



## HealthGuard® PL

<b>Use</b>	<p><b>HealthGuard® PL</b> is a concentrated anti-microbial and mosquito agent especially formulated for use in the textile industry.</p> <p><b>HealthGuard® PL</b> can be applied to all types of textiles and is compatible with most finishing agents.</p> <p><b>HealthGuard® PL</b> can be applied with Fluorocarbon finishes, flame retardant finishes and all resin systems and softeners normally used in textile finishing.</p> <p>Fabrics that are treated with <b>HealthGuard® PL</b> will have long lasting anti-microbial and anti-mosquito protection.</p> <p><b>HealthGuard® PL</b> is a speciality product developed to protect clothing, curtains, furnishings, soft toys and other outdoor camping items from mosquito landings and a broad spectrum of Bacteria, Yeast, Mould and Algae's.</p>
<b>Appearance</b>	Clear yellow liquid
<b>Solubility</b>	Soluble, in esters and glycols Emulsifiable in water
<b>Reaction</b>	pH of 1% emulsion is 4.0 - 5.0
<b>Compatibility</b>	Compatible with most finishing agents
<b>S.G @ 20°C</b>	0.92
<b>Ionic Nature</b>	Anionic
<b>Biodegradability</b>	95% to 100% OECD 302 C
<b>Advantages</b>	<ul style="list-style-type: none"><li>• will not affect colour;</li><li>• no effect upon wash fastness;</li><li>• safe and hygienic;</li><li>• reduces mosquito landings on treated articles;</li><li>• compatible with textile finishing;</li><li>• controls a broad spectrum of gram negative and gram positive bacterial moulds, fungus, yeasts and algae;</li><li>• preserve fabric to a hygienic standard;</li><li>• will prevent discolouration due to microbial attack.</li></ul>
<b>Special Features</b>	<p><b>HealthGuard® PL</b> is ideal for application to military uniforms, tents, sleeping bags and all outdoor gear.</p> <p><b>HealthGuard® PL</b> can be sprayed onto carpets as a topical treatment to prevent odours caused by microbial attack and will dramatically reduce mosquito landings, probing and blood feeding.</p> <p><b>HealthGuard® PL</b> can be mixed with flexible acrylic resins for application to polyester and nylon yarns used in the manufacture of outdoor articles.</p> <p><b>HealthGuard® PL</b> treated articles will effectively kill microorganisms which cause odours and discolouration.</p>

