



AN INTRODUCTION TO OUR

Intelligent & Safe Biotech Solutions

September 2020





ABOUT HEALTHGUARD®

Global leaders in tailored non-invasive healthcare.

HealthGuard® is a privately owned and operated company dedicated to research and development of safe innovative biotech solutions for a broad range of products.

An industry leader worldwide for over 30 years, HealthGuard® manufactures at its Australian Government licensed state of the arts facility in Melbourne, Australia.

All HealthGuard® products are independently tested at world leading facilities.

HealthGuard® BK | HealthGuard® AMIC | HealthGuard® PL | HealthGuard® PLB

PROUDLY INTRODUCING



A specially formulated non-silver broad range Anti-Microbial and Anti-Viral (Destroys SARS-CoV-2 - COVID-19 strain virus) thoughtfully formulated using cosmetic based chemistry.



Formulated for use in the textile industry over 25 years ago

Can be applied to all types of textiles and is compatible with most finishing agents.



Effective with a broad range of textile finishes

Effective with Fluorocarbon and flame-retardant finishes, all resin systems and cationic, non-ionic softeners normally used in textile finishing.



Long-lasting protection for furniture and furnishings

Achieved excellent wash performance. When applied as directed, HG® AMIC achieves over 99% reduction in virus and 96% reduction in bacteria after 20 washes

HealthGuard® AMIC

FEATURES OF

HealthGuard® AMIC




- Ideal for apparel textile, advanced textile and technical textile
- Ideal for application to mattress tickings and all other bedding accessories
- Ideal for application to face masks
- Can be sprayed onto polyester fibre and feathers used in continental quilts and pillows
- Suitable to be incorporated into polyurethane foam
- Can be sprayed onto carpets as a topical treatment
- Treated articles will effectively kill a broad range of harmful microorganisms which are dangerous to human health, as well as odour causing
- Treated articles will effectively destroy SARS-CoV-2 (COVID-19)



**Destroyed COVID-19,
rendering the virus NOT
DETECTED.**

HealthGuard® AMIC


SARS-CoV-2 | COVID-19 TESTING RESULTS

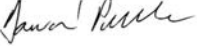




A joint venture between The University of Melbourne and The Royal Melbourne Hospital

Report for Health Guard

Recipient: Health Guard

Experimenter: Dr. Julie McAuley 

Results Verified by: Prof. Damian Purcell 

Date experiment began: 9th June, 2020 Date qRT-PCR performed: 18th June, 2020
 Temperature: 18°C-20°C
 Relative Humidity: 40-44%

Introduction: Samples of material were provided by Health Guard to staff from the Peter Doherty Institute who conducted agreed upon assays to evaluate whether the textile samples can render SARS-CoV-2 inert via the following methods:

Quantitative PCR for total amount of genomic material in samples: Assaying for virus presence via quantitative PCR (qPCR) will give an indication that the virus has been present and genomic material remains, but does not give an indication as to whether this material is infectious.

Quantitation of infectious virus titre in samples via a 50% Tissue Culture Infectious Dose assay (TCID₅₀): This assay results in establishing how dilute the sample containing infectious virus must be, before any virus present stops causing cytopathic effect (CPE) in at least 50% of the cells. When compared to the untreated controls, the TCID₅₀ value will give quantitative differences in the amount of infectious virus left in the sample.

Aim: To evaluate the time at which 2% Health Guard inhibits virus viability.

Method:

1. 2cm round piece of textile substrate was aseptically placed in a 12 well plate. 1 plate contained treated materials, a second plate contained the untreated materials.
2. In the BSCII hood in PC3 lab, 50µL SARS-CoV-2 was added to the textile substrate (n=3 per time point). The plate containing the samples will remain in the BSCII hood, with the lid on.
3. After 10min, 60min and 120min, 1mL MEM infection media (MEM+ antibiotics, no FBS) was added to each sample and surfaces were washed with vigorous pipetting.
4. Eluate was collected and aliquots immediately used in a TCID₅₀ quantitation assay and RNA extracted for quantitative RT-PCR analysis.
5. The inoculum control was generated by allowing the original vial of neat inoculum (sealed) to sit in the BSCII cabinet at room temperature for the duration of the sampling period.

A 2% HealthGuard treated substrate completely **destroyed** **COVID-19**, rendering the virus NOT DETECTED.

