



浩力森



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Limit **BREAK** 突破极限



Lower Energy Consumption
Ultra-High Throwing Power
Ultra-Strong Anti-Corrosion
更低能耗/超高泳透/超强防腐

HTP-7000 Series High Throwing Power &
High Performance Cathodic Electrophoretic Coating
HTP-7000系列高泳透力高性能阴极电泳涂料

HLS Technology Development (Shanghai) Co.,Ltd
HLS (Shanghai) New Material Technology Co.,Ltd
HLS Coatings (Shanghai) Co.,Ltd
HLS Chemical Technology (Jiangsu) Co.,Ltd

浩力森科技发展（上海）有限公司
浩力森（上海）新材料科技有限公司
浩力森涂料（上海）有限公司
浩力森化学科技（江苏）有限公司

Limit BREAK HTP-7000 SERIES

Innovate Material Future 启迪材料极限

HLS邀您共同挑战品质极限。

HLS invites you to challenge the quality limit together.

HTP-7000 series is a new generation of high throwing power and high performance cathodic electrophoretic coating independently developed by HLS. According to the characteristics of automobile body coating industry, its super anti-corrosion performance breaks through the existing standards of the industry, reaching 1500 hours of salt spray resistance and 60 alternating cycles. Super high throwing power and lower curing temperature can effectively reduce cost, energy and emission for customers.

HTP-7000 series leads the industry benchmark, exceeds the existing market requirements, provides customers with future demand solutions in advance, and truly creates value for customers, thus realizing the value of HLS itself.

HTP-7000系列是由HLS自主研发的新一代高泳透力高性能阴极电泳涂料。针对汽车车身涂装行业的特点，其超强的防腐性能突破行业现有标准，达到1500小时耐盐雾，60个循环交替。超高的泳透力及更低的烘烤固化温度有效的为顾客降本、节能、减排。

HTP-7000系列引领行业标杆，超越现有市场要求，超前为顾客提供未来需求的解决方案，真正为顾客创造价值，从而实现HLS的自身价值。

Lower Curing Temperature, Energy Conservation And Emissions Reduction

更低的烘干温度，为您节能减排

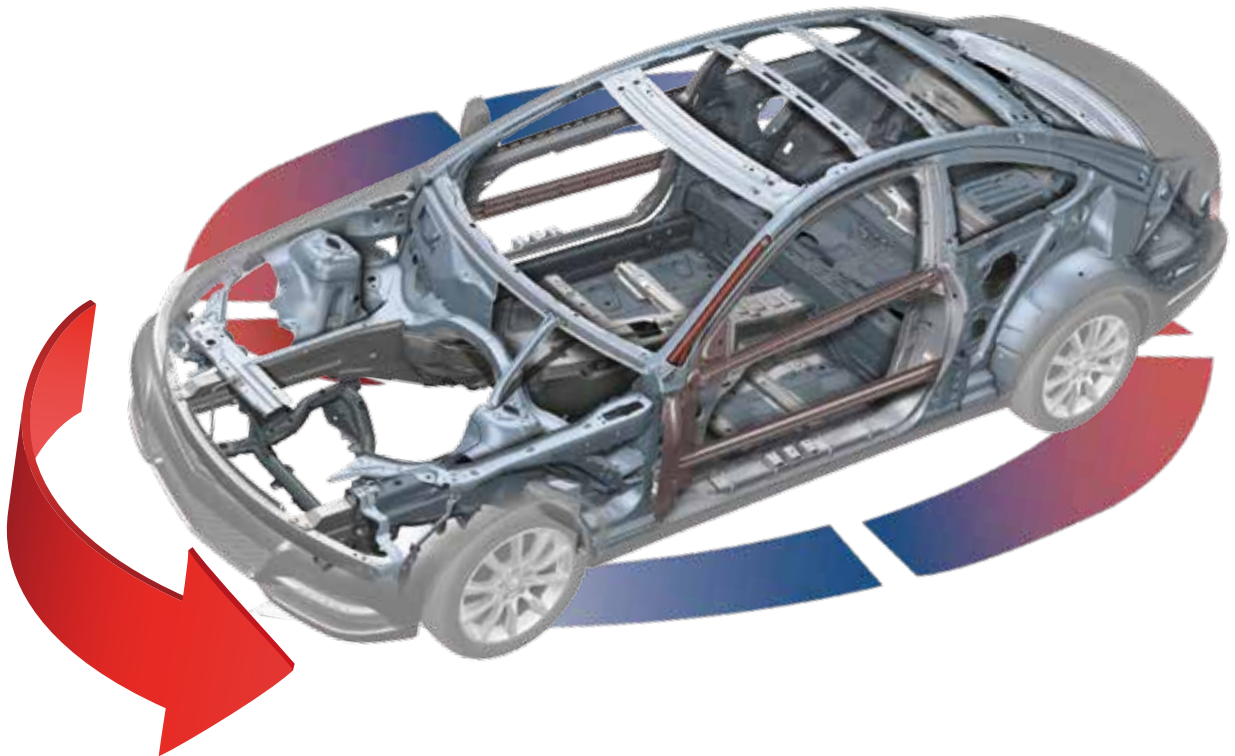
During electrophoretic coating, the drying process of coating film ensures the best performance after curing, and is also the main link of high energy consumption and high emission. Whether from the perspective of energy conservation or environmental protection, The electrophoretic coatings with lower baking temperature and shorter baking time are in line with the trend of sustainable development of coating technology.

