

Microkiller®

迈 抗 力

微生物控制解决方案
Microbial Control Solutions



抗菌 | 防霉 | 抗病毒

Antibacterial | Antifungal | Antiviral



北京艾斯尔科技有限公司
Beijing SR Technology Ltd.

微生物控制

Microbial Control

意义

Meaning

微生物控制是通过采用不同的技术和策略，有效地减少或消除环境中的有害微生物，从而降低疾病的发生和传播风险，保护人类和动物的健康。

Microbial control is the process of effectively reducing or eliminating harmful microorganisms in the environment by adopting different technologies and strategies, thereby reducing the risk of disease occurrence and spread and protecting the health of humans and animals.

抗菌

Antibacterial

抑制制品表面细菌增殖

Inhibit the proliferation of bacteria on the surface of products

防霉

Antifungal

抑制制品表面特定霉菌繁殖

Inhibit the growth of specific mold on the surface of products

抗病毒

Antiviral

减少制品上特定病毒的数量

Reduce the amount of specific viruses on the products

艾斯尔科技

Beijing SR Technology Ltd.

北京艾斯尔科技有限公司于 2003 年 12 月 15 日成立 ,2005 年和 2006 年设立了位于广州和上海的办事处。

自建立以来，艾斯尔科技持续关注安全无害的微生物控制助剂的应用，专注于为诸多行业领域定制抗菌·防霉·抗病毒专业解决方案，致力于推广正确的抗菌理念，以促进行业的健康发展、提高消费者的生活水平。

艾斯尔科技集研发制造和国际贸易为一体，与石塚硝子株式会社、东亚合成株式会社等国际一线供应商建立了稳定长期的合作关系，拥有充足的安全库存；在售制剂多种型号已通过如 EPA、FDA、BPR 等多种国际认证，可添加于塑料、橡胶、涂料、纤维等常见原料中，广泛应用于日用品、纤维、家电、厨房卫浴、食品医疗等行业领域；艾斯尔科技时刻关注国际前沿的抗菌情报，能配合供应商进行前期研发并定制产品推广策略，使公司能更好的服务于大众。

Microkiller® 为公司的注册商标，是我们优良稳定品质、专业细致服务的承诺！

Beijing SR Technology Ltd. was established on December 15, 2003. In 2005 and 2006, it established offices in Guangzhou and Shanghai.

Since its establishment, SR Technology has continued to focus on the application of safe and harmless microbial control additives, focusing on customizing antibacterial, antifungal, and antiviral professional solutions for many industry fields, and is committed to promoting the correct antibacterial concept to promote the industry healthy development and improve consumers' living standards.

SR Technology integrates R&D, manufacturing and international trade. It has established stable and long-term cooperative relationships with international first-line suppliers such as Ishizuka and ToaGosei . It has sufficient safety inventory; Many models have passed various international certifications such as EPA, FDA, BPR, etc., and can be added to common raw materials such as plastics, rubber, coatings, fibers, etc., and is widely used in daily necessities, fibers, home appliances, kitchen and bathroom, food, medical and other industries; Er Technology always pays attention to the international cutting-edge antibacterial information, and can cooperate with suppliers in preliminary research and development and customize product promotion strategies, so that the company can better serve the public.

Microkiller® is the company's registered trademark, which is our commitment to excellent and stable quality, professional and meticulous service!



关注健康 | 安心抗菌

MICROKILLER

特点与优势

Characteristics and Features

高适用性

Stable Performance

Microkiller® 和树脂、纤维、涂料相容性优异，对材料自身外观、功能性、机械性能等影响较低。

It has excellent compatibility with resins, fibers, and coatings, and has little effect on the appearance, functionality, and mechanical properties of the material itself.

耐变色性

Discoloration Resistance

添加 Microkiller® 抗菌材料对制品颜色、外观影响较低。

Adding Microkiller® antibacterial material has little impact on the color and appearance of the product.

高透明性

High Transparency

在透明树脂中加入 Microkiller®, 几乎不影响树脂原有的透明度。

Adding Microkiller® to transparent resin hardly affects the original transparency of the resin.

高安全性

High Safety

拥有 EPA、FDA、NSF、BPR、EFSA、OEKO-TEX、SIAA、CIAA 等权威认证。

It has authoritative certifications such as EPA, FDA, NSF, BPR, EFSA, OEKO-TEX, SIAA, CIAA, etc.

长效保护

Long Lasting

Microkiller® 使用了特殊的活性成分缓释技术，能持续高效抑制制品表面微生物的繁殖。

Microkiller® uses a special active ingredient sustained-release technology that can effectively and permanently inhibit the reproduction of microorganisms on the product surface.

