

TECHNO *talk*

Vol. II Chemistries

2003

JNJ INDUSTRIES

GlobalTech® Chemistries



JNJ's GlobalTech Chemicals Division has emerged as one of the world's leading suppliers of advanced formulations of environmentally responsible solvents, cleaners and degreasers for electronics, laboratory, cleanroom, aerospace manufacturing and industrial applications. GlobalTech products are available in both standard and custom chemistries. We offer a complete line of the most sought after cleaners and solvents used in the electronics and manufacturing industries. Every standard GlobalTech product is formulated and packaged for optimum value and utility. GlobalTech's formulations for the

removal of soils and toxic contaminants range from highly aggressive solvents to gentle hand cleaners and disinfectants. To meet your requirements, every GlobalTech product is available in application specific formulations and blends. JNJ sales staff will help you select the precise components, dilutions and delivery systems to meet your exact needs in a solvent, cleaner or degreaser. In additions to our standard formulations and blends, JNJ offers private label packaging for OEM and distributor branded lines. GlobalTech products are available in nearly every size and type of container, dispenser or delivery system, including SuperSaturated SmartWipes®, bulk liquid containers, sprays, and drums.

Quick Reference Solvent Selection Guide

Product Name	Drying Time	Odor	Cleaning Power	Defluxing			Degreasing	Adhesives	Epoxies	Light Oils	Inks
				No clean	RMA	OA					
SMT Stencil Cleaner	Medium	None	Regular	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Solder Paste & Flux Remover	Medium	Moderate	Aggressive	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Semi Aqueous Paste & Flux Remover	Medium	Mild	Regular	No	Yes	Yes	Yes	No	No	Yes	No
Isopropyl Alcohol & DI Water	Fast	Mild	Moderate	No	Yes	Yes	Yes	No	No	Yes	No
Isopropyl Alcohol 99%	Very Fast	Mild	Moderate	No	Yes	Yes	Yes	No	No	Yes	No
Ink & Screen Cleaner	Medium	Moderate	Regular	No	Yes	Yes	Yes	No	No	Yes	Yes
Epoxy & Adhesive Remover	Fast	Strong	Aggressive	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Global Clean	Fast	Moderate	Aggressive	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes



*Driven by
Performance...*

Innovative Thinking.
Customer Partnership.
Superior SMT Production
Supplies.



SuperSaturated Wipes

SuperSaturated SmartWipes offer cleaning solutions where and when you need them. You will always have the right wipe, with the right chemistry at your fingertips. Our patented SuperSaturated SmartWipes feature a durable, solvent retentive material substrate that cleans effectively without leaving excess solvent behind. Each wipe is presaturated with the proper amount of GlobalTech® CFC & HCFC Free solvent and is packaged in a recyclable, reusable canister. The strong, super absorbent wipes are 100% cleanroom grade polyester made from DuPont Sontara®, low in lint, and resist tearing and shredding. SuperSaturated SmartWipes trap dirt, grease, solder paste, flux residue, epoxy, ink, and other contaminate particles.



Foil Refill Packs

Our complete line of SuperSaturated SmartWipes are available in space and money saving, waste reducing Foil Refill Packs (FRPs). JNJ first introduced the pop-up wipe canister to the SMT industry and we continue our innovation with our vacuum sealed Foil Refill Packs. The vacuum seal insures a longer shelf life that is guaranteed not to dry out and is free of contamination. After using the last wipe, simply remove the lid, open your FRP, and drop in a fresh refill of presaturated wipes into the canister. These FRPs come presaturated with 100 - 6" x 9" wipes, made from the same cleanroom grade polyester from DuPont Sontara that is used in our original canisters.

...more than just the right formula - the right chemistry

AquaSonic Aqueous Cleaners



Aqueous Cleaner for Solder Paste and Flux (AQP) is more than 95% water based and all ingredients are 100% active. It has been specially formulated to remove solder paste and flux residue from stencils, squeegees, printed circuit boards, and other surfaces. AQP utilizes a proprietary electro-chemistry technology to clean. It works by reversing the normal polarity of the contaminant. The reversal of the polarity causes the like charges of the contaminant and the substrate to repel each other, thereby preventing reattachment to the substrate. The contaminants are suspended from the substrate so they can be washed away, leaving a clean, shiny, water break-free surface. AQP works at a sub-molecular level and is especially suited for use in critical clean applications because of its unique ability to penetrate crevices and orifices to dislodge microscopic contaminants. This method of cleaning drastically improves the cleaning efficiency by minimizing the amount of rinse water needed.

Aqueous Cleaner for Surface Mount Applications (SMA) is a unique blend of select detergents and solvents formulated to offer safe, non-flammable cleaning in ultrasonic cleaning systems. Used in dilution, SMA effectively cleans uncured surface mount device (SMD) epoxies/adhesives and solder pastes from stencils and misprinted assemblies, and it does not require heating. It is an ideal cleaning agent for electronics manufacturers who want (1) to clean both SMD epoxies/adhesives and solder pastes in one cleaning process and cannot heat the cleaning solution, (2) to reduce or eliminate VOC emissions, (3) to reduce odor in the workplace, (4) to reduce or eliminate flammable or combustible solvents, (5) to improve operator safety, and (6) to reduce chemistry loss due to evaporation.

