



HUBBELL'S LEKTROCOTE® **PAINT FINISH**

Lighting fixtures and poles manufactured by Hubbell Lighting, Inc. have long been characterized as having excellent exterior durability. This durability represents the marriage of a superior quality polyester powder paint with specially pre-treated metal surfaces. What follows are discussions of Hubbell's paint and pre-treatment system; what we call our LEKTROCOTE.

The LEKTROCOTE Polyester Powder Paint

Representing the very latest in powder paint technologies, Hubbell uses a thermosetting, acid-functional polyester resin as the basis for its powder paint. Responsible for the excellent weatherability of the paint, this polyester resin is deposited onto metal surfaces using an electrostatic spray. The resin is then cured at 400°F to yield a tough, void free paint layer. Exact process controls are continuously enforced to assure paint thickness (0.003-inch minimum) and curing that is neither too fast nor too long.

One of the benefits of this powder paint over typical liquid paints and color anodization is its superior color uniformity. If you've ever had a car re-painted, you no doubt recall that the newly painted surface did not fade like the original paint! What is not generally recognized is that color anodization can share virtually the same problem. It is not uncommon to find anodized lighting fixtures and poles, in the same location, that have faded into two or more entirely different shades of the original color!!!

In contrast to these finishes, Hubbell's unique resin chemistry promotes uniform weathering of all painted surfaces! Although all paints are subject to a loss of gloss over time, this weathering is far less noticeable when all surfaces do so uniformly.

LEKTROCOTE Metal Pre-treatment

It is often said that the quality and durability of a paint finish is only as good as the quality of the underlying surface! In recognition of this, Hubbell takes great care to properly clean and passivate all metal surfaces prior to painting.

For our LIGHTING FIXTURES, this is accomplished using a five-step process during which the metal surface is thoroughly cleaned and rinsed. Both acid and alkaline based liquid cleaners are used to assure the removal of a broad spectrum of potential contaminants.

One of the last steps of the process deposits a thin layer of a proprietary corrosion resistant compound onto the metal surface. This layer provides maximum corrosion and paint adhesion! Only after all five steps have been complete are lighting fixtures and accessories painted.

Because of their size, METAL POLES require different processing. In lieu of liquid cleaning, each and every pole passes through a “Grit Blaster”. While in this machine, clean cast iron grit is shot onto the metal’s surface at speeds approaching 200mph. This cleans the metal surface and transforms it into its “white metal” state. The pole is now ready for painting – but not just yet!

LEKTROCOTE Zinc Primer

Before a steel pole is painted with its final color, a zinc-based primer is applied to the pole surface. Due to adhesion promoting compounds within the primer and the “anchor pattern” of the grit blasted surface, the primer forms a tenacious bond with the pole. So great is this bond that another trip through the “Grit Blaster” will not remove the primer!!!

Once applied to the pole, the zinc primer is partially cured and inspected before the pole receives its final topcoat of polyester powder paint. To promote maximum bonding between the topcoat and primer, both are fully cured together. The result of this extra is an aesthetically pleasing galvanically protected steel pole.

TOTAL PERFORMANCE OF THE LEKTROCOTE® FINISH

<u>PROPERTY</u>	<u>METHOD</u>	<u>RESULTS</u>
Corrosion Resistance	ASTM B-117 (Salt Spray)	No creep more than 1/8 inch from scribe line after 1000 hours. No blisters
Exterior Durability	Florida Test	No peeling, blistering, or chalking after 12 months of continuous outdoor exposure. Slight loss in gloss. Uniform color.
Humidity Resistance	ASTM D-2247	No blistering after 1000 hours.
Impact Resistance	ASTM D-2794	Resistant to 160 inch-pounds - Direct and Indirect
Flexibility	ASTM D-522	Pass 1/8 inch radius bend
Film Hardness	ASTM D-3363	H –3H
Resistance to Construction Materials	AAMA 603	No blistering or adhesion loss, and only slight visual change after exposure to mortar and muriatic acid.
Chemical	Various	Generally resistant to dilute acids, salts, aliphatic and aromatic hydrocarbons, oils, petroleum solvents. <u>Always consult factory for special applications.</u>

CHEMICAL RESISTANCE OF POLYESTERS

Chemicals	Rating		Chemicals	Rating	
	Cold	Hot		Cold	Hot
Acids:			Acid Salts:		
Acetic, 10%	F	P	Aluminum Sulfate	E	E
Acetic, Glacial	P	P	Ammonium Chloride*	E	E
Benzene Sulfonic, 10%	E	E	Copper Chloride*	E	E
Benzoic	E	E	Iron Chloride	E	E
Boric	E	E	Nickel Chloride	E	E
Butyric, 100%	F	P	Zinc Chloride	E	E
Chloracetic, 10%	E	E	Alkaline Salts:		
Chromic, 5%	P	P	Barium Sulfide	E	E
Citric, 10%	E	E	Sodium Bicarbonate	E	E
Fatty Acids	E	E	Sodium Carbonate	E	F
Fluosilicic	P	P	Sodium Sulfide	E	F
Formic, 90%	P	P	Trisodium Phosphate	F	P
Hydrobromic, 20%	G	F	Neutral Salts:		
Hydrochloric, 20%	G	F	Calcium Chloride*	E	E
Hydrocyanic	E	E	Magnesium Chloride*	E	E
Hydrofluoric, 20%	P	P	Potassium Chloride*	E	E
Hypochlorous, 5%	G	F	Sodium Chloride*	E	E
Lactic, 5%	F	P	Solvents:		
Maleic, 25%	E	E	Alcohols	E	E
Nitric, 5%	F	F	Aliphatic Hydrocarbons	G	G
Nitric, 30%	P	P	Aromatic Hydrocarbons	G	F
Oleic	E	E	Chlorinated Hydrocarbons	P	N
Oxalic	E	E	Ketones	F	P
Phosphoric	G	F	Ethers	F	P
Picric	G	F	Esters	F	P
Stearic	E	E	Gasoline	E	E
Sulfuric, 50%	F	P	Carbon Tetrachloride	G	G
Sulfuric, 80%	P	N	Organics:		
Tannic	E	E	Aniline	P	P
Alkalies			Benzene	F	P
Ammonium Hydroxide	P	P	Formaldehyde, 37%	G	G
Calcium Hydroxide	P	P	Phenol, 5%	G	F
Potassium Hydroxide	P	P	Mineral Oils	E	E
Sodium Hydroxide	P	P	Vegetable Oils	E	E
			Chlorobenzene	G	F

KEY:

E = no attack

G = appreciably no attack

F = some attack, but useable in some instances

P = attacked, not recommended for use

N = rapidly attacked

C = cold, 70°F

H = hot, 180°F or boiling point of solvent

* = and nitrate and sulfate