The 2% HealthGuard treated fabric exhibited **significant virucidal** activity against COVID-19 strain within **10 min** of exposure.

“Our researchers in the Doherty Institute High level Biocontainment facilities have conducted many studies on numerous antiseptic agents for surfaces contaminated with SARS-CoV-2.

The Health Guard embedded treated fabric showed significant virucidal activity against SARS-CoV-2 within 10 minutes and completely abolished the ability for the virus to be infectious within an hour.

This particular product has shown superior activity compared to other products tested.”

Prof. Damian Purcell

Head of the Molecular Virology Laboratory in the Department of Microbiology and Immunology at Doherty Institute for Infection and Immunity at The University of Melbourne.



The Peter Doherty Institute for Infection and Immunity
 300 Flemington Road
 Melbourne, Victoria
 Australia
 3006
 Tel: 03 9594 1000
 doherity.edu.au

21st July, 2020

Attn: Victoria Harvey
HealthGuard Corporation Pty. Ltd.
 7 Leader St
 Campbellfield, Victoria
 Australia 3061

To whom it may concern,

I can confirm that the article in the "Innovation in Textiles Magazine" are the authentic comments on the results that we received from the tests we performed on the materials supplied to us from HealthGuard. The treated materials which contained 2% HealthGuard AMIC/PLB applied on weight of goods to textile substrate, were supplied to us in a form ready to test and the results quoted were from these samples. The formulation and concentrations of the treatment were taken at face value from the company, as we had no ability to cross-validate this aspect of our work for this company.

The results that we obtained from the treated materials was impressive to us in comparison with other similar presented materials.

Sincerely,


Prof Damian Purcell
 Doherty Institute, Theme leader for Viral Infectious Diseases




A joint venture between The University of Melbourne and The Royal Melbourne Hospital

This **proves** 2% HealthGuard present in the provided fabric renders COVID-19 strain **non-infectious**.

TESTING RESULTS



GUANGDONG DETECTION CENTER OF MICROBIOLOGY

ANALYSIS AND TEST RESULT

Report No.: 2020FM07437R01Ea

Virus	No.	The logarithm of infectivity titre value immediate after inoculation of the reference specimen (lgTCID ₅₀ /bottle)	The logarithm of infectivity titre value after 24h contacting with the reference specimen (lgTCID ₅₀ /bottle)	The logarithm of infectivity titre value after 24h contacting with the test specimen (lgTCID ₅₀ /bottle)
H1N1 Influenza virus (A/PR/8/34) MDCK	1	6.71	6.05	2.80
	2	6.73	6.10	2.80
	3	6.73	5.97	2.80
lgTCID ₅₀ /bottle Average		6.72	6.04	2.80
Logarithm of antiviral activity			3.24	
Antiviral activity rate (%)			99.94	
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99.94%



中国认可
国际互认
检测
CNAS L1747



Results:
Fabric swatches in contact with Test organism for 10 minutes, 2 hours & 24 hours at 35° C showed the following results:-

* Patched swatches in contact with test organism for 10 minutes, 2 hours & 24 hours at 30 °C. * Unpatched the opposite results.													
Sample Identification	MS2 Bacteriophage				Bacteriophage				MS2 Bacteriophage				Percentage Reduction of Virus at 24 hours
	Average PFU/Carrier at 0 hours (B)	Average PFU/Carrier at 10 minutes (A)	Log Redn. of Virus at 10 mins.	% Redn. of Virus at 10 min.	Average PFU/Carrier at 2 hours (A)	Log Redn. of Virus at 2 hrs	% Redn. of Virus at 2 hrs	Average PFU/Carrier at 24 hours (A)	Log Reduction of Virus at 24 hours				
Untreated													
HEALTHGUARD AMIC - 30 gpl + LAXOF 68 - 20 gpl - Initial	2.90 x 10 ⁴	2.50 x 10 ⁴	4.39	0.07	13.79	2.24 x 10 ⁴	4.35	0.11	22.75	2.20 x 10 ⁴	4.34	0.12	24.13
HEALTHGUARD AMIC - 30 gpl + LAXOF 68 - 20 gpl - after 20 wash		1.20 x 10 ³	3.07	1.39	95.86	<10	<1	>3.46	>99.96	<10	<1	>3.46	>99.96
Untreated - Lab Control		1.50 x 10 ³	3.17	1.29	94.82	5.60 x 10 ²	2.74	1.72	98.06	2.30 x 10 ²	2.36	2.10	99.20
		3.20 x 10 ⁴	4.50	0.00	0.00	4.50 x 10 ⁴	4.65	0.00	0.00	9.50 x 10 ⁴	4.97	0.00	0.00