According to statistics, drying curing temperature from 180 °C to reduce to 160 °C energy use can be reduced by 20%. HTP - 7000 series at 160°C×15 min drying specification in the automobile body coating industry leader.

电泳涂装时，涂膜烘干环节确保了涂膜固化后的最佳性能，同时也是高能耗与高排放的主要环节。无论从节能还是环保角度出发，更低烘烤温度、更短烘烤时间的电泳涂料符合涂装工艺可持续发展的趋势。

据统计，烘干固化温度从180°C减低到160°C，能耗减少20%。HTP-7000系列以160°C*15min的烘干规范在整车车身涂装行业领先。

160°C
Low
Temperature

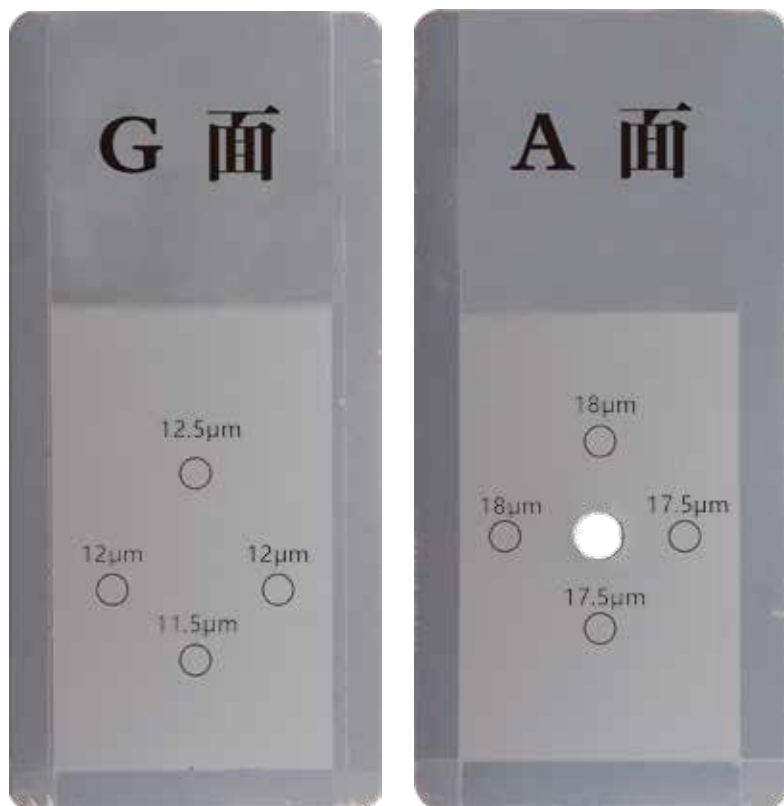


Ultra-High Throwing Power, Reduce Cost

超高的泳透力，为您降低成本

HTP-7000 series with the ultra-high throwing power is the key to achieve the safety of the whole car body interior surface coating. It can not only ensure the body coating film reaches the standard thickness, but also improve the utilization rate and production efficiency of the coating and reduce the cost.

HTP-7000系列的超高泳透力是实现整车车身内表面涂装安全的关键，不仅能确保车身涂膜达到标准厚度，还能提高涂料的利用率和生产效率，降低成本。



HTP-7000 series throwing power reach over 65%
by Four-box method
HTP-7000系列泳透力四枚盒法达到65%以上



HTP-7000 series throwing power reach over
20cm by Ford method
HTP-7000系列泳透力福特盒法达到20cm以上

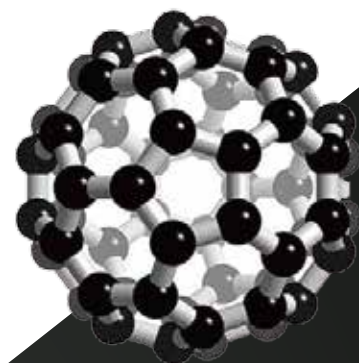
Limit BREAK 突破极限





Ultra-Strong Anti-Corrosion, Improve The Quality



超强防腐性能为您 提高品质

HTP-7000 series, pioneering introduction of new graphene technology. Due to the unique monolayer graphene sheet 2D structure, the physical isolation layer of coating can form a labyrinth, cut off oxygen and water, coupled with its excellent chemical stability, Therefore, after the introduction of graphene into the ultra-high throwing power electrophoretic coating,, relative film thickness is thinner coating, corrosion resistant performance is improved greatly. At the same time, other physical and chemical performance indicators are in the forefront of the industry.