安全性

Safety

安全性试验种类	安全性标准
一次 / 多次皮肤刺激试验 One/multiple skin irritation test	无刺激或轻度刺激 Non-irritating or mildly irritating
急性口服毒性 Acute oral toxicity	LD50 ≥ 2,000 mg / kg
皮肤过敏性 Skin sensitization	阴性 Negative
遗传毒性试验 – 基因突变试验 Genotoxicity test – gene mutation test	阴性 Negative
遗传毒性试验 – 染色体畸变试验 Genotoxicity test – Chromosome aberration test	阴性 Negative

认证

Authorization

America

美国国家环境保护局
U.S. Environmental Protection Agency

美国食品药品监督管理局
Food and Drug Administration

美国国家科学基金会
National Science Foundation

Europe

欧盟生物杀灭剂法规
Biocidal Product Regulation

欧洲食品安全局
European Food Safety Authority

OEKO-TEX®
CONFIDENCE IN TEXTILES
STANDARD 100

Asia

抗菌制品技术协议会
Society of International sustaining growth for Antimicrobial Articles

纤维制品新机能
评价协议会
JAFET

CIAA 合格抗菌材料
Chinese Industry Association for Antimicrobial Materials & Products

产品介绍

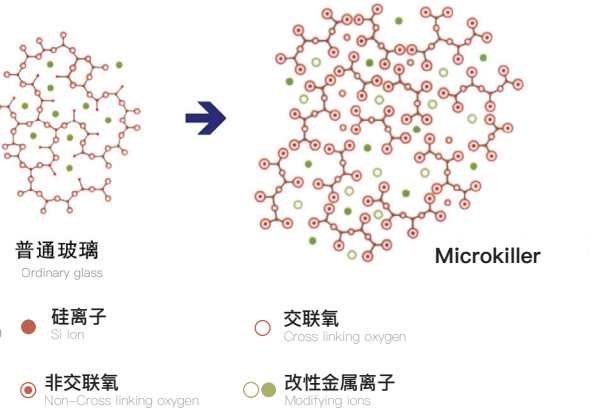
Product Introduction

玻璃系无机抗菌剂

Glass-Based Inorganic Antibacterial Agent

通过特殊的加工技术，调整玻璃网状结构中的组分，从而控制其网状结构强度、并在其中导入具有抗菌功能的金属离子，形成一种新型高科技玻璃材料。通过材料中金属离子的缓释，可充分发挥抑制细菌的功效。耐温可达500℃，对透明树脂的透明性影响较低。

Through special processing technology, the components in the glass mesh structure are adjusted to control the strength of the mesh structure, and metal ions with antibacterial function are introduced into it to form a new type of high-tech glass material. Through the slow release of metal ions in the material, the effect of inhibiting bacteria can be fully exerted. The temperature resistance can reach 500℃ , and the transparency of transparent resin has little effect.



日用品 Housewares



卫浴 Bathroom



家电 Home Appliances



汽车 Automobile

磷酸锆系无机抗菌剂

Zirconium Phosphate Inorganic Antibacterial Agent

将金属离子与磷酸锆进行离子交换而制成。磷酸锆系无机抗菌剂的热稳定性好，耐温可达 800℃；粒径细且均匀，耐变色性好，可用于 PET、PA、PP 等材料长纤和短纤的纺丝加工。

It is made by exchanging metal ions with zirconium phosphate. Zirconium phosphate inorganic antibacterial agents have good thermal stability and can withstand temperatures up to 800° C; they have fine and uniform particle sizes and good discoloration resistance, and can be used for spinning long and short fibers of materials such as PET, PA, and PP.



床上用品 Bedding



清洁用品 Cleaning supplies



运动服饰 Sportswear



医用敷料 Medical Dressings

抗菌防霉剂

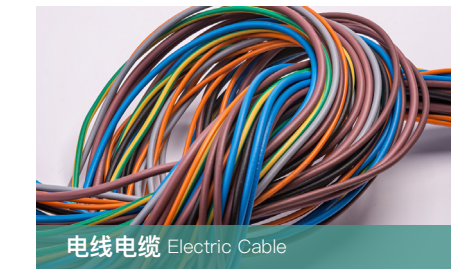
Antibacterial and Antifungal Agent

主要通过破坏细胞膜、抑制蛋白质合成或干扰微生物代谢来起效，可用于抑制或杀灭细菌、霉菌等微生物，防止它们在制品表面繁殖，从而导致腐败、异味。广泛应用于橡塑材料、纺织涂料、油墨、胶粘剂等体系中，合理使用有助于延长制品的使用寿命。

It works mainly by destroying cell membranes, inhibiting protein synthesis or interfering with microbial metabolism. It can be used to inhibit or kill bacteria, molds and other microorganisms to prevent them from multiplying on the surface of products, thus causing corruption and odor. It is widely used in rubber and plastic materials, textile coatings, inks, adhesives and other systems. Reasonable use helps to extend the service life of products.



