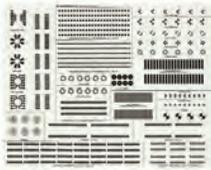


DRAFTING AIDS



Circuit Board Drafting Patterns

An 8-1/2" x 11" sheet containing two dozen of the most commonly used pre-spaced component configurations. Self-adhesive pads may easily be removed from master sheet with printed circuit knife and placed upon Mylar® positive artwork. Interconnection may be made with GC's line of opaque drafting tapes. A highly refined process and ink assures true opacity and the excellent definition necessary for quality printed circuit work.

Part No. 21-677



Mylar® Layout Film

Package of 2 transparent mylar sheets with clear finish plus one grid pattern sheet. Std. 0.10" spacing.

Part No. 22-290 8 1/2" x 11"

Mylar is a registered trademark of DuPont.



Etch Resist Ink Pens

Black felt tip pens for marking nomenclature and touching up photo artwork or etch resist circuits directly on the PC board or on the positive. Dries instantly. Easy application. Can be removed with Stripping Solution (22-240) or alcohol.

Part No. 22-220 Std. Size – draws lines approx. 1/32" wide

Part No. 22-222 Fine Line – draws lines as thin as 1/64" wide



Exposing Frame

Assures tight contact between positive or negative and the photosensitive material. Results in perfect transfer of circuit image to the board.

Part No. 22-393 For boards up to 10" to 12"

PC DEVELOPING & ETCHING



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 No. 22-225 2 fl. oz. Bottle

Part No. 22-226 6 fl. oz. Bottle



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 No. 22-237 6 fl. oz. Bottle

Part No. 22-238 32 fl. oz. Bottle

Part No. 22-239 1 Gallon Container

Professional PC Board Power Etching System



A semi-automatic etching device for use in labs, schools, prototype shops and for limited PC board production. Reduces etching time to minutes. Air pump agitates etching solution for fast, very even etches. Handles up to two 8" X 10" PC boards at a time, either single or double sided. Tank comes with a tip-proof wire stand that can remain portable or attached to the bench with screws. For professional labs, it can be mounted as a bench well. Boards fit into a submersible rack with handles that keep hands away from the etchant as well as separating the PC boards. Lid prevents splashes, reduces evaporation, and can be turned upside down and used as an auxiliary tray.

Kit contains:

- 1 Etching Tank and Reservoir Lid (12"H x 2-1/2"W x 10-1/2"L)
- Molded Polyethylene – ABS PC Board Holder
- Capacity – 1.25 Gallons of Etching Solution
- 1 Etch-O-Matic Power Agitating Pump, 120V AC Operation
- 1 Permanent or Portable Tip-Free Base
- 1 PC Board Holder and Handle
- 4 Feet of Supply Hose

Part No. 22-394



Developing and Etching Trays

Two plastic trays (5-1/4" x 7-1/4" I.D.) for positive method developing and for etching. One aluminum tray for rinsing (4-1/4" x 6-3/4" I.D.).

Part No. 22-284 Set of 3

Part No. 22-285 8" x 10" I.D. High Grade Wht Plastic

Part No. 22-286 11" x 14" I.D. High Grade Wht Plastic



Etching Solution Heater

Fits in tank and heats solution up to 38°C (100°F). Used to further reduce etching time. Built-in adjustable thermostat controls temperature continuously to 100°F. 120V AC/100 W Max.

Part No. 22-392

PRINTED CIRCUIT BOARD REPAIR



Silver Print II

Conductive Paint

Bottle for PC repair or add-on circuit traces. Pure silver in acrylic 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).

Part No. 22-023	1/2 troy oz. Bottle
	Replaces Part No. 22-201
Part No. 22-024	1 troy oz. Bottle
	Replaces Part No. 22-202



Nickel Print

Conductive Paint

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.

Part No. 22-207	2 fl. oz. Bottle
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Print Kote Conformal Coating

The ultimate coating for PC boards. Provides a protective shield to resist environmental contaminants. Prevents arcing and shorting. Air dry 15-30 minutes. May be baked at 200°C for 30-60 minutes for extreme high temperature applications.

Part No. 22-203	2 fl. oz. Bottle
N.S.N. 8010-00-711-2173	



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.

Part No. 22-209	2 fl. oz. Bottle
N.S.N. 6810-00-711-2185	



Stripping Solution

Removes remaining etch resist from PC boards. Removes any coating that remains over the copper after etching which may interfere with the soldering of the component leads to the PC board.

Part No. 22-240	2 fl. oz. Bottle
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Flux Remover and Cleaner II

Convenient, fast and easy to use. Removes all types of organic flux. Pinpoint applicator supplied. Non ODC.

