

## DOW CORNING







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Electrochemicals & Service Aids & Paints





#### ULS - Ultrasolve

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- Fast drying solvent blend
- Removes flux, dirt and grease
- . Suitable for PCB and electronic
- assembly cleaning
- Safe on most plastics
- 100% Ozone Friendly

Completely residue free

100% Ozone Friendly

- **ECSP Electronic Cleaning Solvent Plus** Super fast evaporating solvent
- 100% Ozone Friendly High purity, electronics grade IPA
  - Cleans PCBs and assemblies to leave a Removes grease, dirt and most fluxes

Completely residue free

Excellent cleaner for flux, grease and

Safe on most plastics, rubbers and

CHM129

residue free surface

general grime

elastomers

IPA - Isopropanol

100% Ozone Friendly

#### Warning: All the above contain flammable contents, do not use on live circuits or near any source of ignition, use in a well ventilated area.

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#### Please check with Sales Office for availability

	Mftrs.			Price	Each	
	List No	Order Code	1+	12+	36+	144+
200ml Aerosol	ULS200D	.298-335				
400ml Aerosol	ULS400D	.298-207				
400ml Aerosol (Brush)	ULS400DB	.725-651				
1 Litre Tin	ULS01L	.298-219				
200ml Aerosol	ECSP200D	521-723				
200ml Aerosol (Brush)						
400ml Aerosol	ECSP400D	521-735				
200ml Aerosol	FLU200D	298-165				
400ml Aerosol	FLU400D	298-177				
400ml Aerosol (Brush)		725-663				
1 Litre Tin	FLU01L	298-189				
200ml Aerosol	IPA200H	130-620				
400ml Aerosol	IPA400H	.279-511				
1 Litre Tin	IPA01L	.106-970				

#### **Speciality Cleaners**



- Test on sensitive plastics • 100% Ozone Friendly
  - PRS Printasolve

applications

ciently

Removes ink (solvent or oil based) from most surfaces •

Powerful penetrating action

Very stubborn labels may require multiple

- High effective and economic to use Re-textures rubber print rollers
- 100% Ozone Friendly
- ULC Ultraclens Slow drying solvent blend
- 100% Ozone Friendly ۲
  - Recommended for cold cleaning
- High flash point reducing risk of fire • Non-flammable in bulk (1 Litre)
- All have flammable contents, do not use on live circuits or near any source Warning of ignition, use in a well ventilated area

#### Please check with Sales Office for availability

						CHM108
	Mftrs.			Price	Each	
	List No.	Order Code	1+	12+	36+	144+
200ml Aerosol	LRM200D	451-289				
			1+	10+	20+	60+
12ml Pen	LRM12P	725-638				
			1+	12+	36+	144+
400ml Aerosol	PRS400D	521-711				
200ml Aerosol	ULC200D	451-290				
400ml Aerosol	ULC400D	451-307				
1 Litre Tin	ULC01L	279-547				
						J

#### Solvent Cleaners



#### VID - Magnetic Head Cleaner

- Super fast evaporating blend of solvents
- Removes dirt and oxides from tape heads
- Reduces the incidents of read/write errors •

#### 100% Ozone Friendly SSC - Screen and Stencil Cleaner

- Fast evaporating solvent for the removal of excess solder paste from screen and stencils
- Spray on to stencil or screen at an angle and allow excess paste to run off
- Spray onto cloth (Safecloth, Safewipe etc.) and wipe screen or stencil carefully, take care with fine pitch screens to clean all apertures
- Removes no-clean paste and water washable as well as RA and RMA
- Warning: The above products are highly flammable, do not use on live circuits or near any source of ignition, use in a well ventilated area.

#### Please check with Sales Office for availability

- MDS Metal Degreasing Solvent
- Powerful, chlorinated solvent, non-ozone depleting
- Removes heavy grease and grime
- Fast evaporating •
- ۲ Test on sensitive plastics
- Non flammable

#### VIDP - Non-flammable Magnetic Head Cleaner

- Non-flammable, super fast evaporating solvent Suitable for removing oxide deposits from tape heads
- May be used on live equipment
- Ideal for use in broadcasting environments

#### SSS - Screen and Stencil Solvent

- Non-flammable (flash point >61°C) solvent to remove solder paste and adhesive from screens and stencils
- Spray on to stencil or screen and wipe clean carefully with Safecloth or Safewipe Removes no-clean paste and water washable as well as RA and RMA

						CHM27
	Mftrs.			Price	Each	
	List No.	Order Code	1+	12+	36+	144+
100ml Aerosol	VID100	604-082				
1 Litre tin	MDS01L	891-307				
400ml Aerosol	SSC400	958-384				
200ml Aerosol	VIDP200	725-584				
500ml Trigger Spray	SSS500ML	634-890				

#### **Aqueous Cleansers**



#### SWA400H - Safewash

- Safewash J in convenient aerosol format
- Integral brush for ease of use
- Removes most common fluxes .
- Removes dirt, grease and grime •
- MUST be rinsed after use
- Warning: Flammable propellant, do not use on live circuits or near any source of

#### Please check with Sales Office for availability

- WAJ Safewash J
- Aqueous cleaner for PCBs, jigs and assemblies • Inhibited Safewash for use with sensitive metals
- . Use with ultrasonic or pressure washers
- Cleans to within MIL specifications
- MUST be rinsed after use

Prices are in Singapore Dollars and exclusive of GST





#### SBI400H - Saferinse

- Pure blend of IPA and de-ionised water for rinsing after using Safewash
- Biodegradable
- Non-flammable
- Gives final polish after tap water rinsing
- Warning: Do not use on live circuits

#### Please check with Sales Office for availability

#### SWAS - Safewash Super

- Aqueous cleaner for PCBs and assemblies
- Latest high efficiency Safewash with inhibition for sensitive metals •
- Use with ultrasonic or pressure washers
- Rinses quickly and from under low set components • Removes most 'no-clean' fluxes
- •
- Low odour MUST be rinsed after use
- DEI De-ionised Water
- Recommended as the final rinse after using Safewash and a tap water rinse May be used for any application where hard water deposits cause a problem
- CHM147 Price Each Mftrs List No. Order Code 1+ 12+ 364 144+ 400ml Aerosol SWA400H .451-265 400ml Aerosol SRI400H .451-277 6-12+ 144+ 5 Litre SWA.1051 299-250 5 Litre SWAS05L 725-687 6-12+ 48+ 1 Litre DEI01L 891-253 5 Litre DFI051 891-265

#### SMT Stencil & Screen Cleaners



- Chemtronics StencilWorks® IPA Presaturated Stencil
- Wipes General purpose presaturated wipe for cleaning solder paste off of SMT stencils
- Plastic safe Regular cleaning strength sometimes required to remove solder
- High absorbency paste from SMT stencil surfaces
- Holds up to the most rigorous . scrubbing
- Strong, will not tear, shred, unravel or lint

#### StencilWorks<sup>®</sup> IPA Stencil & Screen Cleaner

General purpose cleaner for penetrating and cleaning solder paste from SMT stencils & screens

- Plastic safe
- Regular cleaning strength
- Ideal for use with StencilWorks IPA Presaturated Wipes or with Chemtronics
- Controlwipes Dry Wipes (C910) • Available in aerosol and liquid

Warning: Both the above products contain flammable contents, do not use near any source of ignition, use in a well ventilated area

#### Please check with Sales Office for availability

SIP1GI = 128-879, SIP16I = 128-867, SIP100PI = 128-855 Mftrs. List No.

Price Each								
		Size	Order Code	1+	12+	36+	72+	
	Stencil Wipes Screen Cleaner	100 Wipes 400ml Aerosol	128-855 128-867					

#### Screen & Stencil Wipes

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•	Effectively	removes	both	solder	pastes	and
	adhesives					

- 100 high wet strength fabric wipes, pre-saturated with a solvent based cleaner
- Re-sealable tub allows easy dispensing, whilst retaining the solvent saturation
- Fast drying and non staining with a low odour
- Non flammable • Wearing of gloves is recommended when using the wipes

Price Per Pack

#### 100 Per Pack Mftrs. List No. SSW100

**Order Code** 1 + **Cleaners/Degreasers** 



Electro-Wash® Cleaner Degreasers are general purpose electronics and electrical cleaning products. Some can be used in ultrasonic systems. They are engineered to clean a wide variety of soils including oils, greases, oxides.

Product		F	eatures		Cleaning Methods				
	Non- Flammable Fast Drying Plastic Safe		Plastic Safe	Cleaning Strength	Aerosol	Brushclean <sup>®</sup> System	Trigger Spray	Ultrasonics	Cold Immersion
Electro-Wash® PX		х	х	Xtra Strength	х	х			х
Electro-Wash PR Cleaner Degreaser		х	х	Regular Strength	х				
Chem-Solv <sup>®</sup> Cleaner Degreaser	х			Xtra Strength				Х	х

#### Electro-Wash® PX Cleaner Degreaser

- The extra-strength universal cleaner degreaser safe for use on plastics
- Flammable
- Fast drying leaving no residue •
- Safe on plastics • Extra cleaning strength
- Available in BrushClean® System for removing stubborn soils
- All-way spray valve allows use when inverted
- Cleans hard-to-reach areas

#### • Available in liquid form

#### Electro-Wash® PR Cleaner Degreaser

- The regular strength cleaner safe for use on plastics
- Flammable
  - Fast drying leaving no residue
  - Safe on plastics
  - . Regular hard-to-reach areas .
  - All-way spray valve allows use when inverted
  - Electro-Wash Two Step® PR Cleaner Degreaser

#### The regular strength cleaner safe for use on plastics Nonflammable

- Use Electro-Wash Cleaner Degreaser to rinse and dry surface fast or rinse water Extra cleaning strength
- Cleans solder paste and inks from screen and stencils
- removes conformal coatings
- Test on plastics

CHM332

CHM349

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Mftrs, List Nos, ES1010E = 860-437, ES810BE = 860-359, ES110E = 313-3485, ES1603E = 860-360 ES125AE = 313-3497 CHM197

1			Order		Price	Each	
	Cleaner Degreaser	Size	Code	1+	12+	36+	72+
	Electro-Wash®PX	400ml Aerosol	860-347				
	Electro-Wash <sup>®</sup> PX	5 Litre	313-3485				
	Electro-Wash PR	400ml Aerosol	860-360				
	Electro-Wash Two Step	5 Litre	313-3497				

Continued

#### The More You Order... **The More You Save!**

Purchases of certain products sold in pack multiples will be grouped together to give you the total quantity price.

5+ 305-2000

Electrochemicals, Service Aids & Paints

#### Chemtronics



Farnell

# Electrochemicals, Service Aids & Paints

#### **Cleaning Solvents — continued**

#### **Flux Removers**



Schemtronics Flux-Off Flux Removers are specially formulated to remove all types of rosin (types R, RA, RMA), rosin-based no clean, synthetic-based no clean (type SA) and water soluble (type OA) flux. They are available in aerosol, BrushClean<sup>®</sup> System, and liquid form for benchtop dispensers and ultrasonic or dip tank applications. All products are safe for use on plastics.