空调滤网 Air Conditioning Filter



电线电缆 Electric Cable



浴室用品 Bathroom Supplies

抗病毒剂

Antiviral Agent

抗病毒剂通过破坏病毒的外壳、干扰病毒的生物合成过程、阻断病毒与细胞的结合等途径，以达到杀死或抑制病毒复制的效果。抗病毒剂可添加在塑料、硅橡胶、涂料等常见材料中。

Antiviral agents kill or inhibit virus replication by destroying the virus shell, interfering with the virus's biosynthesis process, blocking the combination of viruses and cells, etc. Antiviral agents can be added to common materials such as plastics, silicone rubber, and coatings.



医用口罩 Medical Masks



扶梯扶手 Escalator Handrail



电梯按钮 Elevator Buttons

功能性母粒

Functional Masterbatch

Microkiller® 功能性母粒是将特定的微生物控制助剂以较高浓度添加在树脂中，在制品加工过程中与树脂混合使用。使用功能性母粒可以极大的提高助剂在制品中的分散性。

Microkiller functional masterbatch is a specific microbial control additive added to the resin at a higher concentration and mixed with the resin during the product processing. The use of functional masterbatch can greatly improve the dispersion of the additive in the product.



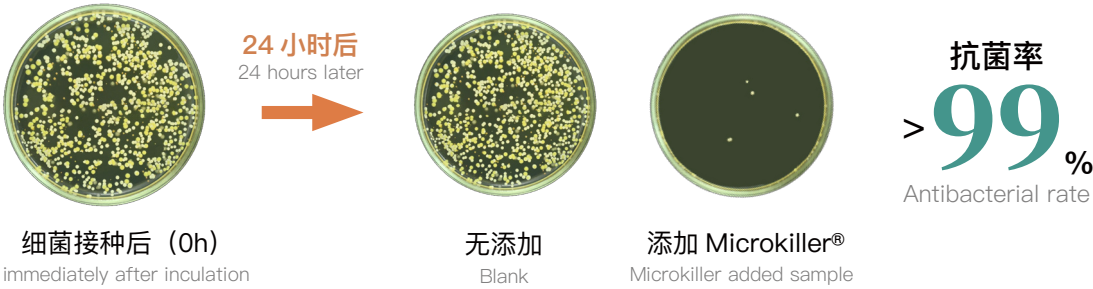
Microkiller® 抗菌性能

Microkiller Antibacterial performance

大肠杆菌

NBRC 3972

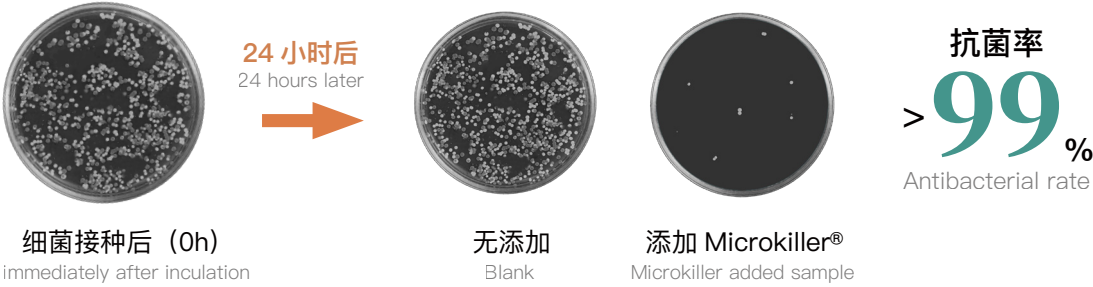
Escherichia coli
NBRC 3972



金黄色葡萄球菌

NBRC 12732

Staphylococcus aureus
NBRC 12732



通用塑料

General Plastics

试验菌种 Test Stains	在不同接触时间洗脱后获得的细菌数的 对数值平均值 (cfu/cm ²)			抗菌活性值 Antibacterial activity value	抗菌率 (%) Antibacterial Rate
	/	0h	24h		
大肠杆菌 E.coli ATCC 8739	空白样 Blank	1.0x10 ⁴	4.8x10 ⁵	>5.9	>99.9
	抗菌样 Experimental group	1.0x10 ⁴	<0.63		
金黄色葡萄球菌 Staph.aureus ATCC 6538P	空白样 Blank	1.8x10 ⁴	1.6x10 ⁵	>5.4	>99.9
	抗菌样 Experimental group	1.8x10 ⁴	<0.63		