REMARKS:

1. PFU (Plaque Forming Unit) = No. of Microorganisms
2. Percentage Reduction = (B - A) / B x 100
3. Log reduction Log (B/A), Where B = No. of viable test microorganisms on the control carriers immediately after inoculation; A = No. of viable test microorganisms on the test carriers after the contact time

INTERPRETATION:

Fabric labelled as Untreated has shown 13.79%, 22.75% and 24.13% reduction of Virus; HEALTHGUARD AMIC - 30 gpl + LAXOF 68 - 20 gpl - Initial has shown 95.86%, >99.96% and >99.96% reduction of Virus; HEALTHGUARD AMIC - 30 gpl + LAXOF 68 - 20 gpl - after 20 wash has shown 94.82%, 98.06% and 99.20% reduction of Virus in 10 minutes, 2 hours & 24 hours respectively when analyzed as per AATCC 100 - 2012 Test Method using MS2 Bacteriophage as surrogate virus.



For BIOTECH TESTING SERVICES

Dr Shilpa U. Nair
Quality Manager
(Authorized Signatory)

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104/105, Malwa, Patanwala Ind. Estate, L.B.S. Marg, Ghatkopar (W), Mumbai - 400086, INDIA • Tel. +91-22-2500 2811, 2500 2812
Email : info@biotechs.in / report@biotechs.in / biotechtestingservices@gmail.com / shilpanair@biotechs.in

An ISO / IEC 17025:2005 Accredited Testing Services

www.biotechs.in

99.20%



Name of Test:
Evaluation of Antimicrobial Activity by AATCC 100 - 2012

Test Inoculum:
1. Staphylococcus aureus ATCC 8308 (1.80 x 10⁷ CFU/ml)
2. Klebsiella pneumoniae ATCC 4382 (1.80 x 10⁷ CFU/ml)

Additional Test Information:
1. Sample size: 40 mm discs
2. No. of swatches used: 4
3. Method of Sterilization of sample: Freeze drying
4. Inoculum Carrier: Phosphate Buffered water
5. Neutralizer: 0.5M NaOH

Results:
Fabric swatches in contact with individual test cultures for 24 hrs at 37° C showed the following results:-

Sample Identification	Test Culture	No. of Bacteria per sample (CFU/sample) at 0 hours (B)	No. of Bacteria per sample (CFU/sample) at 24 hours (A)	Percentage Reduction of Microorganisms (B)
Untreated	Staph. aureus	1.75 x 10 ⁷	3.75 x 10 ⁷	0.00
	K. pneumoniae	1.83 x 10 ⁷	8.00 x 10 ⁷	0.00
HEALTHGUARD AMIC - 30 gpl + LAXOF 68 - 20 gpl - Initial	Staph. aureus	1.72 x 10 ⁷	<10	>99.99
	K. pneumoniae	1.81 x 10 ⁷	<10	>99.99
HEALTHGUARD AMIC - 30 gpl + LAXOF 68 - 20 gpl - after 20 wash	Staph. aureus	1.71 x 10 ⁷	5.80 x 10 ⁷	98.80
	K. pneumoniae	1.87 x 10 ⁷	1.71 x 10 ⁷	98.86

REMARKS:

1. CFU Colony Forming Unit = No. of Microorganisms
2. Percentage Reduction of Microorganisms (B) = 100 (B - A) / B

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* Samples are not shown by the laboratory - * Result refers only to the swatches tested
* The result and any or equivalent result is not valid prior to the date of the laboratory
104/105, Malwa, Patanwala Ind. Estate, L.B.S. Marg, Ghatkopar (W), Mumbai - 400086, INDIA • Tel. +91-22-2500 2811, 2500 2812
Email : info@biotechs.in / report@biotechs.in / biotechtestingservices@gmail.com / shilpanair@biotechs.in

An ISO / IEC 17025:2005 Accredited Testing Services

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Achieving excellent wash durability with over **99% Anti-Viral** and **96% Anti-Bacterial** activity after 20 washes