Product	Primar	y Flux Re	emoved		Features	S	Cleaning Methods			
	Roslin-Based (R ,RMA, RA, No Clean)	No Clean (SA-Synthetic)	Water Soluble	Non-Flammable	Fast Drying	Plastic Safe	Aerosol	BrushClean <sup>®</sup> System	Ultrasonics	Cold Immersion
Flux-Off® CZ	Х	X*	Х	Х	Х	Х	Х	Х		
Flux-Off® Rosin	Х				Х	Х	Х	Х		Х
Flux-Off® Water Soluble			Х			х		х		
Flux-Off® Aqueous	х	х	х	Х		х			Х	Х

' Test on synthetic no clean flux

#### Flux-Off<sup>®</sup> CZ Flux remover

The first non-ozone depleting, nonflammable flux remover safe for use on plastics

- Removes flux from hard-to-reach areas
- All-Way Spray Valve allow use when inverted .
- Fast Drying leaving no residue
- Cleans rosin water soluble and most no-clean flux
- Contains CIROZANE<sup>®</sup> CFC Replacement Chemistry made with HFE drom 3M Available in BrushClean® System for removing stubborn stains
- Flux-Off® Rosin
- The plastic safe flux remover for cleaning rosin and rosin-based no-based flux Flammable
- Fast drying leaving no residue
- All-Way Spray Valve allows use when inverted
- Removes flux from hard-to-reach areas
- Available in BrushClean® System for removing stubborn residues
- Liquid version available

#### Flux-Off® Water Soluble

- The plastic safe flux remover for removing water soluble flux from water sensitive
- areas Flammable
- All-Way Spray Valve allows use when inverted
- Removes flux from hard-to-reach areas
- Moderate to fast drying leaving no residue
- Available in BrushClean® System for removing stubborn residues •

#### Flux-Off® Aqueous Flux Remover

The aqueous flux remover for use in ultrasonics and other aqueous cleaning systems Nonflammable

- No spotting
- Contains no silicates, abrasives, or caustics
- Cleans all flux types including rosin, synthetic no clean, and water soluble flux • Use Flux-Off flux remover to rinse and dry surface fast or rinse with water

Mftrs. List No. ES7200E = 957-021, ES7208BE = 957-033, ES835BE = 860-426, ES1035E = 760-414, ES135E = 313-3461, ES830BE = 860-402, ES132E = 313-3473

(			Order		Price	Each	
		Size	Code	1+	12+	36+	72+
	Flux-Off <sup>®</sup> CZ	400ml Aerosol	957-021				
	Flux-Off <sup>®</sup> CZ	200ml BrushClean®	957-033				
	Flux-Off <sup>®</sup> Rosin	400ml Aerosol	860-426				
	Flux-Off <sup>®</sup> Rosin	200ml Brushclean	860-414				
	Flux-Off <sup>®</sup> Rosin	5 Litre	313-3461				
	Flux-Off <sup>®</sup>						
	Water Soluble	200ml BrushClean <sup>®</sup>	860-402				
	Flux-Off <sup>®</sup> Aqueous	5 Litre	313-3473				

#### **Contact Cleaners**



#### Chemtronics

Contact cleaners remove oils, greases and oxides from contact surfaces. they restore the electrical continuity of contacts, switches, relays and connectors. Recommended for cleaning all types of electronic and electrical contact assemblies includina:

- Metal or Plastic embedded contacts
- Fuse blocks
  - Potentionmeters, Relays or Circuit breakers • Electrical panels & Electronic controls

		Features							
Products	Non -flammable	Fast Drying	Plastic Safe	Cleaning Strength					
Pow-R-Wash <sup>®</sup> CZ Contact Cleaner	х	Х	Х	Regular Strength					
Pow-R-Wash <sup>®</sup> PR		Х	Х	Regular Strength					

#### Pow-R-Wash® CZ Contact Cleaner

The first non-ozone depleting, nonflammable cleaner safe for use on powered-up contacts and surrounding plastics

- Nonflammable
  - Fast Drying
- Safe on plastics .
- All-Way Spray Valve allows use when inverted •
- Contains CIROZANE<sup>®</sup> CFC Replacement Chemistry made with HFE from 3M
- Cleans hard-to-reach areas
- Leaves no residue
- ē **Regular Cleaning Strength**

Pow-R-Wash® PR Contact Cleaner

- The regular-strength contact cleaner for use on plastics
- Fast Drying
- Safe on plastics Regular Cleaning Strength
- Leaves no residue
- Cleans hard-to-reach areas All-Way Spray Valve allows use when inverted •

#### Warning: Flammable contents, do not use on live equipment Please check with Sales Office for availability

							CHM199	
	Mftrs. List No.	Size	Order Code	1+	Price E 12+	ach 36+	72+	
Pow-R-Wash <sup>®</sup> CZ	ES7308E	200ml	957-045					
Pow-R-Wash <sup>®</sup> CZ	ES7300E	400ml	957-057					
Pow-R-Wash <sup>®</sup> PR	ES1605E	400ml	860-384					

**Service Aids** 

#### **Airdusters and Freezers**



#### MCF - Minimal Charging Freezer

- Freezer suitable for use on all components.
- Will not induce static charge in sensitive components, e.g. memory chips
- Frost forming product allowing visual frost dissipation as a test method as well as
- fault eradication
- Cools to at least -50°C

#### Non-flammable

CHM198

- EAD Air Duster
- 100% Ozone Friendly •
- Pure compressed air
- Consistent high pressure with no hand-freezing effect •
- Non-flammable
- Only invert EADI200D õ
- Use in short bursts

Note: If the non-invertible version is inverted when in use, a liquid will be expelled resulting in a freezing effect.

#### FRE – Freezei

- Freezer suitable for use on all non-static sensitive devices
- Allows frost dissipation and fault eradication at low temperature as test methods
- May be used to achieve shrink fit of metal components
- May be used to remove adhesive, chewing gum etc
- May be used as a plumber's freezer by temporarily freezing the water
- Cost effective Cools to at least -50°C
- Non-flammable

# 19 602

Electrochemicals, Service Aids & Paints

#### Nonflammable

						UTING
	Mftrs.			Price	Each	
	List No.	Order Code	1+	12+	36+	144+
200ml Aerosol	MCF200	.891-204				
400ml Aerosol	MCF400	.891-216				
200ml Aerosol	FRE200	.891-228				
400ml Aerosol	FRE400	.891-230				
Invertible						
200ml Aerosol	EADI200D	.249-713				
Non-Invertible						
200ml Aerosol	EAD200D	130-631				
400ml Aerosol	EAD400D	.249-737				

#### **High Power Airdusters**

industors	
Sales and	GDP400 Airduster
	<ul> <li>High power, cost effective Airduster</li> </ul>
	Powerful initial blast with minimal drop off
	• Use to remove dust from delicate and inacces-
Statement of the	sible areas
e Rana	Non-flammable, pure compressed gas
- <u>1999</u>	• Do not tilt more than 60° from the vertical and
a secondar	use in short bursts
At and	
	EADP Airduster
3 A.F.T.	<ul> <li>Ultra high power airduster</li> </ul>
Tables .	High pressure blast for removing particularly
S	stubborn dust
2	<ul> <li>Pure, inert compressed gas</li> </ul>
	<ul> <li>Non-flammable</li> </ul>
	<ul> <li>Do not tilt more than 60° from the vertical</li> </ul>
	Do not uit more than 60 from the vertical
the second se	

<ul> <li>Ultra high power airduster</li> </ul>
<ul> <li>High pressure blast for removing particularly</li> </ul>
stubborn dust
<ul> <li>Pure, inert compressed gas</li> </ul>
Non-flammable
<ul> <li>Do not tilt more than 60° from the vertical</li> </ul>

	Mftrs.			Price	Each		
	List No.	Order Code	1+	10+	50+	100+	
400g Aerosol	GDP400	130-424					
470g Aerosol	EADP400	302-6840					

#### Airdusters



#### Ultrajet® Duster & Ultrajet® All-Way Duster

- Non-flammable
- Made with HFC-134a
- Safe on plastics
- Leaves no contaminating residue •
- Biggest blast of any duster
- All Way Duster can be sprayed in any direction, even inverted, without the risk of dispensing a liquid spray that can freeze or damage sensitive surfaces

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#### Duster

- Economical, regular strength duster
- Safe on plastics
- ē non-flammable
- Ozone safe, CFC/HCFC free
- Made with HFC-134a

Duster Product	Features		
	Power	Invertable All Way Spray	
Ultrajet® Duster	Х		
Ultrajet® All-Way Duster	Х	1	
Duster	R		

R = Regular X = Extra Cleaning Strength

							GIIWITT
		Mftrs.			Price	Each	
	Size	List No.	Order Code	1+	12+	36+	72+
Ultrajet®	400ml	ES1520E	860-438				
Ultaset <sup>®</sup> All-Way	200ml	ES1620E	128-818				
Duster	400ml	ES1617E	153-540				

#### Antistat and Freez-It®



#### Freez-It®

- Quickly lowers temperature to -51°C •
- Non flammable
- Ultra-Pure formulation leaves no residue
- Nonabrasive, safe for most surfaces
- Contains no ozone depleting components

Made with HFC134a

CHM320

Chemtronics

immediately on the more difficult-to-

Printed circuit boards

Off equipment

Photographic equipment

Electronic instruments

Contacts & connectors

1	Made with the ors-	ta					CHM187
1		Mftrs.			Price	Each	
		List No.	Order Code	1+	12+	36+	72+
	Freez-It	ES1550E	860-440				
	Freez-It Antistat	ES1551E	860-451				

Freez-It® Antistat Non-flammable Leaves no residues

Non abrasive Fast cooling to -50°C

ic electricity

400ml Aerosol

sitive components

Contains no ozone depleting compounds Anti-static option minimises generation of stat-

 Suitable to use as heat sink protection during soldering/desoldering and testing thermosen-

. • Chemtronics

#### **Rework Solder Flux – SMFL**



- Quick drying aerosol flux for aiding rework of surface mount assemblies . Use prior to desoldering to aid removal of excess solder paste from boards and resoldering new components
- Provides excellent solderability
- Non tacky, non corrosive residue can be removed using solvent cleaners see page 600
- Spray flux can also be used as an anti-tarnish, protective film on copper or tinned tracks

#### CONTAINS: CO2

Flammable contents, do not use on live equipment or near any source of Warning: ignition, use in a well ventilated area.

