

FF160

EPOXY POLYESTER POWDER COATINGS

Technical Data Sheet

DESCRIPTION

Alwan **FF160** is a thermosetting powder based on specially selected epoxy and polyester resins which give a protective coating with excellent overbake resistance.

A high performance product particularly suitable for applications where a durable and decorative finish is required such as with domestic appliances, lighting, office furniture, ventilation and electrical equipment.

Excellent spraying properties give good penetration of articles and efficient deposition of powder to minimize overspray.

SPECIFICATION

POWDER PROPERTIES

Chemical type	:	Epoxy Polyester
Specific gravity	:	1.2 – 1.75 g/cm ³ depending on colour
Particle size distribution	:	Applicable for electrostatic spray at 60 – 90 kV
Gel time	:	200 – 250 seconds
Shelf Life	:	24 months at 27°C maximum storage temperature
Curing schedule	:	10 minutes at 180°C (metal temperature)

MECHANICAL PROPERTIES

Adhesion	ISO 2409 (2mm crosshatch)	:	Gt=0
Bend test	ISO 1519 (cylindrical mandrel)	:	Pass 5mm
Cupping test	ISO 1520	:	6mm
Impact test	ISO 6272-1	:	>40 Kg.cm (direct and reverse)
Buchholz test	ISO 2815	:	>90

ENVIRONMENTAL AND CHEMICAL RESISTANCE

Constant Humidity ISO 6270-2	:	Excellent no breakdown after 1000 hrs.
Chemical Resistance	:	Generally good resistance to acids, alkalis, and oils
Water Immersion Resistance ASTM D870	:	Pass; 500 hours at room temperature. May be attacked by nitric acid, ketones and chlorinated solvents.
Exterior Durability	:	Some chalking will occur after six months continuous outdoor exposure but suitable for articles used outdoors intermittently

TEST CONDITIONS

Determined on degreased cold rolled steel.

Metal substrate	:	cold rolled steel; degreased
Coating thickness (ISO 2360)	:	60 – 90 microns DFT
Curing schedule	:	10 minutes at 180°C
Flow out	:	Smooth

For other substrates, and in order to obtain optimal corrosion protection, it is essential to apply the following pretreatment prior to powder coating:

For steel	:	Iron or zinc phosphate
For galvanized steel	:	Chromate treatment
For aluminium	:	Chromate treatment

CORROSION RESISTANCE

Alwan FF160 has been tested in a Saltspray Cabinet according to ASTM B 117 - 73, on various substrates.

Iron Phosphate	500 hours	:	10 mm undercutting
Zinc Phosphate	1000 hours	:	5 mm undercutting
Chromated Galvanized Steel	500 hours	:	10 mm undercutting
Chromated Aluminum	1000 hours	:	no change

The information given in this Data Sheet is given in good faith and with every belief in its accuracy but cannot be considered as a formal warranty. In accordance with ALWAN's policy of product development, this specification is subject to change without notice.