General Information Sheet

Enclosure Coating Process

Pre-treatment

This is a chromate conversion for the treatment of aluminium and aluminium alloys, producing a surface finish with a high corrosion resistance value and excellent paint bonding properties. In addition the chromic film has a very low electrical resistance so that the process can be used on parts for electrical equipment with negligible effect on earth bonding. Surface finishes may vary from colourless to a deep bronze.

Polyester D1036 Fiji

D1036 Fiji powder coating is applied by an electrostatic spraying process. The dry powder film is deposited by conventional Corona discharge equipment and held by the molecular structure of the powder. The coated component is then submitted to the heating oven which melts the dry powder causing it to flow, followed by final curing to produce a hard durable finish. One of the main aims of the surface coat industry is to exclude solvents completely, powder coatings offer the latest advances in this technology. The main advantage over wet paint systems is that single application of powder produces a tough, cohesive, pollution free coating, which is superior to the multi-coat wet system.

Properties

Film Thickness	70 - 90 microns
Operating Temp.	Up to 120°C
Cure Temperature	Dependent upon mass but guide 200°C for 20 minutes

Mechanical Tests

Adhesion	ISO 2409	Pass Gt 0 (2mm Crosshatch)
Erichsen cupping	ISO 1520	Pass >6mm
Hardness	ISO 2815	Minimum 80
Flexibility	ISO 1519	Pass 4mm
Impact resistance	ISSO 6272	Pass 2.5 joules reverse & direct or 20 inch pounds

Chemical and Durability Tests

Acetic acid salt spray	ISO 9227	Pass at 1000 hours <16 mm^2 corrosion/10cm
Constant humidity	ISO 6270	Pass at 1000 hours - no blistering, creep<1mm
Sulphur dioxide	ISO 3231	Pass 30 cycles - no blistering, loss of gloss or discoloration
Permeability	Pressure Cooker EN12206-1:2004 Part 5.10	Pass - no defects after 1 hour
Chemical resistance		Generally good resistance to acid, alkalis and oils at normal temperatures.
Mortar Resistance	EN12206-1:2004 Part 5.9	No effect after 24 hours

Exterior durability	ISO 2810	≥50% gloss retention. Colour retention in accordance with GSB or Qualicoat
		Chalking – none in excess of minimum in ASTM D659:1980
Accelerated Weathering Test	Suntest Original-Hanau-Quartzlampen ISO11341	≥50% gloss retention after 1000 hours
	QUV-B 313	≥50% gloss retention after 300 hours
Colour stability at elevated temperatures		Good

Test conditions

The results shown below are based on mechanical and chemical tests which (unless otherwise indicated) have been carried out under laboratory conditions and are given for guidance only. Actual product performance will depend upon the circumstances under which the product is used.