#### Please check with Sales Office for availability

			·)	CHM12
Mftrs. List SMFL2001			Price Each 5+	12+
Gas Leak Det	ector Spray			ROCOL
	<ul> <li>Dete leaks</li> </ul>	ns at locatior	pressure gas	rayed on suspect
Figure of	Operating 300ml Ae	) temperature prosol	0°C to +50°C	CHM1
				CHIMI
Mftrs. List No.	Order Code	1+	Price Each 12+ 36	+ 96+

	300111	Aerosoi			CH	-M110
			Price	Each		
Mftrs. List No.	Order Code	1+	12+	36+	96+	
32030	.603-934					

Continued

CHM121

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Fast evaporating solvents leaving no residue • Removes flux, grease and general contamination from most plastics and elastomers

	Mftrs.	Order		Price	Each	
	List No.	Code	1+	5+	10+	20+
Protective Lacquer	CPL12P	891-150				
Connector	EOP12P	891-162				
r Mechanical Oil	CM012P	891-174				
Pen	SMF12P	891-186				
solve	ULS12P	891-198				
	Connector Mechanical Oil Pen	Protective Lacquer Connector Mechanical Oil Pen List No. CPL12P EOP12P EOP12P CMO12P SMF12P	List No. Code Protective Lacquer CPL12P 891-150 Connector EOP12P 891-162 Mechanical Oil CM012P 891-174 Pen SMF12P 891-186	List No. Code 1+ Protective Lacquer CPL12P 891-150 Connector EOP12P 891-162 Mechanical Oil CMO12P 891-174 Pen SMF12P 891-186	List No. Code 1+ 5+ Protective Lacquer CPL12P 891-150 Connector EOP12P 891-162 Mechanical Oil CMO12P 891-174 Pen SMF12P 891-186	List No. Code 1+ 5+ 10+ Protective Lacquer CPL12P 891-150 Connector EOP12P 891-162 Mechanical Oil CMO12P 891-174 Pen SMF12P 891-186

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Swabs

860-773

860-785 860-797 860-803 806-815				h		1
Foamtips <sup>®</sup> and	– Double-end p	rovides two cleani				Order Code .146-312
Foamtips <sup>⊛</sup> 130	– Elongated sw	endable 152mm p vab with rigid hea e handle, 100 pp	id to clean	fine component	•	Re-Usable
·	Polypropylen	ab with rigid hea e handle, 100 pp m head over cotl	i foamhea	d.	cv. Wooden	The second s
Chamois Tips®	– Ultra-cleaned	opi foamhead. I synthetic chamo ads. ABS handle		Il for cleaning an	d polishing	
Microtips <sup>®</sup> ● Precision so ● Low particu ● Compatible	late levels				CHM139	Pack Quantit 2ml Syringe
<b>50 Per Pack</b> Type Foamtip Pro Foamtip 130 Foamtip 140	Mftrs. List No. CFP50 CF3050 CF4050	Order Code 860-773 860-785 860-797	1+	Price Per Pack 12+	24+	5ml Syringe 10ml Syringe 20ml Syringe Plastic Glo
Foamtip 150 Chamois Tip Microtips	CF5050 CC50 CM502	860-803 860-815 860-827				
Chemswab <sup>®</sup>	, Let ¥		<u> </u>	≪ Cher	ntronics	

Chemtronics

Pre-saturated cotton bud with isopropanol

Evaporates quickly with no residue or

Easy to use

- Non-abrasive
  - Ideal for keyboards, magnetic heads, electronic components and in field service kits

CHM170

Comanniation				CHM166
25 Per Pack Mftrs. List No. CS25	Order Code 860-839	1+	Price Per Pack 12+	24+



	Mftrs.	Order		Price	Each	
	List No.	Code	1+	6+	12+	48+
Air Powered Trigger Spray		891-277 891-289				

#### Syringe



#### e Syringes



#### A comprehensive range of empty syringes

- . Fill with grease, pastes, pre-mixed two-part
- materials etc to give accurate application 4 sizes to cover the majority of requirements CHM330 ity=10 **Price Per Pack** Order Code 204 50+1+ 5+ 10 +130-497 130-503 130-515 130-527 1e ove – PGS Pre-powdered white vinyl glove Single size Reversible, fits either hand Protects hands against cleaning and degreasing solvents, ferric chloride and other chemicals Supplied in packs of 10

					CHM016
Order Multip Mftrs.	le=10		Price P	er Pack	
List No.	Order Code	1+	10+	50+	100+
PGS100	317-615.				

e-K

See Barris

Prices are in Singapore Dollars and exclusive of GST

#### Silica Gel Desiccant

- Non-indicating silica gel conforming to BS2540:1991
- Inert to most chemicals
- Prevents corrosion by absorbing high levels of moisture
- Avoid contact with bulk aqueous based fluids
- Suitable for use in any application where moisture attack is possible Use to protect hygroscopic powders, delicate electronic and communication equip-
- ment, metal surfaces and general items where moisture induced mould growth or corrosion is possible CHM167

Order Mul	tiple=10						
		Mftrs.		Price	Each		
Size	Weight	List No.	Order Code	10+	50+	100+	200+
50 100	10g	SGL010	.890-698				
85 130	50g	SGL050	.890-704				
85 165	100g	SGL100	.890-716				

#### **Cleaning Pads, Wipes and Sprays**

Wipes

#### Chemtronics



#### Chempad<sup>®</sup> Pre-saturated Wipe

- General purpose, pre-saturated, lint-free cleaning pad
- Solvent evaporates leaving no residue .
- Safe for most plastics and rubber
- Removes ink, soils and other residues ۲ ē Ideal for cleaning computers, office equipment and electronic components
- **Optic Prep**<sup>®</sup>

#### Mild nonabrasive solvent

- Quickly removes dust, oils and contaminants
- Evaporates quickly, leaving no residue
- Compatible with most plastics, glass and metals

#### Controlwipes® Dry Wipe

- Solvent resistant, high absorbency, tear resistant wipe
- ē Polyester cellulose blend
- Packed in Class 100 cleanroom environment
- Resistant to most solvents, alcohols and dilute acids • Ideal for applications requiring excellent contamination control
- Opticwipes® Dry Wipe
- Soft laboratory-grade cellulose high absorbency paper
- Non-contaminating and lint-free
- Hiah wet strenath
- Solvent resistant •
- . For applications involving optical surfaces, lab equipment lenses and other precision instrumentation
- Ideal for applications requiring excellent contamination control

					••	CHM192
50 Per Box	Mftrs.			Price Per	Box/Pack	
	List No.	Order Code	1+	4+	12+	36+
Chempad <sup>⊛</sup>	CP400	860-591				
Optic Prep <sup>®</sup>	CP410	860-580				
150 Per Pack			1+	6+	12+	36+
Controlwipes <sup>®</sup>	C910	860-610				
500 Per Pack						
Opticwipes <sup>®</sup>	C920	860-621				



#### HDL - Handclens

- Ideal for use where water is not available
- Foaming hand cleanser that does not require rinsing
- . Apply a small amount to hand and rub hands together to clean
- Foam turns to easily removed crumb •
- Contains lanolin for moisturising and pleasantly perfumed

#### AFC – Anti-Static Foaming Cleaner

- Non-flammable
- Highly efficient hard surface cleaner
- Safe on plastics 100% Ozone Friendly •

#### • Shake well before use

#### ASA – Anti-Static Spray

- Non-flammable
- Cleans and prevents static build-up •
- Long lasting anti-static properties
- Totally hazard free ē 100% Ozone Friendly

#### EWI – Electrowipes

- IPA impregnated wipes for all cleaning applications
- Electronics grade IPA saturated on to lint-free cloth
- Conveniently sachet packed

#### Warning: Flammable contents, use in a well ventillated area.

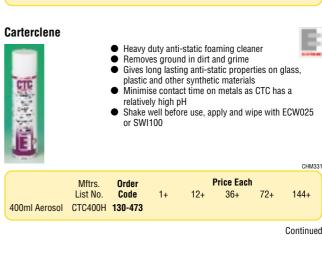
#### Please check with Sales Office for availability

- BLR/BLV BlocLube tamper evident seal
- One part
- Air curing
- Red or green •
- Tack-free after 10 minutes
- ò Adjustable for 24 hours - then becomes brittle

#### Flammable contents, do not use on live equipment or near any source of Warning ignition, use in a well ventilated area

#### Please check with Sales Office for availability

· I loude blick			y			CHM14
	Mftrs.			Price	Each	
	List No.	Order Code	1+	12+	36+	144+
150ml Aerosol	HDL150	891-241				
200ml Aerosol	AFC200D	626-260				
400ml Aerosol	AFC400D	626-272				
250ml Bottle	ASA250ML	317-536				
15ml (Red)	BLR15BE	521-747				
15ml (Green)	BLV15BE	521-759				
100 Per Box	Mftrs.		P	rice Per B	x	
	List No.	Order Code	1+	10+	20+	
Wipes	EWI100	725-675				
	150ml Aerosol 200ml Aerosol 400ml Aerosol 250ml Bottle 15ml (Red) 15ml (Green) <b>100 Per Box</b>	150ml Aerosol 200ml Aerosol 400ml Aerosol 250ml Bottle 15ml (Green) 100 Per Box Xftrs. List No.	Mftrs.           150ml Aerosol         List No.         Order Code           200ml Aerosol         HDL150         891-241           200ml Aerosol         AFC200D         626-260           400ml Aerosol         AFC400D         626-272           250ml Bottle         BLR15BE         521-747           15ml (Green)         BLV15BE         521-759           100 Per Box         Mftrs.         List No.           Ust No.         Order Code	List No. Order Code 1+ 150ml Aerosol HDL150 891-241 200ml Aerosol AFC200D 626-260 400ml Aerosol AFC400D 626-272 250ml Bottle ASA250ML 317-536 15ml (Red) BLR15BE 521-747 15ml (Green) BLV15BE 521-759 100 Per Box Mftrs. P List No. Order Code 1+	Mftrs.         Price           150ml Aerosol         HDL150         891-241           200ml Aerosol         AFC200D         626-260           400ml Aerosol         AFC400D         626-272           250ml Bottle         ASA250ML         317-536           15ml (Red)         BLR15BE         521-747           15ml (Green)         BLV15BE         521-759           100 Per Box         Mftrs.         Price Per Bot           List No.         Order Code         1+	Mftrs.         Price Each           150ml Aerosol         List No.         Order Code         1+         12+         36+           150ml Aerosol         HDL150         891-241         1+         12+         36+           200ml Aerosol         AFC200D         626-260         1+         12+         36+           200ml Aerosol         AFC200D         626-272         250ml Bottle         ASA250ML         317-536           15ml (Red)         BLR15BE         521-747         521-759         Price Per Box           100 Per Box         Mftrs.         Price Per Box         List No.         Order Code         1+         10+         20+



Internet www.farnell.com

19

# **Earnell** Electrochemicals, Service Aids & Paints



#### **Contact Maintenance**



#### EOP - Edge Connector Lubricant

- Ultra high performance lubricant in a handy felt tip pen
- Use for edge connectors and all applications using noble metals
   Excellent electrical, high temperature and mechanical properties
- Excellent electrical, high temperature and mechani

#### EML – Contact Cleaner Lubricant

- Contact cleaner lubricant for switch and contact applications
- Contains contact oil 2X in a high purity blend of solvents
- Supplied in aerosol or pen
- Harmless to most plastics and rubbers

#### Warning: Do not use aerosol on live circuits or near any source of ignition, use in a well ventilated area.

#### Please check with Sales Office for availability

- SFA Contact Treatment Fluid No. 1
- Contact Fluid No.1 in a pure solvent, packed in snorkel bottle
- Use for cleaning and lubricating switches and contacts
- Suitable for use in aggressive environments
- May affect some plastics test before use
   Non-flammable

#### Note: Use in a well ventilated area.

#### Please check with Sales Office for availability

	Mftrs.			Price	Each	
	List No.	Order Code	1+	12+	36+	144+
5cc Pen 200ml Aerosol 200ml Aerosol 55ml Bottle	EML05P EML200F SOB200D SFA55B	317-639 279-481 726-813 317-688				

#### **Non-flammable Contact Cleaner**

Mftrs

List No

200ml Aerosol CCL200 130-436

606

Order

Code

1+

Non-flammable contact cleaner
Removes oxides and dust from all contact surfaces
Ultra fast evaporating, hence should be applied as close to the item to be cleaned as possible
Safe to use on live equipment
Suitable for use where fire prevention is paramount e.g. mines, submarines etc.

#### Switch Cleaning Lubricant – Super Servisol 10

#### Solution to remove

Solution to remove contamination of

SERVISOL

CHM17

- oils and grease and halt the corrosive effects of arching and heating
  Leaves residual, relatively conductive
- Supplied with nozzle extension tube enabling easier application in confiner
- enabling easier application in confined spaces

**CONTAINS: Butane** 

Note: May affect some plastics.

