

COSMETIC FINISHING

Adding a dimension of aesthetics into functionality

Set yourself apart from your competition with these aesthetically-finishing on your components. With the world of consumer electronics offering endless opportunities for ideas, has developed creative solutions – from colors to artistic textures - for customers who want to add an element of aesthetics into their products.

UNI-SHINE®

UNI-SHINE® is a proprietary texturing method which reveals the natural shine of stainless steel. Available in various unique patterns and textures to suit and match the component's surroundings, this cosmetic finish gives a luxurious feel to any application and offers excellent durability.

Features & Benefits

- Available in various cuts
- Meets RoHS requirements
- Provides excellent resistance to wear and scratch
- Offers long lasting finish



UNI-COLOR®

UNI-COLOR® is a special color coating that is designed and formulated to meet high-end cosmetic needs and market trends. Available in both spray paint and physical vapor deposition (PVD) techniques, this environmentally-friendly cosmetic coating offers excellent coverage and resistance against wear and corrosion.

Physical Vapor Deposition (PVD)

PVD is a vacuum coating process to produce a conformal metal-based thin film that can be uniformly deposited on electrically conductive surfaces. Using the sputtering method, a single coating layer provides ample coverage without modifying the surface profile. This technique is used in many electronic industries including optical media, optics and semiconductor components.

Features & Benefits

- Exceptional aesthetic finish
- Uniform coating thickness
- Superior resistance to wear and corrosion
- PVD coating has a high level of hardness

Applications

- Mobile phones
- Digital cameras
- Notebooks and tablets
- Consumer electronics
- Automotive and industrial products





Criteria	Spray Paint	PVD
Abrasion resistance <ul style="list-style-type: none"> • Samsung certified eraser with test load of $1.98 \pm 0.05\text{N}$ 	<ul style="list-style-type: none"> • No ground exposure with a width of $<2\text{mm}$ • Min. 150 cycles (test on coupon) 	<ul style="list-style-type: none"> • No ground exposure with a width of $<2\text{mm}$ • Min. 180 cycles (coating thickness: $1.1 \pm 0.01\mu\text{m}$, test on coupon)
Alcohol resistance <ul style="list-style-type: none"> • Ethyl alcohol (76.9 - 81.4%) • Load: $1.98 \pm 0.05\text{N}$ 	<ul style="list-style-type: none"> • No ground exposure after a min. of 30 cycles (test on coupon) 	<ul style="list-style-type: none"> • No ground exposure after a min. of 30 cycles (test on coupon)
Hardness (Pencil scratch test) <ul style="list-style-type: none"> • 3H pencil scratch for 5 times at 45° with load of $5 \pm 0.05\text{N}$ 	<ul style="list-style-type: none"> • No peeling, crack or flaw (test on coupon) 	<ul style="list-style-type: none"> • No peeling, crack or flaw (test on coupon)
Chemical resistance <ul style="list-style-type: none"> • 2min exposure in MEK ($21-25^\circ\text{C}$, 50% RH) 	<ul style="list-style-type: none"> • No visible change (No discoloration, corrosion, cracking, bubble, peeling) 	<ul style="list-style-type: none"> • No visible change (No discoloration, corrosion, cracking, bubble, peeling)
Extended storage duration <ul style="list-style-type: none"> • 24hr at $65 \pm 2^\circ\text{C}$, 90-95% RH • 2hr storage at room temperature • Visual inspection + adhesion test (by 3M #600 tape) 	<ul style="list-style-type: none"> • No peeling • No significant discoloration 	<ul style="list-style-type: none"> • No peeling • No significant discoloration
Environmental exposure <ul style="list-style-type: none"> • 7hr at 65°C, 90% RH • -40°C to 65°C with 40min dwell and $17^\circ\text{C}/\text{min}$ transition 	<ul style="list-style-type: none"> • No visual degradation after 3 cycles (No significant discoloration, corrosion, peeling) 	<ul style="list-style-type: none"> • No visual degradation after 3 cycles (No significant discoloration, corrosion, peeling)
Perspiration resistance <ul style="list-style-type: none"> • 0.05ml artificial sweat on the top of the coating • 12hr storage at 65°C, 90% RH 	<ul style="list-style-type: none"> • No discoloration on surface 	<ul style="list-style-type: none"> • No discoloration on surface
Corrosion resistance (Salt water spray) <ul style="list-style-type: none"> • 5% salt water • 8hr - 48hr spraying (subject to the raw material grade and the coating thickness) 	<ul style="list-style-type: none"> • No corrosion • No peeling 	<ul style="list-style-type: none"> • No corrosion • No peeling
Adhesion resistance <ul style="list-style-type: none"> • Cross-cut (intervals of 1.5mm test by 3M #600 tape) 	<ul style="list-style-type: none"> • No peeling in 5% or more of a grid square • No peeling other than in areas near the cut (test on coupon) 	<ul style="list-style-type: none"> • No peeling in 5% or more of a grid square • No peeling other than in areas near the cut (test on coupon)