<b>Mode of Action</b>	<p><b>HealthGuard® PL</b> provides protection against the mosquito and a broad spectrum of Moulds, Bacteria, Yeast and Algae's, which can accumulate and multiply both upon the surface and inside many textile substrates.</p> <p><b>HealthGuard® PL</b> prevents the growth of MRSA and VRE bacteria on treated fabrics.</p> <p><b>HealthGuard® PL</b> acts on two fronts:-</p> <ol style="list-style-type: none"><li>1. Inhibits the growth of a broad spectrum of Bacteria, Mould, Yeasts and Algae;</li><li>2. Proven mosquito repellent.</li></ol>									
<b>Test Microorganisms</b>	<table><tr><td><b><u>Moulds:</u></b></td><td><i>Aspergillus Niger</i> <i>Chaetomium globosum</i></td><td><i>Penicillium funiculosum</i> <i>Ulocladium consortiale</i></td></tr><tr><td><b><u>Bacteria:</u></b></td><td><i>Bacillus subtilis</i> <i>Enterobacter aerogenes</i> <i>Escherichia coli</i> <i>Proteus vulgaris</i></td><td><i>Pseudomonas aeruginos</i> <i>Pseudomonas fluorescens</i> <i>Staphylococcus aureus</i> <i>Staphylococcus aureus - MRSA A129</i></td></tr><tr><td><b><u>Algae:</u></b></td><td><i>Chlorella pyrenoidosa</i></td><td><i>Anabaena cylindrica</i></td></tr></table>	<b><u>Moulds:</u></b>	<i>Aspergillus Niger</i> <i>Chaetomium globosum</i>	<i>Penicillium funiculosum</i> <i>Ulocladium consortiale</i>	<b><u>Bacteria:</u></b>	<i>Bacillus subtilis</i> <i>Enterobacter aerogenes</i> <i>Escherichia coli</i> <i>Proteus vulgaris</i>	<i>Pseudomonas aeruginos</i> <i>Pseudomonas fluorescens</i> <i>Staphylococcus aureus</i> <i>Staphylococcus aureus - MRSA A129</i>	<b><u>Algae:</u></b>	<i>Chlorella pyrenoidosa</i>	<i>Anabaena cylindrica</i>
<b><u>Moulds:</u></b>	<i>Aspergillus Niger</i> <i>Chaetomium globosum</i>	<i>Penicillium funiculosum</i> <i>Ulocladium consortiale</i>								
<b><u>Bacteria:</u></b>	<i>Bacillus subtilis</i> <i>Enterobacter aerogenes</i> <i>Escherichia coli</i> <i>Proteus vulgaris</i>	<i>Pseudomonas aeruginos</i> <i>Pseudomonas fluorescens</i> <i>Staphylococcus aureus</i> <i>Staphylococcus aureus - MRSA A129</i>								
<b><u>Algae:</u></b>	<i>Chlorella pyrenoidosa</i>	<i>Anabaena cylindrica</i>								
<b>Test Results</b>	<p><b>HealthGuard® PL</b> has been scientifically formulated and all tests have been carried out by independent testing authorities, giving you and your customer's complete satisfaction.</p>									
<b>Application</b>	<p>For Bacterial, Yeast, Moulds, Algae and Mosquito protection a total amount of 2.0% of <b>HealthGuard® PL</b> on the weight of fabric should be applied.</p> <p><b>HealthGuard® PL</b> can be applied by padding and exhaust methods.</p> <p><b>HealthGuard® PL</b> can be applied in conjunction with acrylic dispersions <b>HealthGuard® PL</b> will migrate into the polymer.</p>									
<b>Drying Temp</b>	Up to 120°C									
<b>Storage</b>	Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition source. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect against physical damage and check regularly for leaks.									
<b>Incompatibilities</b>	Avoid storage with oxidisers. Avoid contamination of water, foodstuff, feed or seed.									
<b>Transport</b>	No restrictions.									
<b>Special Handling</b>	Thoroughly clean hands after handling of this product. Do not allow spills to enter waterways. See Safety Data Sheet (SDS) for further information.									

HGC has a responsibility to take reasonable care for our own health and safety, and the health and safety of others, who may be affected by our acts, or omissions.

This Technical Data Sheet (TDS) at the date of issue has application rates and some Health and Safety Information of the product. To know more on how to safely handle and use this product in the Workplace please read our Safety Data Sheet (SDS) before purchasing this product.

All information given is to the best of our knowledge, and because we cannot anticipate or control the conditions of the end use of this product, prior to usage, each user must determine by reviewing this TDS and our SDS, for the Safe Handling and usage of this product in the Workplace.

HGC believe this information to be reliable, and in good faith, but no guarantees or warranties of any kind are made as to its accuracy, or suitability to particular applications due to variations in methods, conditions and equipment. When HGC provides information and service involving skill, assistance, judgment, recommendations, and or advice, this is done to the best of our knowledge only, information is not to be relied upon.

Full scale testing and performance of the end product is the responsibility of the end user. For further information or classification of certain points to ensure that the user has made a proper assessment and reasonable precautions have been applied, please contact HGC on +61 (0) 3 9308 6888.

Last Updated: 1st July 2013

 **HealthGuard® Intelligent Biotech Solutions**

Document No:	4-03	Issue No:	12	Authority:	CH
File Name:	(TDS) TechDataSheet.docx	Issue Date:	09/04/2013	Page No:	2 of 2