Test Method 试验方法：ISO 22196

工程塑料

Engineering Plastics

试验菌种 Test Stains	在不同接触时间洗脱后获得的细菌数的 对数值平均值 (cfu/cm ²)			抗菌活性值 Antibacterial activity value	抗菌率 (%) Antibacterial Rate
	/	0h	24h		
大肠杆菌 E.coli ATCC 8739	空白样 Blank	1.8x10 ⁴	1.6x10 ⁵	>5.4	>99.9
	抗菌样 Experimental group	1.8x10 ⁴	<0.63		
金黄色葡萄球菌 Staph.aureus ATCC 6538P	空白样 Blank	1.8x10 ⁴	1.6x10 ⁵	>5.4	>99.9
	抗菌样 Experimental group	1.8x10 ⁴	<0.63		

Test Method 试验方法：ISO 22196

纤维

Fiber

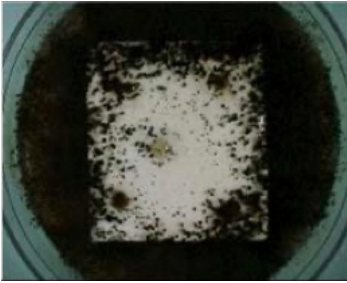
试验菌种 Test Stains	在不同接触时间洗脱后获得的细菌数的 对数值平均值 (cfu/cm ²)			抗菌活性值 Antibacterial activity value	抗菌率 (%) Antibacterial Rate
	/	0h	24h		
大肠杆菌 E.coli ATCC 8739	空白样 Blank	1.0x10 ⁴	4.8x10 ⁵	3.3	99.9
	抗菌样 Experimental group	1.0x10 ⁴	2.3x10 ²		
金黄色葡萄球菌 Staph.aureus ATCC 6538P	空白样 Blank	1.8x10 ⁴	1.6x10 ⁵	>5.4	> 99.9
	抗菌样 Experimental group	1.8x10 ⁴	<0.63		

Test Method 试验方法：ISO 22196

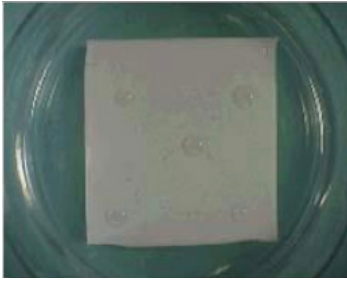
Microkiller® 防霉性能

Microkiller Antifungal performance

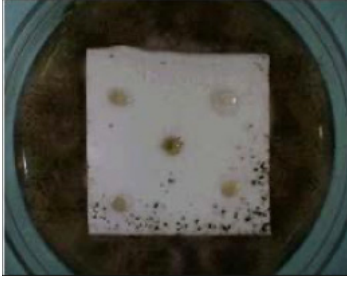
在自来水中浸泡 200 小时后
After soaking in tap water for 200 hours



空白片
Blank



添加 Microkiller®
Microkiller added sample



其他友商防霉剂
Other antifungal agents

Microkiller® 抗病毒性能

Microkiller Antiviral performance

塑料

Plastic

试验菌种 Test Stains	平均病毒滴度对数值 (lgTCID ₅₀ /cm ²)			抗病毒活性值 Antiviral activity value	抗病毒率 (%) Antibacterial Rate
	/	0h	24h		
甲型流感病毒 H3N2	空白样 Blank	/	4.28	2.66	99.78
	抗病毒样 Experimental group	5.67	1.62		

Test Method 试验方法：ISO 21702

涂料

Coating

试验菌种 Test Stains	平均病毒滴度对数值 (lgTCID ₅₀ /cm ²)			抗病毒活性值 Antiviral activity value	抗病毒率 (%) Antiviral Rate
	/	0h	24h		
甲型流感病毒 H3N2	空白样 Blank	5.91	4.52	> 3.22	> 99.9
	抗病毒样 Experimental group	/	< 1.30		

Test Method 试验方法：ISO 21702

Microkiller® 物理性能

Microkiller Physical properties

测试项目	测试规格	PC (空白)	PC (含 0.5%Microkiller)
拉伸强度 50mm/min	ASTM D-628	642	639
弯曲强度 3mm/min	ASTM D-790(kg/cm ²)	924	931
冲击强度	ASTM D-256(kg·cm/cm)	82.6	83.86
热变温度 (载重 18.5Kg)	ASTM D-648(℃)	132.4	132.8

Microkiller® 透明性

Microkiller Transparency

测试材质	外观参数				抗菌率 (%)	
	L*	a*	b*	Y(直接透射)	大肠杆菌	金黄色葡萄球菌
PET (空白)	91.55	-0.49	4.37	83.98	—	—
PET (含 1%Microkiller)	93.05	-0.59	2.66	81.45	> 99	> 99

Microkiller 迈抗力®

世界**领先**的抗菌技术

优异的微生物控制性能

传递**安心、舒适**的生活方式

World-leading Antibacterial Technology

Excellent Microbial Control Performance

Delivering a **Reassuring** and **Comfortable** Lifestyle

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