Warning: Flammable propellant, do not use on live circuits or near any source of ignition, use in a well ventilated area.

#### Please check with Sales Office for availability

176ml Aerosol

		Price	Each		
Order Code	1+	12+	36+	144+	
278-786					

#### **Contact Treatment**



#### CCS - Contact Cleaning Strips

- 20 strip pack
- Mildly abrasive card strips impregnated with high performance contact oil
- Use on points, contacts and relays

#### SGB – Contact Treatment Grease 2GX

- High quality, non-melting contact grease 2GX
   Beduces arcing and contact wear Beduces millivolt discussion
- Reduces arcing and contact wear. Reduces millivolt drop
   Specified world wide for automative and demostic switch applie
- Specified world-wide for automotive and domestic switch applications
   Available in aerosol (flammable) and syringe packaging
- Warning: 279-493 has flammable contents, do not use on live circuits or near any
- source of ignition, use in a well ventilated area

#### Please check with Sales Office for availability

- CG53A Contact Treatment Grease 53A ● Luer Lock syringe dispenser
- New generation contact grease with excellent electrical properties
- Highly plastics compatible
- Good high and low temperature performance
- Offers low and stable contact resistance

						CHM20
Pack of 20	Mftrs.			Price P	er Pack	
	List No.		1+	10+	30+	100+
Cleaning strips	CCS020	317-690				
				Price	Each	
			1+	12+	36+	144+
200ml Aerosol	SGB200D	279-493				
			1+	10+	30+	100+
20ml Syringe	SGB20S	317-652				
35ml Syringe	SGB35SL	317-664				
			1+	10+	20+	
35ml Syringe	CG53A	725-602				

#### Major International Brands

All the leading brand names from over 1,000 major international manufacturers.

12 +

**Price Each** 

36+

72+

Prices are in Singapore Dollars and exclusive of GST

19

CHM019

CHM319

144+

**Speciality Lubricants** 



#### Ferric Chloride (FCC)

- Sealed packet of ferric chloride hexahydrate for etching copper clad boards
- Dissolve the packet (250g) in warm de-mineralised water
- Makes up to 500ml
- Solution may be heated to lengthen life
- Photoresist Developer (PDN)
- An alkaline, aqueous developer for positive photoresists particularly PRP200
   Dilute 1 to 4 with de-mineralised water and use at above 20°C

#### Photoresist (PRP)

- Fast drying positive photoresist aerosol
- Use for one to one reproduction of circuits etc., on metal from transparent positive masters
- Intended for PCB prototyping but may be used for areas of technical or artistic reproduction CHM32

		Order			Price Each		
	Size	Code	1+	5+	10+	20+	50+
Ferric Chloride	250g	130-539					
Developer	250ml	130-540					
Photoresist	200ml	130-552					

#### **Conformal Coating Removal Pen**

- **Conformal Coating Removal Pen** Removes most types of coatings in seconds • Spot clean tight tolerance areas on circuit boards • Marker dispenser provides controlled and exact application Evaporates quickly •
  - Provides low surface tension for superior wetting

  - Conveniently sized repair/prototype dispenser •
  - Multilingual instructions and regulatory information

							CHM326	
Mftrs.		Order			Price Each	ı		
List No.	Size	Code	1+	6+	12+	24+	72+	
CW3500	9g	130-667						

#### Flux Removal/Dispensing



#### Dispensing Pens

Chisel tip marker provides exact delivery of flux to surface Easily removes with appropriate Flux Remover Pen or Flux-Off flux remover

- No clean Flux Dispensing Pen
- Applies a patented non-corrosive, halide free, organic no-clean flux
   Flux meets Bellcore TR-NWT-000078 and IPC SF-818 for Surfface Insulation Resistance
- Rosin Flux Dispensing Pen
- Applies a non-corrosive Type R flux
   Flux meets MIL-14256 E+F Type R and RMA

#### **Remover Pen**

Completely removes flux in seconds

Spot cleans tight tolerance areas on circuit boards Marker dispenser provides controlled and exact application Dries fast

								01111020
Description	Mftrs. List No.		Order Code	1+	F 6+	rice Eac	h 24+	72+
<b>Dispensing Pens</b>		,						
No clean Flux	CW8100	9g	130-692					
Rosin Flux	CW8200	9g	130-709					
Remover Pen								
No Clean Flux	CW9100	9g	128-727					

#### Lubricants





#### HTG - High Temperature Grease

- Temperature range -20°C to +200°C
- ė Does not harden at high temperature
- . Low evaporation weight loss
- Fortified with anti-wear and anti-oxidant additives .
- Water resistant

#### MPG - Multipurpose Grease

- Wide temperature range •
- Good lubricating and thermal properties .
- Safe on most thermoplastics

#### Non-melting

#### SPG - Special Plastics Grease

- Superb plastic compatibility
- Excellent mechanical lubricant
- Will not adversely affect electrical performance
- ė Use for plastic gears, cogs, slides etc.
- EPE Permagard 40
- De-watering fluid
- Loosens seized metal parts
- Protects against rust and corrosion
- 100% Ozone Friendly
- Warning: Flammable contents, do not use on live equipment or near any source of ignition, use in a well ventilated area.

#### Please check with Sales Office for availability

#### MPO – Multipurpose Oil

- Light, general purpose oil for all mechanical lubrication applications .
- Reduces wear and friction . Prevents rust and corrosion
- Excellent lubrication characteristics

#### Tenacious film

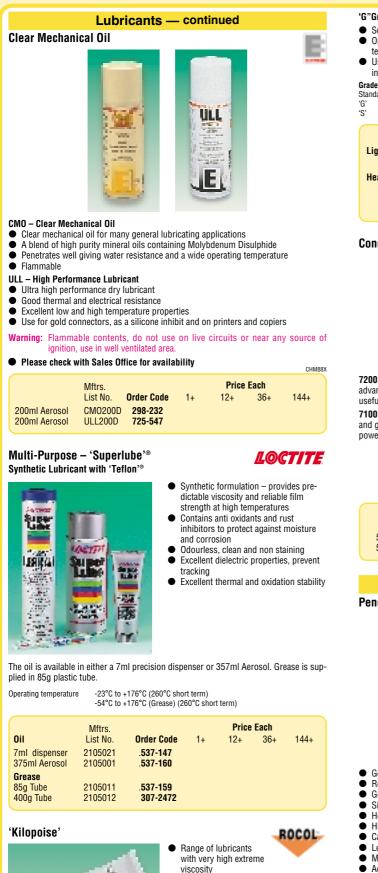
<ul> <li>Tchaclous mini</li> </ul>						CHM30X
(	Mftrs.			Price	Each	
	List No.	Order Code	1+	10+	20+	50+
50ml Tube	HTG50T	891-290				
50ml Tube	MPG50T	317-846				
35ml Syringe	SPG35SL	725-626				
			1+	12+	36+	144+
200ml Aerosol	EPE200H	298-244				
400ml Aerosol	EPE400H	298-256				
			1+	5+	20+	100+
250ml Tin	MP0250ML	317-834				

#### Silicone Oil – OSL400

CHM329



Internet www.farnell.com



'G"Grades

- Soap thickened Operates at high operating temperatures
- Used in view of wider clearance involved

#### Meltina Point Standard

Fluid at room temperature 95°C

'S'	205°C					CHM34
				Price Each		
Light Grade		Order Code	1+	12+	36+	
0001G	50g Tube	101-671				
Heavy Grade						
0868	50g Tube	101-677				
0868G	50g Tube	101-679				
0868S	50g Jar	101-720				

'S"Grade

grade

•

•

Available in heavy grade only

Retains consistency when worked

Higher operating temperature than 'G'

Colloidal silicia thickened

#### **Conductive Greases**



7200 Carbon conductive grease combines electrically conductive carbon graphite with advance silicone lubricants. It features excellent high temperature properties making it useful in applications where dripping or running at temperature may cause a problem 7100 Silver conductive grease combines pure silver with advanced silicone lubricant, and gives both electrical and thermal conductivity. Ideal in low power electronic or high power electrical applications.

		ture range conductivity	<b>7100</b> Silicone Grease Silver -57°C to 252°C <0.01Ωcm 255°C	Carbon		CHM164X
Size 50ml 50ml	Mftrs. List No. CW7200BLK CW7100BLK	Order Code 860-633 860-645	1+	Price Ea 6+	<b>ch</b> 12+	24+



	Mftrs.			Price	Each	
Oil	List No.	Order Code	1+	12+	36+	144-
7ml dispenser	2105021	.537-147				
375ml Aerosol	2105001	.537-160				
Grease						
85g Tube	2105011	.537-159				
400g Tube	2105012	307-2472				



Acts in manner which is opposite of

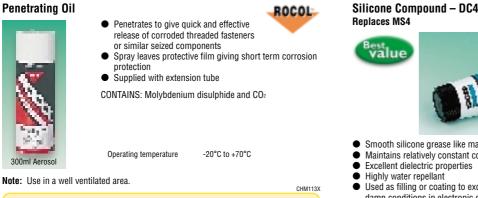
5 Litre + spray

726-862

standard lubricants Increases difficulty of movement between surfaces

Designed for assemblies where a fine adjustment or slow motion is produced by hand, where free motion is required to be dampened, and where sealing is required, but not for moving machinery in the ordinary sense

608 Electronic, Electrical and Mechanical



			Price	Each	
Mftrs. List No.	Order Code	1+	12+	36+	144+
14025	.450-996‡				

#### NC123 Extra



#### NATIONAL CHEMSEARCH

- Displaces moisture .
- Inhibits corrosion and rust Lubricates and cleans
- . Prevents electrical failure caused by moisture
- Ideal for use on electrical and electronic equipment

**CONTAINS: Butane and Propane** 

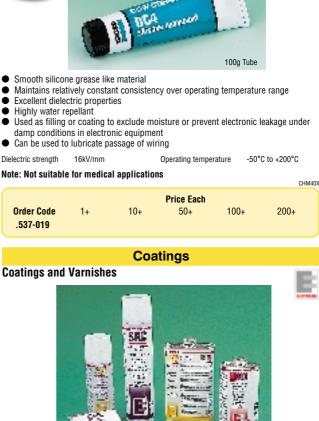
Note: Will not affect electrical characteristics, will not harm metals, most laquers and enamels, ceramics or plastics

Warning: Flammable contents and propellant, do not use on live equipment or near any source of ignition, use in a well ventilated area.