Spray Cleaner Solution (SCS) is a unique blend of select detergents and solvents formulated to offer safe, non-flammable cleaning in aqueous spray cleaning equipment. Used in dilution, SCS is a neutral pH detergent formulated for removing uncured surface mount device (SMD) epoxies/adhesives and solder pastes from stencils and misprinted circuit assemblies. It is an ideal cleaning agent for electronics manufacturers who want (1) to clean SMD epoxies/adhesives and solder pastes in one cleaning process, (2) to reduce VOC emissions and/or comply with VOC regulations, (3) to reduce or eliminate flammable or combustible solvents, and (4) to improve operator safety.

PRODUCT NAME	Product Abbreviation	CLEANING METHOD				PACKAGING		
		UltraSonic Equipment	Spray Cleaning Equipment	Manual Cleaning	Heat Required	Liquid Concentrate	Liquid Premixed	Presaturated Wipes
AquaSonic Aqueous Cleaner for Solder Paste & Flux	AQP	Yes	No	Yes	Yes*	Yes	Yes	No
AquaSonic Aqueous Cleaner for Surface Mount Applications	SMA	Yes	No	Yes	No	Yes	Yes	Yes
AquaSonic Spray Cleaner Solution	SCS	No	Yes	Yes	No	Yes	No	No

* Only when used in an ultrasonic cleaner

RATING SCALE Good - Better - Best	Product Abbreviation	APPLICATION					Recommended Dilution Ratios	SCAQMD Certified
		Solder Paste	Epoxy/SMD Adhesives	Flux Residue	Oils	Grease		
	AQP	Best	Better	Best	Good	Good	5-15%	Yes
	SMA*	Best	Best	Best	Good	Good	5-7%	Pending
	SCS*	Better	Better	Better	Better	Better	5-10%	No

* No Heat Required

Hand Cleaners



The Benchtop Electronic Hand Cleaner is a high performance, general purpose cleaner in a presaturated wipe dispenser. Laboratory Certified to be effective in the removal of toxic metals from all surfaces, including the skin. Used at the workstation or any location where operators/technician's hands become soiled. Cleans hands, surfaces, fixtures and tools without requiring the operator to leave the work area. Certified Ionic Contamination Test results show Benchtop Electronic Hand Cleaner to be well within ANSI/J-STD-001 Industrial and MIL-STD-2000 Military Standards adopted to maintain acceptable levels of cleanliness in the manufacture of electronic assemblies, circuits and components.



BIOACT SC-10 Electronics Cleaner



BIOACT SC-10 Electronics Cleaner is a blend of highly-refined aliphatic hydrocarbons, orange terpenes, and linear alcohols formulated to offer superior performance in stencil/misprint cleaning and deflusing applications. It is an ideal replacement for isopropanol (IPA) in hand wipe cleaning applications where performance, safety, and/or VOC emissions need to be improved. SC-10 Electronics Cleaner was developed for removing all types of uncured SMD adhesives and unreflowed solder paste from stencils and misprinted assemblies. It is also effective in removing many rosin, water-soluble, and no-clean solder paste and flux residues as well as acrylic and silicone conformal coatings, and tape residue.

Application Specific Choices

SMT STENCIL CLEANER

- Metal and plastic stencils
- Electronic screen/stencil printers
- Batch ultrasonic cleaning machines
- Automatic stencil wiper assemblies (approved by DEK) - liquid form
- Excellent overall cleaner and degreaser
- Dries to zero residue - Odor Free
- Removes RMA, RA, no clean solder pastes and fluxes, UV curable inks and adhesives



SMT

SEMI AQUEOUS PASTE & FLUX REMOVER

- Screens and stencils
- Good for stencil cleaning machines
- General degreasing
- Misprinted circuit boards
- Water soluble - no rinsing required
- Removes organic contaminants such as soldering oils, waxes, silicones, uncured adhesives and other difficult soils
- Safe cleaner for water soluble and rosin based fluxes



AFR

SOLDER PASTE & FLUX REMOVER

- Superior defluxing properties
- Exceptional for automatic cleaning systems and batch cleaners
- Removal of R, RA, RMA, No Clean, Water Soluble, OA Solder Pastes & Fluxes from:
 - Screens, stencils and PC boards
 - Squeegee assemblies and tools
 - Production equipment (Stencil Printers)
 - Relays, contacts and other electronic assemblies
- General degreaser for soldering oils, waxes, silicones, uncured adhesives and other difficult soils
- Dries to zero residue



PFR

INK & SCREEN CLEANER

- Commercial screen printing inks
- Cleans pastes, silicones and most contamination associated with fluxes
- Water soluble - dries to zero residue
- Cleans screens and stencils
- Good for cleaning tools and machinery
- Excellent general degreaser
- Will not damage emulsions
- Remove conductive, resistive and dielectric thick film inks