Part No. 22-271	16 oz. Aerosol
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Etch Resist Lacquer

For touch-up or modification of resist patterns before etching. Fast drying, easy to apply on PC boards. Bottle is supplied with small brush attached to cap.

Part No. 22-244	1/2 fl. oz. Bottle
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Small Printed Circuit Repair Kit

For repair and servicing of printed circuits

- Kit contains:
- 1—Solder Aid Tool Part No. 9093
 - 1—Low-Melt Solder Part No. 9132
 - 1—PC Repair Foil
 - 1—Print Kote Part No. 22-203
 - 1—Print Kote Solvent Part No. 22-209
 - 1—Fiberglass Eraser
 - 1—Tweezers Part No. 7948
 - Asst. Solder Washers (Fluxed)



Part No. 22-682
N.S.N. 3439-00-986-2582
N.S.N. 5999-00-755-1808

PRINTED CIRCUIT BOARD REPAIR (Cont.)



Pure Copper Circuit Tape

1/8" wide roll of self-adhesive pure copper tape for quick repairs or circuit modification. Adheres readily to PC boards and similar surfaces; solders readily. Flexible enough to be used around corners, between PC boards, between board and chassis, etc. Extremely low resistance.

Part No. 22-509	.002" Thick	6 foot
Part No. 22-511	.0014" Thick	20 foot



Micro Inspection Magnifier

Superb tool for the close inspection and trouble shooting of micro-circuits and PC boards. Provides 2X magnification from 2-1/2" dia. precision-ground glass that swings a full 360° with positive-lock swivel adjustments.

Part No. 22-386



Drill Bit Sets

For drilling component lead wire holes in phenolic and glass epoxy PC boards. Made of high speed tool steel for long life.

Part No. 22-275	Set Contains:
	No. 66 Bit .0330" Dia.
	No. 60 Bit .0440" Dia.
	No. 1/16 Bit .0625" Dia.
Part No. 22-276	Set Contains:
	No. 31 Bit .1200" Dia.
	No. 27 Bit .1400" Dia.
	No. 3/32 Bit .0938" Dia.

OLD TO NEW PRODUCT CROSS REFERENCE

All New Chemical Products

Old Part No.	New Part No.	Page No.	Description	Change
10-324	10-327	52	General Purpose Plastic Cement II-2 oz.	Environmental Reformulation
10-352	10-354	52	Rubber-to-Metal Cement-2 oz.	Environmental Reformulation
10-984	10-985	49	Reach-All Pen Oiler-1/2 oz.	Environmental Reformulation
10-5302	19-5302	48	VCR/Magnetic Head Cleaner-2 oz.	Environmental Reformulation
10-7521	19-7522	47	Static-Free High Strength Flux Remover-18 oz.	Environmental Reformulation
10-228	19-229	47	Flux Remover & Cleaner II-16 oz.	Environmental Reformulation
19-328-22	19-272	42,47	Flux Solx3-16 oz.	Environmental Reformulation
19-624	19-913	42,43	Big Bath3 Contact Cleaner-16 oz.	Environmental Reformulation
19-700	19-701	46	GC Natural Citrus Cleaner-12 oz.	Environmental Reformulation
19-746	19-747	59	GC Wipes	Size and Texture
19-820	19-826	48	Anti-Oxidant Grease-1 oz.	Environmental Reformulation
19-901	19-912	42,45	Big Bath3 Contact Cleaner-12 oz.	Environmental Reformulation
19-902-SF	19-907	42,45	Big Bath3 Contact Cleaner & Degreaser Anti-Static-16 oz.	Environmental Reformulation
19-903	19-906	42,45	Big Bath3 Contact Cleaner & Degreaser-16 oz.	Environmental Reformulation
19-903-6	19-905	42,45	Big Bath3 Contact Cleaner & Degreaser-12 oz.	Environmental Reformulation
19-903-SF	19-907	42,45	Big Bath3 Contact Cleaner & Degreaser Anti-Static-16 oz.	Environmental Reformulation
19-2903-3	19-905	42,45	Big Bath3 Contact Cleaner & Degreaser-12 oz.	Environmental Reformulation
19-2903-8	19-906	42,45	Big Bath3 Contact Cleaner & Degreaser-16 oz.	Environmental Reformulation
19-8669	19-802	42,46	GC NPB3 Cleaner & Degreaser-16 oz.	Environmental Reformulation
22-201	22-023	55	Silver Print II Conductive Paint-1/2 oz.	Environmental Reformulation
22-202	22-024	55	Silver Print II Conductive Paint-1 oz.	Environmental Reformulation
22-270	22-271	63	Flux Remover & Cleaner II-16 oz.	New Size/Environmental Reformulation