#### Please check with Sales Office for availability

				CHM37
Order Code 451-253	1+	Pric 12+	<b>e Each</b> 36+	144+
Lubricants		DFL –	Dry Film Lubrica	nt B
	Rine al	<ul> <li>Hig can</li> <li>Che mig</li> <li>Wa fric</li> <li>Use uns</li> <li>Ma for</li> </ul>	h purity PTFE bas t mically inert film yrate or attract co ter repellent with tion	sed lubri- which will not ntamination a low coefficient of or mineral oils are a mould release
<ul> <li>CO – Silicone Gree</li> <li>High insulating</li> <li>Chemically inert</li> <li>Excellent resista</li> <li>Meets MIL-1-86</li> <li>100% Ozone Fri</li> </ul>	silicone compo t, non toxic and ance to tracking 660B and DEF S	und with good v odourless	vater resistance	
	y source of igni	ition, use in a we	ell ventilated area.	n live equipment or
Products contain: C	0 <sup>2</sup>			
Operating temperature	s -200°C to +20	0°C		CHM38>
	Mftrs.	Order	Price Ea	ich

	Mftrs.	Order		Price	Each	
	List No.	Code	1+	12+	36+	144+
200ml Aerosol	DFL200D	.298-268				
200ml Aerosol	SC0200D	298-270				



#### CPL - Clear Protective Lacquer

#### 200ml aerosol

•

- General purpose coating
- Solvent removable
- High gloss
- Good humidity resistance •
- Can be soldered through safely 100% Ozone Friendly

- SRC Silicone Removable Coating
- Solvent removable, silicone conformal coating
- May be safely soldered through
- Good adhesion
- Good humid ageing properties
- 100% Ozone Friendly

#### UV trace for easy inspection

- TRV Tropicalised Varnish
- An air drying, acrylic based varnish incorporating a UV trace for inspection purposes
- Use for protecting PCBs and assemblies
- Touch dry in approximately 10 minutes
- Incorporates a fungicide to prevent attack in high humidity atmospheres .
- Wide operating temperature
- Excellent electrical properties

#### MR8008 - Insulating Varnish

- Solvent based, air drying polyurethane, one-part varnish Dipping grade for the insulation and protection of PCBs, transformers and wound components
- Touch dry in approximately 60 minutes
- Wide operating temperature .
- Contains UV trace for inspection

#### Warning: All the above have flammable contents, do not use on live equipment or near any source of ignition, use in a well ventilated area.

#### Please check with Sales Office for availability

			,			CHM041
	Mftrs.			Price	Each	
	List No.	Order Code	1+	12+	36+	72+
200ml Aerosol	CPL200H	521-462				
400ml Aerosol	SRC400	891-319				
500ml Tin	TRV500ML	958-360				
250ml Tin	MR8008	958-372				

19 609 Electrochemicals, Service Aids & Paints

#### Coatings — continued



#### DCA/DCR - SCC3 Conformal Coating

- Transparent (DCA) or Red (DCR) UL approved coating
- Very high chemical and solvent resistance
- Not solvent removable
- UV trace for inspection (DCA only)
- . Heat cure for maximum protection
- Can be safely soldered through
- Operating temperature range -70°C to +200°C
- . 100% Ozone Friendly
- Flammable contents and propellant, do not use on live equipment or near Warning: any source of ignition, use in a well ventilated area.
- Please check with Sales Office for availability

#### TFCF - Fluorocoat - Thin Film Coating

Thin film coating offering excellent moisture resistance

- Suitable for use in telecommunications and passenger compartment applications .
- Applies a very thin film which breaks when connectors etc. are inserted
- Does not require labour intensive masking of sockets and other components
- Packed in handly 250ml pump spray for use in maintenance and repair • UV trace for easy inspection

#### HPA - High Performance Acrylic Conformal Coating

- Conforms to MIL-1-46058C
- . UV trace for inspection
- Solvent removable
- Safely soldered through
- Operating temperature range -55°C to +130°C
- 100% Ozone Friendly

#### Warning: Flammable contents and propellant, do not use on live equipment or near any source of ignition, use in a well ventilated area.

#### Please check with Sales Office for availability

						6011/174
	Mftrs.			Price	Each	
	List No.	Order Code	1+	12+	36+	144+
200ml Aerosol	DCA200H	298-293				
1 Litre tin	DCA01L	725-705				
200ml Aerosol	DCR200H	298-300				
200ml Aerosol	HPA200H	298-281				
1 Litre tin	HPA01L	725-699				
			1+	12+	36+	72+
250ml Pump spra	ay TFCF250	891-320				

**Re-Work** 

400ml Aerosol APL400H

15ml Container SRC15ML

APL15ML

15ml Container



Coatings	<b>S</b> Ch	emtronics <sup>.</sup>

- Konform® conformal coatings are used in spray, dip tank and brush applications
- Protect PCB Components and flex circuitry from damage
- Most Konform® conformal coatings contain a UV indicator for improved QA
- Dielectric strengths of 1100 volts/mil or more Tough, clear transparent coating will not fragment, chip or crack
- .

**Conformal Coatings** 

No mixing required All Konform® products are plastic safe and upper ozone safe CFC/HCFC Free

#### Konform<sup>®</sup> SR

- Engineered for applications where flexibility and high temperature resistance are reauired
- Silicone coating stable from -64°C to +199°C
- High dielectric strength of 1100 volts/mil
- Easily removed with Electro-Wash Two Step or Conformal coating remover pen • UL recognised, Mil-46058C

#### Konform<sup>®</sup> AR

- Designed to provide effective insulation against electrical shorts and harsh environments
- Acrylic coating stable from -59°C to +137°C
- High dielectric strength of 1200 volts/mil .
- Provides excellent acid resistance
- UL recognised, Mil-46058C

#### Konform® UR

- Ideal for applications that require good abrasion and solvent resistance Urethane coating stable from -45°C to +110°C
- High dielectric strength of 1200 volts/mil • UL recognised, Mil-46058C

#### Konform® UV

CHM174

- UV curable in 30 seconds
- Conformal coating stable from -54°C to +163°C •
- Meets MIL-1-46058C
- **Product Selection Guide** Temperature Abrasion Organic Solvent Acid Resistance Resistant Resistant Resista Flexi-Solder- Repair- Humidity Product Resistant ability bility ability Konform® SR \*\*\*\* \*\*\* \*\*\*\* \*\*\* Konform® AR \*\*\* \*\*\* Konform® UR \*\* ~ \*\* \*\* \*\* Konform® UV

Warning: All have flammable contents, do not use on live circuits or near any source of ignition, and use in a well ventilated area.

Please check with Sales Office for availability

						01101103	
Description	Mftrs. List No.	Pack Size	Order Code	1+	Price Each 6+	12+	
Konform <sup>®</sup> SR	CTSR1E CTAR-12E CTAR1E CTUV32	400ml Aerosol 5Ltr Container 400ml Aerosol 5Ltr Container 1 Litre Container 5Ltr Container	304-4270 305-8670 304-4294 305-8682 304-4336 304-4348				

#### Silicone Conformal Coating

#### DOM: COMP.

CHM189



610 Electronic, Electrical and Mechanical

302-6838

130-450

130-461

# 61 Electrochemicals, Service Aids & Paints

#### Shielding



Excellent surface resistivity • Excellent adhesion Fast drying Excellent attenuation levels •

100% Ozone Friendly

•

SCP - Silver Conductive Paint

NSC - Nickel Screening Compound

- Highly conductive silver loaded resin
- . Fast drying Ideal for track repair
- Ideal for pinpoint shielding
- Both of the above products contain flammable contents, do not use on live Warning:
- equipment or near any source of ignition, use in a well ventilated area Please check with Sales Office for availability

• Trease uncor	with ouros	Onioc for ava	nabint	'			CHM44>	(
	Mftrs.			Р	rice Eac	h		ľ
	List No.	Order Code	1+	6+	12+	36+	144+	
400ml Aerosol	NSC400H	.521-450						
			1+	12+	36+	144+		
3g Bottle	SCP03B	725-614						

#### Coatings

D sty under all Collection and State of the second second .

and which we are

#### Conductive Pen

- Pen dispenser for drawing highly conductive silver traces,
- jumpers and shielding with precision and control
- Quickly creates conductive silver traces on most surfaces • Valved pen tip for easy application
- Can be soldered at low temperatures •
- Dries in minutes at room temperature
- ۲ Choice of Micro Tip for fine lines or Standard Tip for wider lines

#### Flex Conductive Pens

- Micro-Tip pen for drawing conductive traces on flexible and ITO surfaces
- Quickly creates flexible conductive silver traces on Mylar<sup>®</sup> and flex circuitry
- Micro tip for precise applications
- Dries in minutes at room temperature highly adherent polymer system
- **Overcoat Pen**

1

в

- Pen dispenser for precise application of a tough protective acrylic conformal coating
- Protects conductive pen traces
- Repairs permanent solder mask Protects against shorting, arcing, abrasion and moisture
- Dries in minutes at room temperature
- Choice of clear or green coating
- Both of the above contain flammable contents, do not use near any source Warning: of ignition, use in a well ventilated area

#### Please check with Sales Office for availability

		Order		Price	Each	
Description	Size	Code	1+	5+	10+	20+
Conductive PEN - STAN 1.4 Conductive Pen - Micro 0.7 Flex Conductive Pen Overcoat Pen - Clear Overcoat Pen - Green	8.5g 8.5g 4.9g	.604-010 604-021 130-655 .604-033 .604-045				

#### Tamper-proof Coating

#### Varnistop Red 7400



100 +

CHM162

CHM344

- Solvent based dark red marking ink for use on electronic equipment
- Excellent adhesion to metal and plastic fasteners
- Dry to touch in 5 minutes .
- Used for tamper-proofing and warranty seals •
- Ideal for securing trim pot settings
- Enables a visual inspection of adjustement

Order Code 1+

- Price Each 10 +50+
- 307-2034

# **Conformal Coating Thinners**

Thinners



#### Non-Acrylic Conformal Coating Thinners (DCT)

- Use to dilute coatings for use in dip and spray applications
- Suitable for use with all non-acrylic based conformal coatings •
- ò High purity solvent blend

#### Universal Acrylic Thinners (UAT)

- Suitable for use with all acrylic based conformal coatings
- Use to dilute coatings for use in dip and spray applications •

ò High purity solvent blend

Warning: Flammable contents, do not use on live equipment or near any source of ignition, use in a well ventilated area

#### Please check with Sales Office for availability

				Price Each	
Туре	Size	Order Code	1+	5+	10+
DCT	1 litre	305-1985			
DCT	5 litre	305-1997			
UAT	5 litre	305-2011			

#### **Masking Agent**

#### Chemtronics

CHM350



- Chemask® solder masking agents protect PC boards, plated through-holes, contacts, pins, posts and terminals during wave soldering
- Provide short term high temperature protection from molten solder to 268°C . • Non-flammable
- Non-contaminating leaving no residue, ionic or corrosive .
- Solder masking agents available in convenient squeeze bottles • Plastic safe, non-flammable, upper ozone safe; CFC/HCFC free

#### **Chemask**®

**Chemask**<sup>®</sup>

- Dries tack-free in 30 minutes •
- Latex material is compatible with flux systems and stable with cleaning solvents

#### Chemask® HV

- More controlled application
- Thicker coating does not seep through thru-holes
- õ Latex material is compatible with flux systems and stable with cleaning solvents

#### Chemask® DA

- Dries tack-free in 30 minutes
- . No ammonia - low odour
- Non-corrosive Chemask® W

- Easily removed in water cleaning cycles
- UV indicator for positive quality control • •
- Non-corrosive; safe for sensitive gold, silver and copper contacts

#### Chemask® WF

- Dissolves in water cleaning cycles
- Does not clog filters . Non-corrosive; safe for sensitive contacts

						GLIMOOS
Description	Size	Mftrs. List No.	Order Code	1+	Price Each 12+	24+
Chemask®	236ml	CM8	860-529			
Chemask <sup>®</sup>	5 Ltr	CM1	305-8700			
Chemask <sup>®</sup> DA	236ml	CDA8	304-4373			
Chemask <sup>®</sup> DA	5 Ltr	CDA1	304-4385			
Chemask <sup>®</sup> HV	236ml	CHV8	304-4350			
Chemask <sup>®</sup> HV	5 Ltr	CHV1	304-4361			
Chemask <sup>®</sup> W	236ml	CW8	304-4397			
Chemask <sup>®</sup> W	5 Ltr	CW1	304-4403			
Chemask <sup>®</sup> WF	236ml	CWF8	304-4415			
Chemask <sup>®</sup> WF	5 Ltr	CWF1	304-4427			

611

CHM339



CHM352 Price Each Mftrs List No. Order Code 1+ 12+ 6+ 200ml Aerosol HTCA200 302-6863 **Conductive Rubber Jointing Compound**  Room temperature vulcanising thermally conductive rubber Thermal conductivity of 2W/mK • Wide operating range from -50°C to 230°C (peak at 構造品 260°C) Use as a low strength adhesive, sealant or gasketing compound E CHM318 Mftrs Order Price Each List No. Code 10 +20+50+ 1+ 5+ 100ml Tube TCR100 130-485 Thermally Conductive Adhesive - 'Output'® 315 LOCTITE Self Shimming High thermal conductivity • Self shimming, produces a consistent 0.15mm gap Controlled strength for serviceability Eliminates the need for mechanical fasteners Ideal for use on heatsinks, thyristors, transistors, rectifiers, regulators etc. 25ml Adhesive + 18ml Activator Tensile shear strength Modified Methacrylete 7N/mm<sup>2</sup> (1000psi) 1.1x10<sup>-4</sup>/-°C Base compound Colour Coefficient of thermal expansion Blue 0.815 W/m.K Thermal conductivity Operating temperature -55°C to +150°C Surface resistivity 1.2 10<sup>13</sup>Ω

Warning: Flammable contents, do not use near any source of ignition, use in a well ventilated area.

