# HHL TECHNOLOGY®

纺织品卫生整理技术 解决方案

## 专注防蚊虫技术 20 年

汉斯克专注于防蚊虫技术 20 年。汉斯克整合了材料科学、化学、生物科技和昆虫学，为各类基材研发新型防蚊虫及抗微生物添加剂。汉斯克始终秉承以预防生物媒介传播为己任，致力用科技改善生活，服务社会大众。产品应用范围涉及纺织面料、塑料制品、农用制品、建筑制品等领域。

Hansk has been focusing on anti-insect technology development for over 20 years. Hansk integrates materials science, chemistry, bio-technology and entomology to develop new anti-mosquito and anti-microbial additives for various substrates. Hansk adheres to the mission of preventing biological vector transmission, and to improve living standard with technology. The product application scope includes textile, agricultural plastic and construction materials.

## 国际知名品牌合作伙伴

汉斯克公司旗下 HHL Technology，专为各类服装及家纺品牌提供防蚊虫、防螨和抗微生物的卫生整理解决方案。多年来与众多品牌合作，产品和技术广泛应用于户外休闲、运动、婴童、家纺等领域。是您值得信赖的合作伙伴！

HHL Technology, a sub-brand of Hansk, offers hygienic solutions such as anti-microbial, anti-dustmite and anti-insect properties to apparel and home textile brands. HHL Technology has been appiced by various international sportswear, outdoor clothing and gear, children-wear and home textile brands.

## 国际权威检测认证

汉斯克与国际合作伙伴密切合作，产品与技术通过多个国家权威实验室的检测及安全认证，并获得美国环保署 EPA 及欧盟 OEKO-TEX、ZDHC 化学品零排放等认证。

Hansk works closely with partners internationally, and collaborates with prestigious independent test institutes and universities for arthropod and toxicity test. Hansk products have obtained US EPA , EUOeko-Tex and Zero Discharge of Hazardous Chemicals (ZDHC) certificates.

## 中国团体标准制定单位

在纺织面料的防蚊虫功能整理方面，汉斯克发起并参与制定中国《氯菊酯防蚊面料》团体标准 T/CTCA 3-2017。并于 2023 年对《团体标准 T/CTCA 3-2017》进行了再次修改与完善，在纺织品防蚊虫领域为行业提供更加全面的执行标准。

Hansk is co-convenor and one of the drafting units for Group Standard T/CTCA3-2017 “Anti-Mosquito Fabric Treated with Permethrin”, the standard has been revised and improved in 2023, to provide a more comprehensive anti-mosquito standard to the textile industry.

# 从一簇菊花开始
# FROM A CLUSTER OF CHRYSANTHEMUM

自然界中有一种除虫菊，其早时发现蚊虫会远离这种菊花，后来经过科学家分析，得出除虫菊中酯类化合物是具有驱昆虫蚊子等效果。产品有效成分氯菊酯，是这种酯类化合物的科技合成版本。

美国陆军使用氯菊酯作驱虫用途已 30 多年，如今在欧美等国家氯菊酯已经是一种常用于防蚊虫纺织品的成分。而汉斯克的技术能够把对蚊虫的驱避功效大幅提升，并具有击倒及驱避双功能。

Pyrethrins are naturally-occurring compounds with insecticidal properties that are found in pyrethrum extract from certain chrysanthemum flowers. The active ingredient used by Hansk is mainly permethrin, an technologically-synthesized organic compound similar to the natural pyrethrins.

The U.S. military has been using permethrin on their uniforms for more than 30 years. Permethrin is  a common active ingredient used in insect repellent clothing in Europe & USA. Hansk is able to significantly enhance its repellency, therefore articles treated with Hansk products can both knock-down and repel insects.

## 主要优点 / Key Benefits

01 优良的耐水洗性， 持久有效
Excellent wash fastness, durable and effective

02 不影响面料颜色及手感
Does not affect fabric colour and  hand feel

03 简单的应用方法，包括浸轧、浸渍、喷雾
Simple application methods including pad, exhaust and spray

04 与其它整理剂兼容
Compatible with other finishing additive

VITAL PROTECTION

# 防蚊虫

## 介绍 / Introduction

Vital Protection 是一种高效、市场领先的防蚊虫技术及产品，经处理的纺织品可以保护使用者免受蚊子、蠓虫、苍蝇、跳蚤和臭虫等害虫的叮咬。同时具有抑菌及控制异味，预防织物降解功效。

Vital Protection is a highly effective, market-leading anti-insect protection technology and product. Vital Protection safeguards the user and fabrics from biting insects. In addition to giving the end-user essential health protection and peace of mind, Vital Protection also inhibits odour-causing bacteria and fabric degradation.

