

CLIPSAL[®]

by **Schneider** Electric

Keep the bugs at bay with
'germ-shield.'



HOSPITALS



AGED CARE



DENTAL

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germ-shield[®]
coating system

The “germ-shield” advantage

Did you know there are over 2,000,000 nosocomial bacteria infections in U.S. hospitals every year? And 100,000 of those people infected result in deaths, costing the U.S. health system more than US\$11b per annum.

Not only are these figures alarming, but these types of avoidable infections put a great burden on our economy and health system. Fortunately, there is now a solution to this problem called “germ-shield” – a revolutionary anti-microbial coating system.

The major differences between “germ-shield” and conventional microbial coatings are that “germ-shield” technology:

- is not absorbed or consumed by the microbe, which in turn allows for the treatment to remain at full-strength for essentially the life of the surface or product

- is a bound anti-microbial, which means that it molecularly bonds to the surface. This bond does not allow any leaching of treatment onto other surfaces and does not allow for the development of adaptive organisms
- will not volatilise (off-gas)
- has a 30-year history of durability, effectiveness and safety.

Total protection with Medilec

Medilec now offers a range of medical service panels (MSPs) and medical electrical accessories that come with the option of “germ-shield”. “Germ-shield” is completely non-toxic to humans and the environment, and protects against over 650 species of bacteria, which are commonly found in hospital environments.

The Medilec range of MSPs and medical electrical accessories available with “germ-shield” includes:



ML2165
Ultra Plus, Plaster Mount



ML2164
Metal, Flush Mount



ML2144
Metal, Flush Surface Mount



MLH921
Medi-Plus, Surface Mount Duct



ML2000
Moulded Plastic Series



ESP
Metal, Flush Mount



Merlon IP-7000
Nurse Call



Merlon IP-7000
TV Hand Set

Product part approval material test results

Test	Details	Results
Adhesion	<ul style="list-style-type: none"> • 1mm cross hatch • Test with tape adhesion value of >1.13kg per 25mm width on glass 	Conforms: Adhesion rating 100% Over two test areas - six components ASTM D 3359 class 5 - pass
Humidity	95% +/- 5% rel. for 240 hours at 40°C	Conforms: Adhesion remains at 100% No colour change, blisters or gloss variation No change in flexibility rating
Moisture and Cold Cycle	Three cycles of: <ul style="list-style-type: none"> • 15.5 hours at 70°C • 0.5 hours at ambient • 7.5 hours at -20°C • 0.5 hours at ambient • 15.5 hours at 50°C and 95% humidity • 0.5 hours at ambient • 7.5 hours at -20°C • 0.5 hours at ambient 	Conforms: There is no loss of adhesion, blisters, gloss or colour change evident No change in flexibility rating

Oven Age	Seven days at 80°C ± 2°C	Conforms: There is no loss of adhesion, blisters, gloss or colour change evident No change in flexibility rating
Chemical Resistance	Acetic Acid 0.1N solution Acetic Acid 1N solution Acetic Acid 10N solution Hydrochloric Acid 0.1N solution Hydrochloric Acid 1N solution Hydrochloric Acid 10N solution Sulphuric Acid 0.1N solution Sulphuric Acid 1N solution Sulphuric Acid 10N solution Sodium Hydroxide 0.1N solution Sodium Hydroxide 1N solution Sodium Hydroxide 10N solution Petrol - 98% Octane applied at 25°C for 24hrs	Conforms: No evidence of discolouration or other defects No evidence of discolouration or other defects Small discernible discolouration, no other defects No evidence of discolouration or other defects
Ericson Hardness Test Model # 318	Test and report	> 10N force required to mark coating Testing over two test areas - two components Substrate - ~ 10N force required to mark
Ultra Violet Accelerated Exposure	ATLAS UVCON Operating at four hours UV at 60°C and four hours humidity at 50°C	Conforms: At the completion of 1000 hours there are no visible colour or gloss changes or any other defects
Abrasion Resistance	Sample wear tested with a Taber Abrader using a CS20 wheel with a 500gm load and 1000 revolution per 25 micron dft.	Conforms: At the completion of 1000 hours, no wear through to substrate

Report on anti-microbial test results

1. Sample: Coated Plates

Sample
1. Control panel (blank)
2. High loading primerless on S/S. Thermal moisture
3. Thermal care

2. Outline of Test

The test was executed in accordance with "JIS Z 2801".