96.60%



GUANGDONG DETECTION CENTER OF MICROBIOLOGY



ANALYSIS AND TEST RESULT

Report No.: 2020FM17569R01E

1. Sample pretreatment: The sample was not washed for test.

1.1. Test Result:

Virus	No.	The logarithm of infectivity titre value immediate after inoculation of the reference specimen (lgTCID ₅₀ /bottle)	The logarithm of infectivity titre value after 2h contacting with the reference specimen (lgTCID ₅₀ /bottle)	The logarithm of infectivity titre value after 2h contacting with the test specimen (lgTCID ₅₀ /bottle)
H1N1 <i>Influenza A virus</i> (A/PR/8/34) Host cell: MDCK	1	7.05	6.87	3.80
	2	7.10	6.80	3.73
	3	7.10	6.97	3.80
lgTCID ₅₀ /bottle Average		7.08	6.88	3.78
Logarithm of antiviral activity		3.10		
Antiviral activity rate (%)		99.92		

(Continued on the next page)

99.92%



GUANGDONG DETECTION CENTER OF MICROBIOLOGY



ANALYSIS AND TEST RESULT

Report No.: 2020FM17569R01E

3. Sample pretreatment: The sample was washed 30 times for test.

3.1. Test Result:

Virus	No.	The logarithm of infectivity titre value immediate after inoculation of the reference specimen (lgTCID ₅₀ /bottle)	The logarithm of infectivity titre value after 2h contacting with the reference specimen (lgTCID ₅₀ /bottle)	The logarithm of infectivity titre value after 2h contacting with the test specimen (lgTCID ₅₀ /bottle)
H1N1 <i>Influenza A virus</i> (A/PR/8/34) Host cell: MDCK	1	7.05	6.87	4.63
	2	7.10	6.80	4.50
	3	7.10	6.97	4.63
lgTCID ₅₀ /bottle Average		7.08	6.88	4.59
Logarithm of antiviral activity		2.29		
Antiviral activity rate (%)		99.49		

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99.49%

Achieving excellent wash durability with
99.49% Anti-Viral
activity after 30
washes
ISO 18184

TESTING RESULTS



GUANGDONG DETECTION CENTER OF MICROBIOLOGY



ANALYSIS AND TEST RESULT

Report No.: 2020FM17476R01E

Virus and host cell	No.	The logarithm of infectivity titre value immediate after inoculation of the reference specimen (lgTCID ₅₀ /bottle)	The logarithm of infectivity titre value after 2h contacting with the reference specimen (lgTCID ₅₀ /bottle)	The logarithm of infectivity titre value after 2h contacting with the test specimen (lgTCID ₅₀ /bottle)
Influenza A virus H3N2 Host cell:MDCK	1	7.05	6.50	3.50
	2	6.97	6.63	3.63
	3	7.10	6.59	3.50
lgTCID ₅₀ /bottle Average		7.04	6.57	3.54
Logarithm of antiviral activity			3.03	
Antiviral activity rate (%)			99.91	

Sample picture:



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99.91%

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Himway Test House Pvt Ltd



ISO & ISO/IEC 17025:2017 ACCREDITED NABL LABORATORY

Issued To : Britacel Silicones Ltd.,
1,124,1,125/126,Verna Industrial Estate,
Verna,Goa-403722

Report No.: 20072101
Date Of Sampling : 20.07.2020
Sample issue in Lab : 21.07.2020

Nature of the Sample :Health Guard AMIC-2%+Itrasil-2%
Treated Knits Fabric Made In Arvind Textile

Test Started On : 21.07.2020
Test Completed on : 22.07.2020

Customer Ref. No : NS

SAMPLING DETAILS:

Sample Packing & Marking : Plastic Bag
Sample Quantity : 1 Meter

TEST RESULTS:

Modified ISO 18184:2019 Tested method of Three sample against Human Coronavirus F229E at One contact Time of our sample.