## 产品系列 / Product Family

### Vital Protection 1 防蚊虫抗菌整理剂

防蚊虫抗菌整理剂 , 弱阳 / 非离子性，3%-8% o.w.f.

Anti-insect & Anti-bacterial finishing agent, weak cationic/non-ionic, 3%-8% o.w.f

### Vital Protection W 环保水性防蚊虫抗菌整理剂

环保水性防蚊虫抗菌整理剂 , 不含溶剂，弱阴离子性，3%-8% o.w.f.

Eco-friendly water-based anti-insect & anti-bacterial finishing agent, solvent-free, weak anionic, 3%-8% o.w.f.

### Vital Protection 10% 防蚊虫整理剂

美国 EPA 注册认可的防蚊虫整理剂 ( 注册编号 :93511-3)，经处理的织物可在美国销售

US EPA registered anti-mosquito finishing agent (no.: 93511-3), treated articles can be distributed in the US

### Vital Protection MB 防蚊虫母粒

防蚊虫母粒， 可在锦纶 (PA6, PA66)、涤纶 (PET, PBT)、PP、PVC 纺丝过程中添加

Anti-insect masterbatch, can be added during nylon (PA6, PA66), polyester (PET, PBT), PP and PVC yarn spinning process

## 产品特性 / Product Features

**01** 大幅减少和预防与虫害叮咬的健康风险
Drastically reduces and prevents health risks associated with insect bites

**02** 有效抑制引起異味的細菌聚集， 防止織物降解
Protects fabrics against odours, discolouration and staining

**03** 抗细菌和抗真菌
Anti-bacterial and anti-fungal

## 应用领域 / Range of Application

户外服装及装备
Outdoor Clothing & Gear

休闲运动
Sports Wear

窗帘
Curtain

军服
Military Uniform

鞋袜帽
Shoes, Socks & Hats

儿童纺织
Children Wear

## 防蚊试验效果对比图
## Anti-Mosquito Test Comparison (Control & Treated)

中疾控防蚊效果报告
（水洗前）

中疾控防蚊效果报告
（水洗 30 次）

# HEALTH PROTECTION

# 防螨

## 介绍 / Introduction

Health Protection 具有消除尘螨及其食物来源双重作用产品，为哮喘和过敏患者提供终极保护。Health Protection 能够抑制纺织品上尘螨的生长，并预防织物产生异味、污渍和变质，确保衣物可以长时间保持清洁、清新及健康。

Health Protection is a dual action product that offers protection against both odour causing bacteria and dust mites. It is the ultimate anti-allergy system. Health Protection works by acting as a contact repellent, inhibiting dust mites on any treated article. Additionally, it also protects fabrics against odours, staining and deterioration ensuring they remain cleaner, fresher and healthier for longer!

尘螨一般生长在地毯、床上用品，纺织家具及毛绒玩具生活的节肢动物。一张普通的床可能有超过 200 万只尘螨居住！尘螨被公认为数百万患者触发过敏反应的主要原因。它们可引发哮喘、湿疹、慢性鼻窦炎、皮肤过敏等。

Dust mites are microscopic insects that love to live in carpet, bedding, beds, soft furnishings and toys. The average bed is home to 2 million of them! Dust mites are commonly recognised as one of the main triggers of allergic reactions in millions of sufferers worldwide including asthma, eczema, sinusitis and skin allergy.

## 产品系列 / Product Family

### Health Protection 1 防尘螨抗菌整理剂

防尘螨抗菌整理剂，弱阳 / 非离子性，1%-4% o.w.f.
Anti-dustmite & Anti-bacterial finishing agent, weak cationic/non-ionic, 1%-4% o.w.f.

### Health Protection 3 防尘螨整理剂

高浓度，高性价比的防尘螨整理剂，弱阳 / 非离子性，0.5%-2% o.w.f.
High concentration and cost-effective anti-dustmite finishing agent, weak cationic/non-ionic, 0.5%-2% o.w.f.

## 产品特性 / Product Features

01 保护织物免受尘螨的干扰、预防产生异味的细菌生长
Protect fabrics against dust mites, and prevent the growth of odor-causing bacteria.

