

F58

PURE EPOXY POWDER COATINGS

Technical Data Sheet

DESCRIPTION

Alwan **F58** is an epoxy-based powder coating designed to give optimum mechanical performance and exceptional protective qualities on variety of substrates including steel and aluminum where long-term exposure to ultra violet light or exterior weathering is not anticipated. Alwan F58 powders are available in gloss, semi-gloss, matt or structured finish. It is also available for all RAL color and can be custom matched according to the requirements.

SPECIFICATION

POWDER PROPERTIES

Chemical type	:	Epoxy
Specific gravity	:	1.2 – 1.8 g/cm ³ depending on color
Particle size distribution	:	Applicable for electrostatic spray at 60 – 80 kV
Gel time	:	78 – 100 seconds
Shelf Life	:	24 months at 27°C maximum storage temperature
Curing schedule	:	15 minutes at 170°C (metal temperature) 10 minutes at 180°C (metal temperature) 6 minutes at 190°C (metal temperature)

MECHANICAL PROPERTIES

Adhesion	ISO 2409 (2mm crosshatch)	:	Gt=0
Bend test	ISO 6860 (conical mandrel)	:	Pass <5mm
Cupping test	ISO 1520	:	Pass 7mm
Impact test	ISO 6272-1	:	>40 Kg.cm (direct and reverse)
Buchholz test	ISO 2815	:	>90
Tg (DSC)		:	62±0.5°C

ENVIRONMENTAL AND CHEMICAL RESISTANCE

Cyclic Humidity ISO 6270-1	:	Pass no blistering / loss of gloss after 1000 hrs.
Chemical Resistance	:	Excellent resistance to most acids, alkalis, and oils at normal temperature.
Water Immersion Resistance ASTM D870	:	Pass 500 hours
Salt spray ASTM B117	:	Less than 1/16" creepage at scribe
Exterior durability	:	Not recommended for exterior use. It contains an epoxy component which will chalk on exterior exposure.

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 aluminum	:	Chromate treatment

CARE AND MAINTENANCE

Alwan F58 should be regularly washed with warm water and mild liquid detergent, followed by a fresh water rinse to maintain the attractive appearance of the powder cured film. The use of abrasive cleaners is not recommended, nor is the use of active organic solvents.

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.