#### Please check with Sales Office for availability

Note: Due to shelf life, this product should be used within three months of purchase in order to maximise its performance.

						UHIVI 1337
Two-Part Kit Mftrs.				Price Each		
List No.	Order Code	1+	5+	20+	50+	100+
1705052	.537-020					

	IY & EIIC	apsulating	material	5
Primer 1200	<ul> <li>Suppli reactiv</li> <li>Used t canizir</li> </ul>	Flammable co	& P naphtha on of room ter after applicat	mperature vul-
Note: Not suitable for r Please check with S		availability	e Each	CHM72
Order Clear, 500ml 101-			50+	100+

• Please check with Sales Office for availability

'Silastic' RTV Silicone Rubber – 9161 Asserced					
FILVEILE Marmite Marmite	-	<ul> <li>Solvent-free easy to pour liquid</li> <li>Cures at room temperat of a liquid catalyst (sup</li> <li>Suitable for potting and of electronic and electri components caulking at applications</li> <li>Supplied in kit form, east Silastic RTV 9161 and 4 catalyst (by weight)</li> </ul>	plied) encapsulation cal nd sealing ch containing		
Cure schedule (by weight) 2% catalyst @ 25°C Pot life – 1% catalyst 1.5% catalyst 3% catalyst 4% catalyst	24 hrs. 35 mins. 25 mins. 12 mins. 7 mins. 3 mins.	Operating temperature range Dielectric strength Elongation Tensile strength Tear strength	-50°C to +250°C 22kV/mm 150% 2.75MPa 2.2kN/m		

Warning: Flammable contents, do not use near any source of ignition, use in a well ventilated area

#### Note: Not suitable for medical applications

		Price Each			
	Order Code	1+	10+	50+	100+
Standard kit, 0.5kg Industrial kit, 5kg	101-778 101-779				

#### 'Silastic' RTV Silicone Rubber - 3110



Similar to 9161 RTV described above with differing cure schedule and pot life. Colour: White Cure Schedule (by weight) Pot Life

5% catalyst – 4 hrs.	50 mins.
0% catalyst – 2 hrs.	20 mins.
0% catalyst – 1 hr.	5 mins.
perating temperature range	-65°C to +250°C
ielectric strength	24kV/mm
longation	180%
ensile strength	2.75MPa
ear strength	3.5kN/m
-	

Note: Not suitable for medical applications

	Price Each				
	Order Code	1+	10+	50+	100+
3110 RTV, 5kg Catalyst, 0.5kg	101-711 101-686				

#### Silastic 145 RTV Two part, low viscosity silicone elastomer Non-toxic, with no odour Excellent dielectric properties • Low specific gravity Stable at low and high temperatures . . Protects against moisture and other environmental attacks No stress on encapsulated components Easy to cut out, repair and re-encapsulate Developed for encapsulating high performance electrical, electronic units and low voltage assemblies Cure schedule ure) Working time @ 23°C 90 -5 2 10

Operating temperature range	-00
Dielectric strength	24k\
Viscosity @ 25°C	10,5
Specific gravity	1.15
Hardness, Shore A	40
Tensile strength	2.40
Pack weight	5.5k
Colour	Blue

24 hrs. @ 23°C (room temperatu
90-120 mins.
-50°C to +180°C
24kV/mm
10,500mPa.s.
1.15
40
2.40MPa
5.5kg

**Price Each** 10+

50+

Note: Not suitable for medical applications

	Order Code	1+
5.5kg	956-983	

'Sylgard' Silicone Elastomer – 170



Two-part medium-low viscosity liquid silicone

- Cures at room temperature to a flexible flame retardant rubber Meets UL94V-0 and MIL-S-23586D .
- .
- Black base component and buff curing agent which is an aid to thorough blending Designed for general potting and encapsulating applications of modules, relays, power supplies, amplifiers, transformers, ferrite cores and connectors

#### • Colour: Black/Grey

CHM74X

CHM75X

CHM208

100+

Mix ratio by we	eight	1:1	Operating temperature range	-60°C to +200°C
Cure schedule	@ 25°C	8 hrs.	Dielectric strength	18kV/mm
	@ 70°C	15 mins.	Elongation	150%
	@ 100°C	8 mins.	Tensile strength	3.5MPa
	@ 150°C	3 mins.	Tear strength	1.7kN/m
Pot life	@ 25°C	1 hr.		

#### Note: Not suitable for medical applications

			Price	Each	
	Order Code	1+	10+	50+	100+
Standard kit, 2kg Industrial kit, 10kg	101-693 101-694				

#### 'Sylgard' Silicone Elastomer – 182 and 184



and 184	269F COR
Clear silicone material	

CHM76X

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- Low viscosity liquid ē Blends easily with curing agent and flows around intricate parts
- Choice of cure schedules offers flexibili Cures as a flexible incapsulant Used for potting and encapsulation of

necessary

2hrs -55°C to +200°C

24 hrs @ 25°C 15 mins @ 150°C



	Colour:	Translucent
	Type 182	Type 184
Mix ratio by weight	10:1	10:1
Cure schedule	4 hrs @ 65°C	24 hrs @ 25
	15 mins @ 150°C	15 mins @
Pot life @ 25°C	8 hrs	2hrs
Operating temperature range	-55°C to +200°C	-55°C to +2
Dielectric strength	24kV/mm	24kV/mm
Viscosity, mixed	40 poise	40 poise
Elongation	100%	100%
Tensile strength	6.2MPa	6.2MPa
Tear strength	2.7kN/m	2.7kN/m
*Full electrical properties achieve	d after seven days.	
Note: Not suitable for media	cal annlications	

Note for medical application

1.1kg Kit		Price Each								
Ū	Order Code	1+	10+	50+	100+					
Sylgard 182 Sylgard 184	101-695 101-697									

Continued

#### **Free Same Day Delivery**

For orders received before 12.30pm we provide free same day delivery.

#### Potting & Encapsulating Materials — continued **Epoxy Encapsulant** Araldite



- A range of two-part encapsulants complete with mixing spatula, one pair of protective gloves and instructions for use.
- Low Viscosity 147-588 (CY1301GB)
- Transparent pale coloured encapsulant • For fast filling of small units and components requiring visual
  - inspection. Encapsulant provides good thermal endurance and excellent dielectric properties.
- Flame Retardant 147-589 (CW1302GB) Filled, general purpose, easy to pour
- encapsulant.
- Fulfils class V-O of flammability standard UL94
- The filler fulfils outstanding arc and tracking resistance
- . Encapsulant has high thermal conductivity to aid heat dissipation
- Flexible 147-590 (CW1312GB)
- Filled, flame retardant incapsulant • Fulfils class V-O of flammability standard UL94
- The filler imparts outstanding arc and tracking resistance
- . Low viscosity to aid mixing and pouring
- . Encapsulant has high thermal conductivity to aid heat dissipation
- Ideal for large metal units and pressure sensitive devices

		147-588	Order Codes 147-589	147-590
Mftrs. List No's.		CY1301GB	CW1302GB	CW1312GB
Mix ratio by weight		100:30	100:11	100:9.5
Mix ratio by volume		100:37	100:20	100:17.5
Cure cycle @ 25°C		2 days	2 days	2 days
@ 60°C		2 hrs	2 hrs	4 hrs
@ 100°C		1 hr	1 hr	1 hr
Usable life @ 25°C	50ml	2½ hrs	2¾ hrs	3½ hrs
	500ml	½ hr	1½ hrs	1¾ hrs
Max. op. temp.	Short term	180°C	180°C	150°C
	Long term	120°C	120°C	110°C
Deflection temp. (BS2)	782 method)	57°C to 63°C	57°C to 63°C	Flexible
Electric strength (kV/n	nm)	12 to 14	10 to 12	10 to 12
Viscosity mixed (poise	e)	12	20	100
Hardness (Shore)		D82	D82	C84
U.M.	Resin	2 273g	1 811g	1 957g
	Hardener	2 94g	1 94g	194g
Volume (mixed)		630ml	550ml	600ml
Colour		Pale Yellow	Off White	Off White
				CHM78X
		Pr	ice Per Pack	
Description	Order Code	1+ 6+	24+	48+

Low viscosity Flame retardant Flexible

19

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Electrochemicals, Service Aids & Paints

.147-588

Encapsulants

#### **Enseal Encapsulants**



- Enseal Encapsulants seal and protect electronic components

- Free

#### Enseal RTVG & RTVC

- Reversion resistant
- Non-corrosive
- **BTVC Clear**
- High optical transparency • Flowable
- EB Black Epoxy • Flame retardant - meets UL 94V-0
- Conceals components completely
- **Enseal SG**
- Transparent green gel •
- . Two part system - Easy 1:1 mix ratio
- Easy to rework and repair
- Extremely soft and flexible

	Enseal EB	Enseal EC	Enseal RTVC	Enseal RTVG	Enseal SG		
Abrasion Resistant	Yes	Yes	No	No	No		
Organic Solvent Resistant	Yes	Yes	No	No	No		
Flexibility	**	**	****	****	****		
Repair ability	*	*	***	***	****		
Mix ratio by Weight	1 to 1	1 to 1	1 to 1	1 to 1	1 to 1		
Mix ratio by Volume	1 to 1	1 to 1	1 to 1	1 to 1	1 to 1		
Cure @ 25°C	6hr	24hr	12hr	24hr	30min		
Cure @ 90°C	1hr	3hr	30min	1hr	6.0min		
Cure @ 120°C	30min	1hr	10min	15min	5.0min		
Usable Life @ 25°C	2hr	2hr	2hr	2hr	30min		
Max. Operating Temp.	80°C	163°C	204°C	204°C	200°C		
Viscosity Mixed	9100cps	2500cps	2000cps	2900cps	475cps		
Thermal Conductivity W/mK	0.58		0.02	0.03	0.02		
Color	Black	Amber	Clear colourless	Grey	Transparent Gree		
Volume Resistivity ASTM D 257Ω/cm	1 1014	1 1015	1 1015	1 1015	1.6 1015		
Dielectric Constant @ 1KHz ASTM D 150		3.2	2.7	3	2.79		
Dielectric Strength volts.mil ASTM D 149	420	415	500	500	570		
* Poor ** Average **	* Good *	*** Exceller	nt				