<Bacteria used for test> Escherichia Coli, NBRC3972
Staphylococcus Aureus, NBRC12732.

3. Test Result

Table 1. Test result of anti-microbial effect against Escherichia Coli.

Sample	Number of Living Bacteria		Anti-microbial Activity Value Against Blank	Reduction %
	At Beginning	After 24 hours		
1. Control Panel (blank)	1.1 x 10 ⁵	1.4 x 10 ⁷		
2. High Loading Primerless	1.1 x 10 ⁵	<1 x 10 ²	>5.1	>99.999
3. Thermal Cure	1.1 x 10 ⁵	<1 x 10 ²	>5.1	>99.999
Control (film only)	1.1 x 10 ⁵	2.2 x 10 ⁷		

Table 2. Test result of anti-microbial effect against Staphylococcus Aureus.

Sample	Number of Living Bacteria		Anti-microbial Activity Value Against Blank	Reduction %
	At Beginning	After 24 hours		
1. Control Panel (blank)	1.1 x 10 ⁵	5.3 x 10 ⁵		
2. High Loading Primerless	1.1 x 10 ⁵	<1 x 10 ²	>3.7	>99.981
3. Thermal Cure	1.1 x 10 ⁵	<1 x 10 ²	>3.7	>99.981
Control (film only)	1.1 x 10 ⁵	1.7 x 10 ⁶		

4. Consideration

Samples containing Ionpure showed anti-microbial efficacy against both Escherichia Coli and Staphylococcus Aureus, as its activity value exceeded the standard value of 2.0, which means this application has a >99% bacterial reduction rate.

Clipsal Australia Pty Ltd

A member of Schneider Electric

Head Office

33-37 Port Wakefield Road, Gepps Cross,
South Australia 5094

PO Box 132, Enfield Plaza,
South Australia 5085

Telephone (08) 8161 0511
Facsimile (08) 8161 0900
Email plugin@clipsal.com.au
Internet www.clipsal.com

National Customer Care Enquiries: **1300 2025 25**

National Customer Care Facsimile: **1300 2025 56**

Area Representatives

ACT	Canberra region	0408 550 373
NSW	Albury	(02) 6051 2377
	Central Coast	0418 430 361
	Coffs Harbour	0418 653 183
	Dubbo	0418 822 564
	Newcastle	0407 298 792
		0418 686 040
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	Wollongong	0418 423 581
NT	Darwin	0409 282 307
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	Sunshine Coast Sth	0419 797 827
	Sunshine Coast Nth	0438 282 299
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SA	Northern region	0403 344 086
	Southern region	0419 876 885
TAS	Northern region	0418 120 269
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VIC	Ballarat	0418 336 291
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	Gippsland	0418 512 680
	Mornington Pen.	0407 795 291
	Western Victoria	0419 380 444
WA	Bunbury	0418 931 684
	Kalgoorlie & Eastern Gold Fields	0417 928 981
	Karratha	0418 937 249

International Enquiries

International Sales and Marketing

Email export@clipsal.com.au

Schneider Electric (NZ) Ltd

38 Business Parade South, Highbrook,
East Tamaki, Manukau 2013,
NEW ZEALAND

PO Box 15355, New Lynn,
Waitakere 0640, NEW ZEALAND

Telephone + 64 9 829 0490

Facsimile + 64 9 829 0491

Internet www.schneider-electric.co.nz

Clipsal Customer Care

Freephone 0800 652 999

Freefax 0800 101 152

Email sales@nz.schneider-electric.com

Internet www.clipsal.co.nz

www.schneider-electric.co.nz

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