Test Virus	Contact Time	Sample ID	Virus Titer (TCID ₅₀ per Carrier)	Mean Virus Titer (TCID ₅₀ per Carrier)	Mean Log10 Virus Titer (TCID ₅₀ per Carrier)	Log ₁₀ Reduction	Percent Reduction
Human Coronavirus F229E	Time Zero	Control sample	2.28E+06	3.57E+06	6.79	N.A.	N.A.
			7.15E+06				
			1.28E+06				
	30 Min	Control sample	7.19E+05	4.58E+05	5.93	4.71	99.99% Kill Rate : 12 second(99%)
			4.23E+05				
			2.33E+05				
	30 Min	Rigid Sample-1 (Test)	2.25E+03	2.26E+05	3.49	2.68	99.99% Kill Rate : 16 second(99%)
			2.25E+03				
			2.28E+03				
		20 wash treated sample-2 (Test)	1.88E+05	4.10E+05	3.43	2.42	99.99% Kill Rate : 22 second(99%)
			1.95E+04				
			7.17E+05				
			7.19E+03				
			2.32E+03				

* TCID₅₀ Tissue Culture Infectivity Dose at the 50% Endpoint
* Log₁₀ and Percent Reductions for Control sample at 30 Min calculated relative to Control sample immediately upon inoculation (Time Zero)
* Log₁₀ and Percent Reduction for the three Test sample at 30 Min calculated relative to Control sample mean viral titer at 30 Min.
* SAMPLE SIZE : DIAMETER = 4.80 +/- 0.1CM.* PRE INCUBATION C : SARBOURAUD GLUCOSE AGAR.* PRE INCUBATION D : SARBOURAUD GLUCOSE BROTH
* DILUTE AGENT FOR INOCULATION : PHYSIOLOGIC SALT SOLUTION.* INCUBATION: 30 DEG C.* SPECIMEN PREPARATION : INCUBATION 15 MIN @ 134 DEG C

End of Report

Reviewed By

Authorized Signatory By Ravi Kant-Pethak

- ♦ The results listed refer only to tested sample & applicable parameters endorsement of product is neither inferred nor implied.
- ♦ Total liability of our lab is limited to the invoiced amount & sample will be destroyed after 90 days from the date of test report unless specified otherwise.
- ♦ The test report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
- ♦ The test report refers to the sample submitted to us & not drawn by Himway Test House Pvt. Ltd. unless mentioned otherwise.

Regd. Office : Plot No. 327, Street NO. 02, Santl Nagar (Nandgram) Ghaziabad-201003
Mob. : 8448128057, 8448128058, 8448128059, Email : himwaytesthouse@gmail.com, Visit us : www.himwaytesthouse.com

99.99%

CONSISTENT RESULTS

Different strains

Different laboratories

TESTING RESULTS



COMPANY NAME: GM SYNTEX PVT LTD
ADDRESS: JB NAGAR, ANDHERI (E), MUMBAI

EMAIL: tushar@gmsyntex.com
ATTN: Mr. Tushar
TEL: 7875868983
FAX: /

TEST REPORT

Report No.: (6720)192-0422
Form No.: 25144
Date In: 10th July 2020
Date Out: 11th Aug 2020
No. Of Working Days: 22
Page: 01 of 04
Pretest for Buyer: Not Listed

Sample Description: Woven Fabric Treated With Healthguard (Fabric)



Report No. (6720)192-0422
Page No. 04 of 04

TEST RESULTS

AFTER 15 WASHES

TESTED AGAINST: Influenza A Virus (H3N2): ATCC VR-1679

Sample Details: Fabric – Golden	Log Value
Reference Specimen Immediately after inoculation	5.2
Reference Specimen after 2 hours contact time (of inoculation)	0.9
Antiviral Activity Log (Avg. Reduction)	4.3
Total Viral Activity Reduction (%)	99.995 %

-----END OF TEST REPORT-----

99.995%

CONSISTENT
RESULTS

Excellent wash durability



COMPANY NAME: BRITACEL SILICONES LTD
ADDRESS: F-18, 'F' BLOCK ROAD, MIDC, MAROL, ANDHERI EAST
MUMBAI, MAHARASHTRA 400093

EMAIL: naishadh@britacelsilicones.com
ATTN: Mr. Naishadh Desai
TEL: 022-40094000
FAX: 022-40094003

TEST REPORT

Report No.: (6720)198-0147
Form No.: 26001
Date In: 16th July 2020
Date Out: 12th Aug 2020
No. Of Working Days: 19
Page: 01 of 04
Pretest for Buyer: Not Listed

Sample Description: Vardhaman Healthguard AMIC 30 GPL, ULTRASIL SX 20 GPL (Fabric)



Report No. (6720)198-0147
Page No. 04 of 04

TEST RESULTS

TESTED AGAINST: Feline Calicivirus: ATCC VR-782

Sample Details: Fabric – Grey Dyed	Log Value
Reference Specimen Immediately after inoculation	6.5
Reference Specimen after 2 hours contact time (of inoculation)	1.4
Antiviral Activity Log (Avg. Reduction)	5.1
Total Viral Activity Reduction (%)	99.999 %