HTP-7000系列产品，开创性的引入新型石墨烯技术。由于石墨烯本身独特的单层片状二维结构，在涂层中能形成迷宫式的物理隔绝层，阻隔氧气和水，再加上自身优异的化学稳定性，故在超高泳透力电泳涂料中引入石墨烯后，相对膜厚更薄涂膜情况下，抗腐蚀性能得到极大的提升。同时，其他各项物理及化学性能指标都位于行业前列。



Panel 板材 Test Project 测评项目	Standard Phosphating Plate 标准磷化板	Standard Silane Plate 标准硅烷板
<p> GB/T 1771 Salt Spray test ACT Plate, Film thickness 18μm 1500h Salt spray knife "X" </p> <p> GB/T 1771 耐中性盐雾性 (ACT板, 膜厚18μm) 1500h 盐雾刀划 "X" </p>	 <p> Single side corrosion 单边腐蚀：1.5mm no blistering, no rust 板面无起泡、生锈 </p>	 <p> Single side corrosion 单边腐蚀：1.8mm no blistering, no rust 板面无起泡、生锈 </p>
<p> PV1210 Alternating cycle corrosion resistance tests 60 cycles ACT Plate, Film thickness 18μm Salt spray knife "X" </p> <p> PV1210 循环交变试验 (ACT板, 膜厚18μm) 60个 盐雾刀划 "X" </p>	 <p> Single side corrosion 单边腐蚀：1.6mm no blistering, no rust 板面无起泡、生锈 </p>	 <p> Single side corrosion 单边腐蚀：1.7mm no blistering, no rust 板面无起泡、生锈 </p>

Panel 板材 Test Project 测评项目	Standard Phosphating Plate 标准磷化板	Hot-dipgalvanized sheet 热镀锌板
<p>PV1210 tests 60 cycles ACT Plate, Finish thickness 18μm</p> <p>PV1210 循环交变试验 (ACT板, 膜厚18μm) 60个 符合涂层</p>	 <p>Level 等级: 1.5 no blistering, no rust 板面无起泡、生锈</p>	 <p>Level 等级: 2.0 no blistering, no rust 板面无起泡、生锈</p>

Other Major Performance Data

其他主要性能参数

Project 项目	Standard Phosphating Plate 标准磷化板	Standard Silane Plate 标准硅烷板	Evaluation Reference Standard 评价参考标准
Roughness (Cold rolled plate) 粗糙度 (冷轧板)	< 0.2um	< 0.18um	GB/T 1031
Autoclave (ACT Plate) 耐高压蒸煮 (ACT板)	Level (级) 0		D27 543 (PSA PEUGEOT CITROEN) (标致-雪铁龙)
Sharp edge corrosion (240h edge rust points) 锐边腐蚀 (240h边缘锈点)	< Rust points (点) 10	< Rust points (点) 15	JB/T 10242-2013附录H
Moist heat resistance 耐湿热性	240h	/	GB/T 1740-79
Anti-stoning 耐石击性	Level (级) 1.0		DIN 55996-B
Acid resistance 耐酸性 (50g/L H ₂ SO ₄ 72h)	No bubbles, no wrinkles, no rust, no shedding 不起泡、不起皱 不生锈、不脱落		GB/T 9274
Alkali resistance 耐碱性 (50g/L NaOH 72h)			
Gasoline resistance 耐汽油 (92# 24h)			
Interlayer adhesion 与上涂层 (原子灰、中涂漆) 配套性附着力	≤ Level (级) 0		GB/T 9286

行业精神之服务

SERVICE 服务

ATTITUDE IS EVERYTHING, DETAIL DECIDES SUCCESS OR FAILURE

Dear customers:

If your product has other paint film performance requirements, please scan the customer service QR code and add HLS WeChat customer service Lily as a friend.

We will have someone to serve you, so that you can choose more suitable products. At the same time, Can also scan the public number QR code, follow the HLS WeChat public number. We will regularly push the 《Modern E-Coating Encyclopedia》 edited by HLS and other technical knowledge of coating and paints to share with you.

尊贵的顾客：

若您的产品有其他漆膜性能要求，请扫描客服二维码，添加HLS微信客服Lily为好友。

我们会有专人为您服务，以便您选择更适合的产品。

同时，亦可扫描公众号二维码，关注HLS微信公众号。我们会定期推送由HLS主编的《现代电泳涂装百科全书》以及其他关于涂装、涂料的技术知识，与您分享。



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