separately. Specifications: size: 6.25 x 7.75 x 5" (W x D x H); weight: 5 lbs. 10 oz; air input: 0-100 psi; air output: 0-100 psi; vacuum: 0-18" of mercury; power: 110-230 VAC switchable 50/60 Hz; internal voltage: 24 volt transformer; repeat accuracy: .5ms 9.0005 sec.; recycle time: 12ms (.012 sec.); setting accuracy: ±2%.



Part # KDS834A

## Flux Solvent Dispensers

Both static safe and standard hold two ounces. Avoid spills and waste and place flux precisely where needed. Squeeze bottles dispense one drop of liquid resin, flux, oil solvent through stainless steel needles. Static dissipative models protect static-sensitive components.



Part #	Description
FD2D	Flux dispenser, 0.020" needle, ESD safe
FD3	Flux solvent dispenser, tri tip



## GC Wipes

Soft non-woven GC wipes with the strength of polyester rayon. Safe for critical applications. Provides excellent contamination control on precise instrumentation, semiconductors and other critical uses. White 9" x 10 1/2" - 30 sheets per package.



Part # 19-747



# Chemicals - Chemical Accessories



### The Pump™

A new air-powered spray bottle that provides an environmentally conscious alternative to conventional aerosols. The refillable, reusable spray bottle uses air as a propellant with its self-contained "Air Pump". Save money by buying liquid solvents in bulk. This durable unit replaces the use of aerosol cans. Use with cleaners, degreasers, alcohol, CFCs, HCFCs and other chemicals.



Part #	Description
19-763	6 fl. oz. pump bottle
19-769	3 fl. oz. bottle

### Travel Dispenser

Designed for easy one-handed delivery of a wide variety of liquids onto a cloth, cleaning pad, cotton ball or other wipe-on applicators. Can conveniently apply polishes, removers or other liquid products onto the applicator eliminating direct hand contact, spillage, fumes and waste while protecting product quality. Available empty or prefilled with two of your favorite GC Chemicals - Head Cleaner and Isopropyl Alcohol.



Part #	Description
19-770	4 fl. oz. Isopropyl Alcohol
19-773	4 fl. oz. VCR/Magnetic Head Cleaner
19-774	4 fl. oz. Dispenser Only

This catalog represents a sampling of our inventory.

Please contact us if the product or part you are looking for is not included in this publication.



## NOTES

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