-----END OF TEST REPORT-----

99.999%



COMPANY NAME: BRITACEL SILICONES LTD
ADDRESS: F-18, 'F' BLOCK ROAD, MIDC, MAROL, ANDHERI EAST
MUMBAI, MAHARASHTRA 400093

EMAIL: naishadh@britacelsilicones.com
ATTN: Mr. Naishadh Desai
TEL: 022-40094000
FAX: 022-40094003

TEST REPORT

Report No.: (6720)198-0146
Form No.: 26001
Date In: 16th July 2020
Date Out: 12th Aug 2020
No. Of Working Days: 19
Page: 01 of 04
Pretest for Buyer: Not Listed

Sample Description: Vardhaman Healthguard AMIC 30 GPL, ULTRASIL SX 20 GPL 20 Wash (Fabric)



Report No. (6720)198-0146
Page No. 04 of 04

TEST RESULTS

TESTED AGAINST: Feline Calicivirus: ATCC VR-782

Sample Details: Fabric – Grey Dyed	Log Value
Reference Specimen Immediately after inoculation	6.5
Reference Specimen after 2 hours contact time (of inoculation)	1.8
Antiviral Activity Log (Avg. Reduction)	2.7
Total Viral Activity Reduction (%)	99.8 %

-----END OF TEST REPORT-----

99.8%

VISUAL DEMONSTRATION

UNTREATED FABRIC

ENVELOPED VIRUS PARTICLES
DEPOSITED ON UNTREATED TEXTILE.

Untreated Textile Substrate

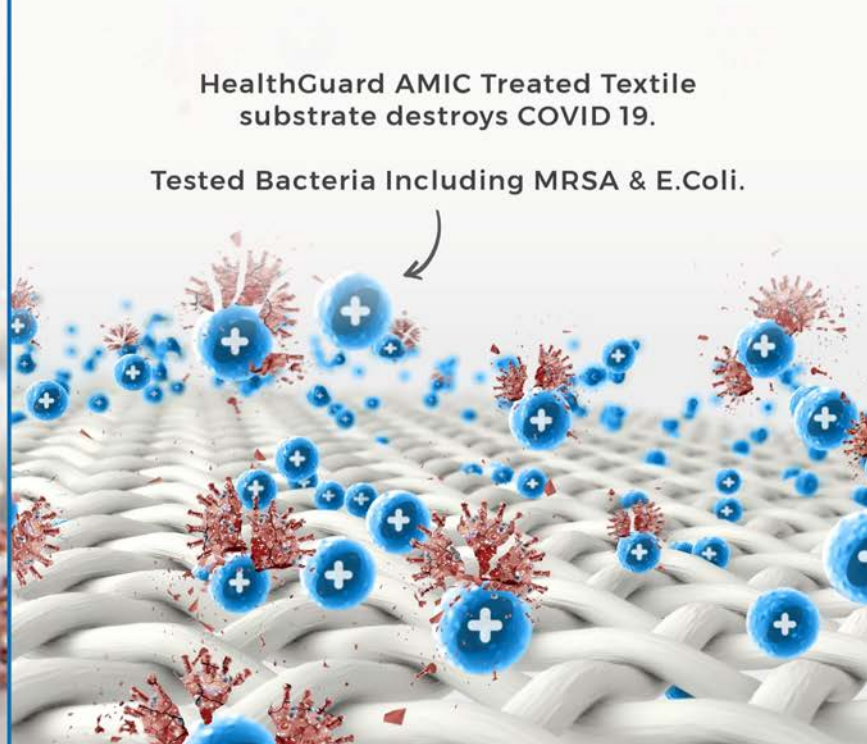


TREATED FABRIC

HEALTHGUARD RUPTURES THE
ENVELOPE, KILLING THE DNA.

HealthGuard AMIC Treated Textile
substrate destroys COVID 19.

Tested Bacteria Including MRSA & E.Coli.



HANG TAGS



Biocidal claims vary depending on country of marketing. We can guide you on claims, however we recommended that you seek independent legal advice in conjunction with this information to ensure compliance prior to purchase and promotion.