						CHM35	1
Type RTVG RTVG EB EB EC EC SG SG	Mftrs. List No. EN104G EN1032G EN104C EN204B EN2032B EN204C EN2032C EN304 EN3032	Pack Size 118ml 950ml 118ml 950ml 118ml 950ml 118ml 950ml	Order Code 304-4439 304-4440 304-4452 304-4456 304-4488 304-4490 304-4506 304-4518 304-4520	1+	Price Each 5+	10+	

#### **Twin Pack Encapsulating Systems**





- . Two part epoxy/polyurethane encapsulants
- Supplied in air tight plastic bag to correct mix ratio • Resin and hardener are separated by a resin proof clip
- To mix, remove clip and 'mix in the bag'
- Safe and easy to use system
- Reduces risk of air contamination usually found when contentionally mixed

#### Epoxy

- Generally have higher temperature than polyurethane
- They are harder and stronger with better adhesion
- Superior resistance to moisture during/after cure
- Exhibit low shrinkage during cure

High abrasion resistance

#### Polyurethane

- Softer and more flexible than epoxies causing less stress on components
- CHM93X

alue

value

#### Epoxy **General Purpose**

Robnor

- Flame retardant epoxy resin and hardener
- Gives permanent environment protection
- Curing time can be decreased by baking between 50°C and 100°C
- Can be used in most PCB components and materials Contains 4.4 Diaminodiphenylmethane, a toxic material. Should be used in a well .
- ventilated area with suitable eye/face protection and gloves

#### Non DDM

- Non-toxic flame retardant encapsulating epoxy resin
- High electrical strength and thermal conductivity
- System gives good cosmetic finish

FOR SPECIFICATIONS SEE CROSS REFERENCE CHART ON PAGE 54 CHM70V

- 614 Electronic, Electrical and Mechanical
  - Prices are in Singapore Dollars and exclusive of GST

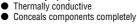


- Convenience packaging for precision applications

#### 4oz Squeeze bottles and 32oz Jar Kits

- Two part 1:1 ratio
- All Enseal products are Plastic Safe, Non Flammable & Upper Ozone safe CFC.HCFC

#### Two part system – Easy 1:1 mix ratio



Enseal EB & EC

RTVG - Grey Opaque

- Two part system Easy 1:1 mix ratio
- Abrasion resistan, hard coating
- High strength
- Flowable
  - EC Transparent Epoxy Excellent insulation properties

.147-589 .147-590

	Price Each								
Size	Order Code	1+	10+	50+	100+				
General Purp	ose								
50g	147-161								
100g	147-162								
250g	725-997								
500g	147-163								
1000g	148-215								
Non DDM									
50g	537-305								
100g	537-317								
250g	537-329								
500g	537-330								
1000g	537-342								

#### Polyurethane

#### **Halogen Free**

- Low cost, general purpose potting and encapsulation system •
- Quick cure time
- Good adhesion to a wide range of substrates
- Recommended for light electrical applications where the continuous temperature is • less than 100°C

Robnor 📰

#### Low Viscosity

- Two part flexible encapsulant designed to give environment protection
- Does not cause component stress by shrinkage during cure
- Offers short gel time
- No exotherm, heat evolved problems
- Demonstrates good adhesion to a wide range of materials
- Ideal for flexible joints

						CHM15
			Price	Each		
Size	Order Code	1+	10+	50+	100+	
Halogen Free						
270g	725-961					
566g	725-973					
1131g	725-985					
Low Viscosity						
500g	725-950					

#### Epoxy – EER

#### **General Purpose**

- Gloss black flame retardant encapsulant
- Low exothermic properties during cure at ambient temperatures
- Applications include potting PCB's, coils, transformers or mould casting

#### **General Purpose - Non DDM**

- Black flame retardant encapsulant
- . Free of DDM or other aromatic amines
- Very low exothermic properties during cure Cold or hot cure system

#### **High Temperature**

- Gloss/matt black flame retardant encapsulant
- Operating temperature of up to 150°C, short term (130°C continuous)
- Low exothermic properties during cure
- Applications include potting PCB's, transformers, rectifiers, solid state relays etc.
- ē Gloss finish achieved when cured above 25°C

#### **Thermally Conductive**

- Gloss white flame retardant encapsulant
- Free of abrasive fillers such as alumina
- Low exothermic properties during cure
- High operating temperature in short term, 150°C (130°C continuous)
- Applications include potting PCB's, power supplies, DC-DC converters, •
- transformers etc Thermal conductivity, 1.26W/mK

FOR SPECIFICATIONS SEE CROSS REFERENCE CHART BELOW

CHM942

	Price Each										
Size	Order Code	1+	10+	50+	100+						
General Pur	pose										
250g	108-779										
500g	108-780										
Non DDM											
50g	307-2149										
100g	307-2150										
250g	307-2162										
500g	307-2174										
1000g	307-2186										
High Tempe	rature										
250g	108-781										
Thermally C	onductive										
250g	108-783										

#### Polyurethane - EUR

#### **General Purpose**

- Black semi-rigid flame retardant encapsulant
- Good water and impact resistance
- Cured product produces very little stress
- Applications include cable jointing or potting transformers, power supplies or fer-• rites

#### **High Performance**

- Black encapsulant with high toughness/tear resistance
- Excellent dielectric properties .
- Low water absorption and high resistance to sea water
- Applications include high quality potting, speciality cable jointing, terminations etc Renairable

#### •

- Blue flame retardant encapsulant developed for extreme and varying conditions and temperatures
- Low shore A40 hardness allows resin to be easily broken away for component repair or fault finding

#### Low Viscosity

- Black hard/tough casting resin/encapsulant
- Excellent adhesion qualities to difficult substrates such as PVC, ceramics etc.
- Good dielectric properties, water and chemical resistance
- Applications include potting intricate components, radio transmitters, PCB's etc.

#### Low Viscosity - Flame Retardant

- Grey , semi-rigid, low viscosity flame retardant casting resin •
- Excellent electrical insulation characteristics
- Good water and impact resistance
- Ideal for potting small and delicate components such as ferrites

#### Self Heal

- Translucent 'gel like' encapsulant with unique ability to 'self heal' when penetrated .
  - Enables testing of circuits and devices through resin itself or to pass wires or connections through the resin when in situ
- High water resistance and excellent electrical properties
  - FOR SPECIFICATIONS SEE CROSS REFERENCE CHART BELOW

						CHM92
				Price	Each	
	Size	Order Code	1+	10+	50+	100+
General Purpose	500g	108-785				
High Performance	250g	108-786				
Repairable	250g	108-787				
Low Viscosity	250g	108-788				
Self Heal	250g	521-760				
L.V. Flame Retardant	500g	307-2198				

Continued

#### **Total Customer Care**

Our aim is to ensure you are 100% satisfied. If you ever have a query with your order, call us on (65) 788 0200

#### **Volume Pricing**

If your requirements exceed the quantities in this catalogue, please ring us on (65) 788 0200.

# 0 Electrochemicals, Service Aids & Paints

# Farmell Electrochemicals, Service Aids & Paints

	Encapsulants — continued													
			Robnor			CHM211								
			RUDIIUI			Electrolube								
	Ероху	Epoxy Non-DDM	Polyurethane Halogen Free	Polyurethane Low Visc.	Ероху	Epoxy Non DDM	Epoxy High Temp	Epoxy Therm Cond.	Polyure - thane	Low Viscosity Polyurethane - Flame Retardant	Polyure- thane High Perf.	Polyure- thane Repairable	Polyure- thane Low Visc.	Polyure- thane Self Heal
	147-161 147-162 725-997 147-163 148-215	537-305 537-317 537-329 537-340 537-342	725-961 725-973 725-985	725-950	108-779 108-780	307-2149 307-2150 307-2162 307-2174 307-2186	108-781	108-783	108-785	307-2198	108-786	108-787	108-788	521-760
Mftrs List No	PX314ZG	PX700K	EL171C	EL116F	ER2002	ER2188	ER2001	ER2074	UR5547	UR5597	UR5041	UR5044	UR5528	UR5083
Mix Ratio by Weight	8.6 : 1	9.4 : 1	8.5 : 1	7.83 : 1	8.86 : 1	10.97 : 1	17.48 : 1	17.24 : 1	5.52 : 1	6.47 : 1	3.62 : 1	13.40 : 1	2.37 : 1	2.0 : 1
Mix Ratio by Volume	5.6 : 1	5.3 : 1	6.0 : 1	6.40 : 1	5.48 : 1	5.54 : 1	8.91 : 1	7.15 : 1	4.0 : 1	5.39 : 1	3.78 : 1	11.58 : 1	2.83 : 1	2.10: 1
Curing Time @ 25°C	24 hrs	2-7 days	Overnight @ 20°C	-	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	24hrs	24 hrs	24 hrs
@60°C	90 mins	4 hrs	1 hour @ 80°C	-	90 mins	4.5hrs	2 hrs	4 hrs	-	4 hrs	-	-	-	-
@ 100°C	20 mins	2 hrs	-		20 mins	20 mins	30 mins	-	-	-	-	-	-	-
Gel Time (200g mass)	-	-	20-30 mins @ Ambient	60-90 mins	-	150 mins	300 mins	300 mins	-	45 mins	-	-	-	-
Usable Life @ 25°C	1 hr	2 hrs	10 mins	20 mins	1.5-1.75 hrs	60 mins	2-2.5 hrs	1.5 hrs	20 mins	20 mins	20 mins	30 mins	20 mins	90 mins
Max. Operating Temperature	120°C	115°C	100°C	100°C	115°C	125°C	130°C	130°C	110°C	125°C	125°C	120°C	120°C	100°C
Deflection Temperature	50°C	Ambient	-	-	55°C	50°C	60°C	60°C	Flexible	-	Flexible	Flexible	25°C	Flexible
Electric Strength (kV/mm)	10	14.2	16.2	100	10	10	10	10	14	12	20	16	25	10
Viscosity Mixed	200 Poise	125 Poise	<130 Poise @ 21°C	20-25 Poise @ 23°C	140 Poise	90 Poise	80 Poise	124 Poise	40 Poise	30 Poise	25 Poise	34 Poise	20 Poise	8 Poise
Flame Retardency	Yes to UL94V-0	Yes to UL94V-0	Yes to UL94V-0	Only when cured	Yes	Yes to UL94V-0	Yes to UL94V-0	Yes	Yes	Yes	No	Yes	No	-
Thermal Conductivity	-	1 W/m.k	0.42 W/m.k	<0.3W/m.k	0.38W/m.k.	0.4W/m.k	0.4W/m.k	1.26W/m.k	0.35W/m.k	0.35W/m.k	0.20W/m.k	0.30W /m.k	0.245W /m.k	0.20W/m.k
Hardness Shore (D)	D90	D75	D50-60 After 24 hrs @ 100°C	D70 (16 hrs) D80 (200 hrs)	D75	D85	D80	D83	A85	A75	A90	A40	D57	Not measurable
Colour	Black	Black	Black	Grey	Black	Black	Black	White	Black	Grey	Black	Blue	Black	Translucent