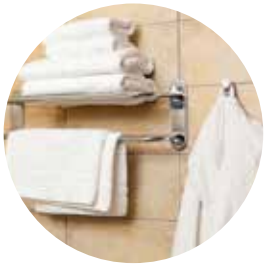
02 保护受过敏或哮喘影响的患者，提供安全健康的环境
Immeasurable benefits to allergy and asthma sufferers and provide a safe, healthy environment

03 抗细菌和抗真菌
Anti-bacterial and anti-fungal

## 应用领域 / Range of Application

高端家纺
Home Textiles

床垫
Mattress



毛巾制品
Towel

地毯
Carpet

家居休闲服
Sportswear

羊毛羊绒
Wool

## 防尘螨测试 / Anti-Dust Mite Test

HHLTECHNOLOGY®

# HYGIENE PROTECTION

# 抗菌

## 介绍 / Introduction

Hygiene Protection 有效保护织物免受微生物的滋生，避免纺织品产生异味、染色、变质及变色。

Hygiene Protection effectively protects fabrics against the growth of micro-organisms that can cause odours, staining, deterioration, discolouring.

## 产品特性 / Product Features

**01** 广谱抗菌
Broad Spectrum anti-microbial function

**02** 抑制有害细菌和霉菌的繁殖。有效抑制金黄色葡萄球菌、大肠杆菌、肺炎杆菌、白色念珠菌等繁殖
Effectively inhibit the reproduction of bacteria and mould such as S. aureus, E. coli, P. bacillus and C. albicans

**03** 适合哮喘和过敏症患者；减少因细菌繁殖引起的皮肤过敏。
Ideal for asthma and allergy sufferers. Reduce skin allergies caused by bacteria

## 有效抑制 / Effectively Inhibit

金黄色葡萄球菌
*Staphylococcus aureus*

大肠杆菌
*Staphylococcus aureus*

白色念珠菌
*Candida lbicans*

## 防细菌测试 / Anti-Microbial Test

# 防蚊虫面料开发流程
# Anti-Insect Fabric Development Process

1

**面料选择：**品牌商确认面料类型、面料处理量、水洗次数要求、及是否会在面料中添加其他添加剂。

**Fabric Selection:** The brand to confirm fabric type, treated quantity, wash cycles required and if other additives will be added to the fabric.

2

**报价：**HHL Technology 向客户提供建议用量及价格核算

**Quotation:** HHL Technology to recommend application dosage and cost.

3

**测试打样：**品牌提供 2 米面料样品给 HHL Technology。 品牌亦可根据 HHL Technology 提供的工艺及用量选择自行小样或中样测试。

**Sampling:** The brand to provide 2m fabric sample to HHL Technology for lab test. Alternatively, the brand can follow application procedure recommended by HHL Technology for lab or mid-scale trials.

4

**大货生产及抽检：**基于试样结果进行大货生产。由生产方或品牌方抽样送到第三方测试机构或 HHL Technology 进行质量检测。

**Bulk Production and Quality Check:** The brand to bulk manufacture based on lab result. Brand or fabric manufacturer will dispatch treated sample to independent test institute or HHL Technology for quality check.

5

**吊牌：**经处理的样品经第三方机构检测符合要求，HHL Technology 将为品牌发放吊牌

**Hang-Tag:** HHL Technology will issue hang-tags to the brand if the treated sample fulfill the requirement from independent test institute

# 品质管理——
# 不是控制 而是成就

防蚊虫成人服装吊牌

防螨服装吊牌

抗菌服装吊牌

防蚊虫儿童服装吊牌

美国版 EPA 防蚊虫专用吊牌

# 国际权威认证
# International Certification

美国环境保护署
产品登记

瑞士OEKO-TEX®
有害物质测试

欧洲化学品
零排放

# 全球合作检测机构
# Global Independent Testing Institute

英国i2L Research
蚊虫驱避及击倒测试

中国疾病预防控制中心
蚊虫驱避及击倒测试

专业第三方测试
检验和认证机构

英国ARCTEC
蚊虫驱避及击倒测试

德国TÜV SÜD
产品毒性测试

意大利Entostudio
蚊虫驱避及击倒测试

汉斯克的产品已在美国环保局 (EPA) 及欧盟 Oeko-Tex 注册。产品在国际权威的节肢类动物测试机构，包括英国 ARCTEC 及 i2L Research、意大利 Entostudio、中国疾病控制与预防中心有丰富的蚊子、尘螨、蚂蚁、蟑螂、苍蝇等害虫的测试数据，而毒性测试在 TÜV SÜD、SGS、GTTC 等机构进行检测，以证实产品安全有效。

Hansk products have been registered at US Environmental Protection Agency (EPA) and EU Oeko-Tex. Hansk collaborates with arthropod test institution in Europe and Asia including ARCTEC and i2L Research in UK, Entostudio in Italy, CDC in China and have obtained extensive test data on mosquito, dustmite, ant, cockroach and housefly. Hansk also collaborate with TÜV SÜD,SGS and GTTC for product toxicity test.

汉斯克®
HANSK
抗菌 防螨 防蚊虫

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