4 SIDE



HANG TAG OPTION

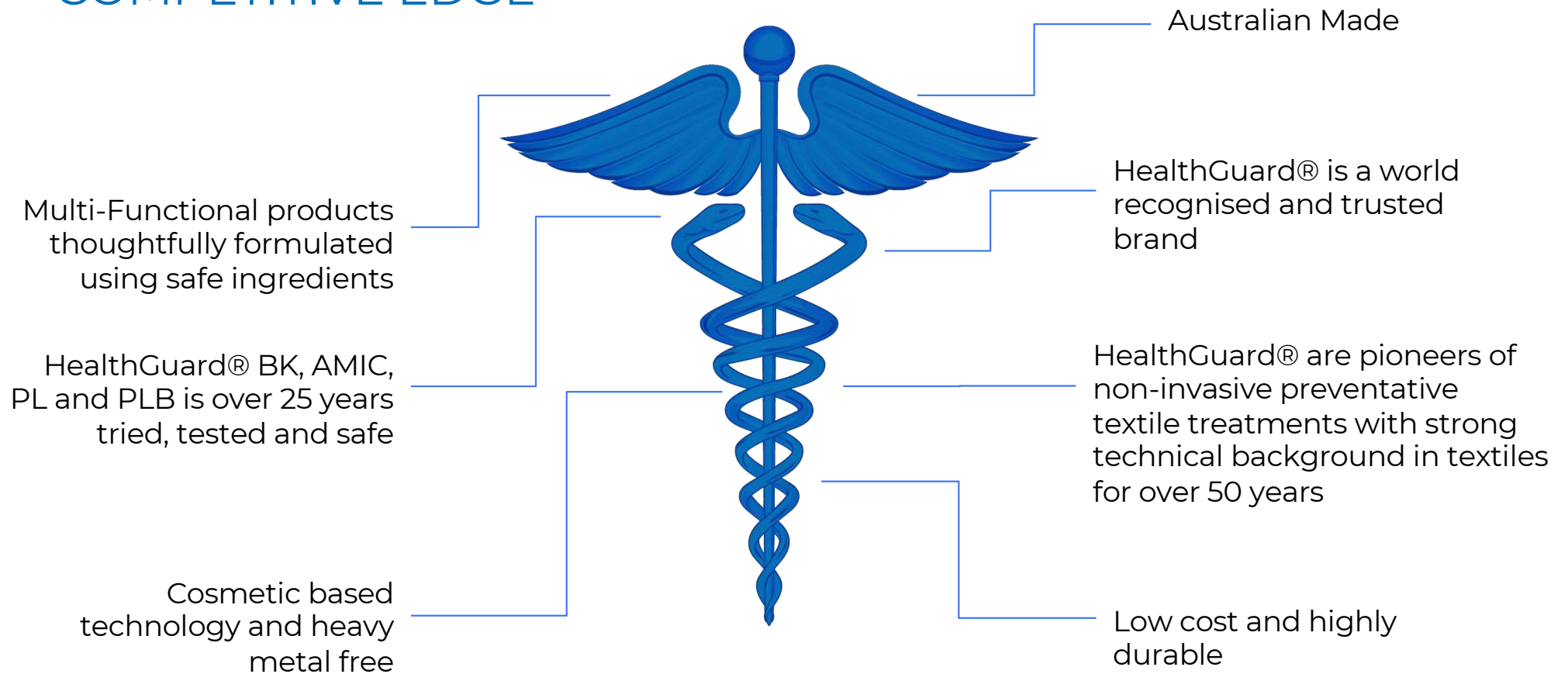


COMPLIANCE & CERTIFICATIONS

1. HealthGuard® treatments are COMPLIANT with current Biocidal Product Regulation (BPR) under PT 2 and PT 18.
2. We hereby declare that the mentioned HealthGuard® Products contain no ingredients listed on the California Proposition 65, updated on 3rd January 2020.
3. HealthGuard® BK & AMIC is under evaluation with ZDHC Level 1 and 2.
4. HealthGuard® BK & AMIC is currently being assessed for Oeko Tex active biocidal product certification.
5. HealthGuard® PLB is Australian Pesticide Veterinary Medicines Authority approved (APVMA)
6. HealthGuard® PLB is endorsed by Sensitive Choice (Australia) – National Asthma Council Australia



COMPETITIVE EDGE



TREATING GLOBALLY LEADING BRANDS



Vardhman
Delivering Excellence. Since 1965.



CHARLES PARSONS
Est. 1915





Proudly