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Filler

- Permanently repairs and patches metal, wood, concrete, fibreglass and ceramics
   Can be applied underwater
- Hardens in 10 mins. back in service in 1 hour and full strength in 24 hours
   Applications include, repairing tanks and drums, patching holes in pipes, stopping leaks and repairing porosity holes in castings

Temperature Resis Solids Dielectric Strength Cured hardness (S Adhesive tensile st Compression strer Pot life (@ 24°C) Visosity Colour	(ASTM D149 hore D) rength (ASTM	1) 3 77 1/ D1002) 5 695) 8 2 F	9°C (wet), 12 00% 00 volts/mil 5 N/mm <sup>2</sup> 13 N/mm <sup>2</sup> 10 mins. Putty/hand kn Green\white (d		ite after mixin	g) CHM214
4oz stick	Mftrs. List No. 11600	Order Cod 704-0714		Price 5+	e Each 10+	50+

## General Purpose Paint

Super Enamel General Purpose Paint



plasti-kote<sup>®</sup>

- Finest all-purpose spray paint available
- Exclusive resin base not available to any other manufacturer
- Ideal for exterior and interior surfaces
- Non-fading and long-lasting
- Combats corrosion
- Suitable for wood and metal surfaces
   Choice of 13 colours, 2 primers and 2 acrylic
- Heat resistance 150°C

Coverage approx. 2.23m<sup>2</sup>

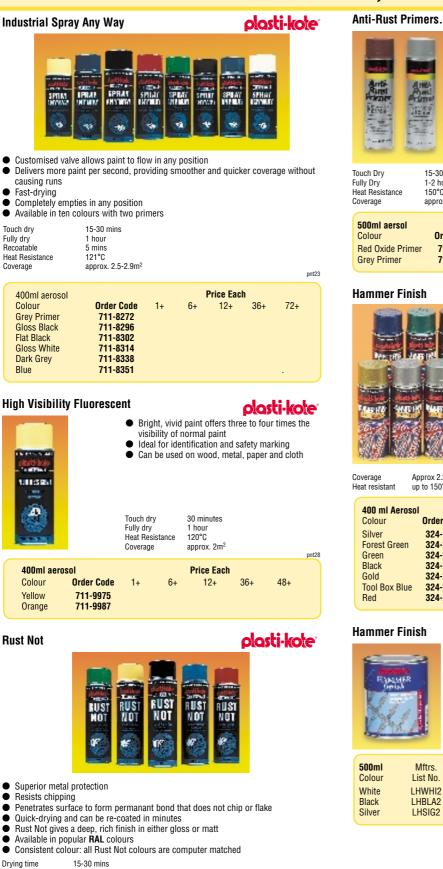
							pnt56
400ml aerosol				Price	Each		
Colour	Order Code	1+	6+	12+	18+	30+	48+
Gloss Black	324-1816						
Matt Black	324-1828						
Satin Black	324-1830						
Medium Grey	324-1841						
Satin White	324-1853						
Gloss White	324-1865						
New Yellow	324-1877						
Bright Red Lawn Green	324-1889 324-1890						
Pacific Blue	324-1907						
Royal Blue	324-1919						
White Primer	324-1920						
Red Oxide Primer	324-1932						
Grey Primer	324-1944						
Satin Clear Acrylic	324-1956						
Gloss Clear Acyrlic	324-1968						
Gold	324-1970						
Silver	324-1981						

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Matt Black

Fire Red

Mid Blue

Aluminium

Equipment Grey

Drying time Recoatable Heat resistant Coverage	15-30 mi anytime 150°C approx. 2						pnt24
500ml aersol	RAL			I	Price Eac	h	
Colour	No.	Order Code	1+	6+	12+	36+	48+
Gloss White	-	711-8909					
Gloss Black	9005	711-8922					

711-8934

711-8946

711-8958

711-8983

711-8995

#### 15-30 minutes Fully Dry Heat Resistance 1-2 hours 150°C Coverage approx. 2.3 to 2.6 m 500ml aersol Colour **Order Code** 711-9409 Red Oxide Primer Grey Primer 711-9410 Hammer Finish



Approx 2.23m

<b>plasti-kole</b>
Aetallic hammer
inish offers a unique, decorative, ham-
nered effect finish
Can be used on most surfaces to
chieve a metal like effect
ast drying
Corrosion resistant

36+

Jacki ka

plasti-kote

pnt25

72+

• Special anti-corrosive properties to increase life and durability of the top coat Seals out moisture and inhibits rust Protects and seals all bare surfaces

Prepares the surface for Plasti-Kote Rust Not

Price Each

12 +

Suitable for interior or exterior use

Non-sandable formula

6+

N

f

# up to 150°C

400 ml Aeroso				Price Each		
Colour	Order Code	1+	6+	12+	18+	30+
Silver	324-1993					
Forest Green	324-2006					
Green	324-2018					
Black	324-2020					
Gold	324-2031					
Tool Box Blue	324-2043					
Red	324-2055					

#### Hamr

mer Fi	inish	:	Inhibits I Camoufl Recoatal	rust forr ages im ple after	nered, metalli	•	s finish
nl ur e k r	Mftrs. List No. LHWHI2 LHBLA2 LHSIG2	Order Code 714-6395 714-6401 714-6413	1+	5+	<b>Price Each</b> 10+	50+	100+
							Continued

#### **Fixed Prices**

We aim to maintain all prices in this book for the lifetime of this issue.

10 Electrochemicals, Service Aids & Paints PNT6

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Internet www.farnell.com

3000

5010





- chemicals
- Non-shrinking, reduces potential failure Permanent repair giving high compressive strength after full cure (80N/mm2)
- Multi-purpose as it can be used internally and externally, on both old and new concrete

Patchfast is an easy to apply 3-component kit which can be used with confidence by maintenance staff. Bonds and sets down to a feather edge which gives a hygienic impervious finish that is easily cleaned. Patchfast can be used in aggressive environments such as chemical process areas, steelworks, food and drink manufacturing areas, dairies, breweries, plating shops, abattoirs, engineering shops, production lines, workshop and warehousing areas

Coverage rate: 1.14m<sup>2</sup> per 12kg @ 5mm deep

Material Properties Specific Gravity Pot Life Initial Hardness Full Cure Below 20°C these times will be increased	2.1 30 minutes 6 hours 7 days			
Physical Properties Compressive Strgth Flexural Strength Tensile Strength Bond to Steel (Blasted to S.A 2.5) Bond to Concrete	80N/mm <sup>2</sup> 30N/mm <sup>2</sup> 12N/mm <sup>2</sup> 12N/mm <sup>2</sup> Concrete Fails			PNT58
<b>Order Code</b> 1+ 12kg Tub <b>721-3323</b>	4+	<b>Price Each</b> 8+ 12+	20+	30+

Marking I	Paint.
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#### **Road Paint**

olasti-kote

PNT57

- One coat coverage Tight spray pattern, minimises over-. sprav Not affected or washed-away by poor weather conditions . Non-clogging nozzle Formulated for heavy-traffic areas 0. Y . Suitable for concrete, grass, asphalt EKI
  - and gravel Typically applied to car parks, warehouses, loading areas and factory floors
    - Touch dry in 2 to 5 minutes

<b>750ml Aero</b> s Colour White Yellow Red Green	sol Order Co 721-29 721-29 721-29 721-29 721-29	02 14 26	6+	Price Each 12+ 18+	30+	48+
ayout Blu		•	Will not Resists v	lear, sharp defini chip or flake wash off apply & remove		OCOL
<b>400ml</b> Mftrs' 57034	List No. 0	Irder Code 707-2028	1+	<b>Price Each</b> 12+ 36+	- 72+	pı
REMO			● S	oftens paints & v	arnishes	pnt
500ml 2.5 litre	Mftrs. List No. S81599 S81600	Order Code 720-6999 720-7001	1+	Price Ea 12+		8+
00101 D+		Corros	<mark>ion C</mark>	ontrol	_	
eavy-Duty		<ul> <li>Effectiv</li> <li>Thin fle</li> <li>Dry film</li> <li>Easily h</li> <li>The mild deneed to be protection of doors, ir</li> </ul>	xible film andled – ewatering complete of metal p transit c Ideal for	r corrosion prote – will not crack hot attract dirt & resists finger-pr action means th ly dry before app parts stored for e r indoors under the protection o pagereage. Protec	ection or chip dust int corrosion nat the parts plication. Us extended per severe corro f machines a	do not e for the iods out osion and

	vides residual lubri	cation for assembly etc.
aŭ	Colour Film Type Film Thickness Curing Time Protection Period	fugitive red dye hard waxy film when fully cured approx. 5 to 10 microns fully cured in approx. 48 hours outdoors: up to 12 months indoors: typically in excess of 3 years
		n

300ml aerosol			1	Price Each	ı	
Mftrs. List No.	Order Code	1+	12+	36+	72+	144+
69100	707-1784					

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618 Electronic, Electrical and Mechanical

Zinc-Rich Prime		Heat Protection
	<ul> <li>Heavy-duty primer</li> <li>For metal exposed to severely corrosive elements</li> <li>Ideal for water-submerged metals</li> <li>High zinc content fuses to metal surface, inhibiting corrosion</li> <li>For non-ferrous metals</li> <li>Cold galvanising spray; suitable for protecting welds on galvanised material</li> <li>Touch Dry 10 minutes</li> <li>Dry 1 hour</li> <li>Recoatable 2 hours</li> <li>Heat resistance 82°C</li> <li>Coverage approx. 2.3 to 2.6 m<sup>2</sup></li> </ul>	Hot Paint plasti-kote
	Price Each Order Code 1+ 6+ 12+ 36+ 72+ 711-9392	<ul> <li>Formulated to resist temperatures of up to 650°C</li> <li>Heat cured formula which forms a hard. long lasting finish that will not burn off, chip or flake</li> </ul>
Cold Galvanising	<ul> <li>g Spray</li> <li>Zinc-rich coating: solid content is 90% zinc</li> <li>Permanent coating provides long-term corrosion protection</li> <li>Ideal for both bare metal &amp; damaged galvanised surfaces</li> </ul>	<ul> <li>Ideal for any surface exposed to very high heat</li> <li>400 ml Aerosol</li> <li>Price Each</li> <li>Colour</li> <li>Order Code</li> <li>1+</li> <li>6+</li> <li>12+</li> <li>36+</li> <li>48+</li> <li>Black</li> <li>324-2109</li> <li>White</li> <li>324-2110</li> <li>Aluminium</li> <li>324-2134</li> </ul>
Touch Dry Fully Cured Heat Resistance		<section-header><section-header></section-header></section-header>
	Price Each Order Code 1+ 12+ 36+ 72+ 144+ 707-1840	Touch Dry 15 to 30 minutes Fully Dry 1 to 2 hours Heat Resistance 425°C Coverage approx. 2.3 to 2.6 m <sup>2</sup>
	Lacquer	500ml aerosol Price Each
Clear Acrylic	<ul> <li>Purable all-weather coating</li> <li>Gives a transparent, flexible films</li> <li>Watertight and will not yellow</li> <li>Protects and enhances other finishes e.g. fluorescent coatings</li> <li>Effective in insulating electrical systems</li> </ul>	Mftrs. List No. Order Code 1+ 6+ 12+ 36+ 72+ 144+ 796 711-9963
500ml aerosol Mftrs. List No. Ord	<b>Price Each</b> ler Code 1+ 6+ 12+ 18+ 30+ 48+	

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711-9549

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