

POWDER - Lak

(PTY) LTD

Technical Information

Powder – Lak Series 6000 Powder Paints

- Basic Material** A Low Temperature thermo-curing combination of epoxy resin and polyester resin.
- Product Indication** Powder-Lak Series 6000 for electrostatic powder spray application suitable for Low Temperature curing.
- Applications** Powder-Lak Series 6000 has been formulated to achieve the same properties as standard epoxy polyester hybrid powders at a lower cure temperature. It is suitable for single coat applications to sheet metal, wire products, piping and castings, as well as profiles of steel, aluminium, iron, galvanised steel etc. The range of applications is not limited to the above examples.
L.T. powder coating has a better resistance to yellowing than normal epoxy systems, and to a limited extent, may be used outdoors.
- Properties** Powder-Lak Series 6000 should be used when the coating is to be subjected to normal conditions. L.T. coated items feature tough, flexible films with good mechanical properties and excellent resistance to corrosion. A special advantage is the savings in energy during the curing process.
- Surface Preparation** The surface must be dry, free of rust and scale or any trace of grease, dust, oil or parting compounds. With some surfaces, light sand blasting improves adhesion. Special preparation is not required, but iron- or zinc-phosphating followed by passivation will improve adhesion as well as corrosion resistance.
- Application** Powder-Lak Series 6000 may be applied using any electrostatic high voltage **Method** powder coating equipment, with a negative charge of 30 - 100Kv. Compressed air must be free of water and oil.
The usual instructions of the equipment supplier must be followed regarding the preparation of recovered powder, oven time/temperature ratio, booth and recovery system maintenance and the setting of guns. When powder coating is done with hand-held equipment, adequate **Personal Protective Equipment** must be worn.

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Curing Schedule	For increased energy efficiency and or production output one may use one of the following settings: 180°C for 6 minutes (metal temperature) 165°C for 15 minutes (metal temperature)
Powder Data	<ol style="list-style-type: none">1. Particle size: max. 125 μ. The particle size is determined by an ALPINE Air Jet Sieve (DIN 53734).2. Specific Gravity: 1,4-1,8 (depending on tint and type).3. Coating thicknesses: 40-150 μ (for cold workpieces); up to 500 μ (for preheated workpieces)4. Theoretical Coverage: 5-10 sq. m/kg. with 60 - 80 μ depending on the type.
Colors	Many RAL and SABS colors, standard colors as per the color card. Special colors on request, subject to minimum quantities.
Gloss (GARDNER DIN 67530)	Gloss, Semi-matt, Matt and dead matt
Curing loss	0,6-1,2%
Shelf life	About 6 months if stored in a cool, dry environment, not in excess of 25°C. Prevent exposure to sun and heat radiation, as these will affect the flow characteristics and gel time. Shelf life can be extended to 12 months if optimal storage conditions are met.
Packaging	20kg non-returnable, box with polythene bag.
Repair coating	<ol style="list-style-type: none">1. By repeat coating at lower voltage (+ / - 40KV)2. With usual single or twin-pack repair coatings.
Advantages	Lower energy usage. Single coat with film thickness 40-150 μ . User-friendly, as no solvents are required. Reduced fire hazard, good edge coverage. Loss limited to 3 - 5% due to recovery of material. Clean working stations, no flash-off period, low porosity of coatings, excellent insulation. If procedure is followed, no pollution. No drips or runs during application.

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Surface	0,8 mm shallow-drawn plate, degreased. No further treatment.
Coating thickness	Smooth finish: 70 +/- 10 μ Textured/Sandpaper finish: 100 +/- 10 μ
Cross Hatch (DIN 53151)	Gt. 0 – 1 (Depending on formulation)
ERICHSEN cupping (DIN 53156)	8-10 mm, 4-6 mm for semi-matt qualities.
BUCHHOLZ Hardness (DIN 53153)	>100
Spindle-bend test (DIN 53152)	Up to 2 mm. 6-10 mm for standard formulations.
Impact test GARDNER	> 120 inch lbs.
Abrasion test (ERICHSEN abrasion with 400 double lift motions)	30 mg +/- 10 mg.
Salt Spray test ASTM B 177-61	240 - 1000 hours depending on type. Maximum sub-rusting: 1,5 mm on Andreas cross.
KESTERNICH Test DIN 50018	10 rounds "i.o"
Temperature resistance	Briefly: up to 180°C Long periods: up to 120°C * * No mechanical stress (slight yellowing of bright colors)
Hot water resistance	100 hours "o.B" and good resistance against lye solutions.
Dew point environment DIN 50017	500 hours with no dis-bonding (when suitably pre-treated).
Toxicological properties	The LD-50 figures for the resins and hardeners used are available.

NOTE:

Test results apply to powders applied under controlled conditions. Variations may occur due to the surface, application, pre-treatment, curing, etc.
The data on this information sheet does not constitute a guarantee.