IKS

ISOPROPYL ALCOHOL & DI WATER

- Universal cleaner and disinfectant
- Light oils
- Most types of inks
- Most pastes and fluxes
- Most printing and industrial cleaning
- Safe for all plastic



IPA/DI

GLOBAL CLEAN

- Bellcore tested and approved
- General purpose cleaner
- Removes paste and adhesive
- Fast evaporator - less than 1 minute on ss
- Light grease and oils
- Safe on all metals
- Dries to zero residue
- UV curable inks and epoxies, inks used in lithography



GPF

ISOPROPYL ALCOHOL 99%

- Universal cleaner and disinfectant
- Light oils
- Most types of inks
- Most pastes and fluxes
- Most printing and industrial cleaning
- Safe for all plastic
- Very fast evaporator



IPA

EPOXY & ADHESIVE CLEANER

- Conductive epoxies
- 2 part epoxies
- Labels, tape and label adhesives
- Most varieties of glue or adhesive residues
- Cleans screens and stencils
- Strong aggressive cleaner
- Excellent penetration -gets under wet and cured epoxies
- Screen printable epoxies used in electronics maintenance



EAD



Every Cleaning Job Requires a Specialist!

JNJ's GlobalTech® division provides advanced formulations of environmentally responsible chemicals and solvents - GlobalTech products are formulated for the rigorous cleaning requirements in the electronics and manufacturing industries.

Material Compatibility Chart

Material	SMT	PFR	AFR	IPA IPA/DI	IKS	EAD	GPF
SS Screen Mesh	✓	✓	✓	✓	✓	✓	✓
Polyacetal	✓	✓	✓	✓	✓	✓	✓
Polycarbonate	✓	▲	▲	✓	▲	▲	▲
Polyamid	✓	•	•	✓	•	•	•
Laminate F-4	✓	✓	✓	✓	✓	✓	✓
Laminate G-10	✓	✓	✓	✓	✓	✓	✓
CEM 1 and CEM 3	✓	✓	✓	✓	✓	✓	✓
Epoxy (Cured)	▲	▲	▲	✓	▲	•	▲
Styrene	▲			✓			
ABS	✓			✓			
PVCs (vinyls)	✓			▲			•
Natural Rubber	▲	•	•	✓	•	•	▲
HDPE	✓	✓	✓	✓	✓	✓	✓
Polyurethane	✓	✓	✓	✓	▲	•	▲
Polypropylene	✓	✓	▲	✓			✓
Teflon (PTFE)	✓	✓	✓	✓	✓	✓	✓
Katrez	✓	✓	✓	✓	✓	✓	✓
EPDM	▲	▲	▲	✓	▲		•
Viton (Silicone)	▲			✓			
Acrylics	▲			✓			

✓ -Not Affected ▲ -Possible Affects • -Likely to Affect Blank -Not Recommended

.....Delivering the Performance You Demand.....

SMT PRODUCTION SUPPLIES KIT



Our SMT Production Supply Kits were developed to accommodate small and mid-size manufacturing facilities that don't require production supplies by the case. Each SMT Production Supply Kit is packaged with understencil wiping rolls, presaturated wipes and dry wipe rolls to accommodate the production needs of the average stencil printer for one week. They are available in various packaging styles - there are kits designed for use with MPM automatic printers, DEK automatic printers, DEK automatic printers and for printers that do not have automatic stencil wiper assemblies. The SMT Production Supply Kits and/or the individual items in the kits can be ordered through your local distributor. The kits for MPM or DEK automatic printers come with; 4 - SmartRoll® UnderStencil Wiping Rolls, 2 - 9" x 9" SelectaWipe Rolls, that are as easy to use as paper towels but are made from Class 100 cleanroom material, 1 canister of SMT Stencil Cleaner and 1 canister of IPA/DI with matching Foil Refill Pack. Kits without understencil wiping rolls are also available.

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In addition to our GlobalTech products, JNJ manufactures high quality electronic screen and stencil printing accessories and cleaning products, SMT production supplies for all OEM stencil printing machines, ultrasonic cleaning machines, and flexible custom tooling products. We design and manufacture precision machined squeegee blades and holders for most OEM printers. We are recognized experts in understencil wiping rolls - our OEM and custom understencil rolls fit every printer worldwide. Our ultrasonic stencil cleaning machines range from benchtop units to automated systems, and are compatible with our AquaSonic Aqueous Chemistries. JNJ's line of Universal Tooling Plate Assemblies provide 5-minute set up and changeover for Speedline/MPM stencil printers.

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The Industry Standard in Quality and Performance

JNJ's commitment is not only to provide the highest quality products possible, but to make them available to you for fast delivery through a network of local, national and international distributors.

**SMT PRODUCTION SUPPLIES & EQUIPMENT
CUSTOM & PRODUCTION MACHINING**