



## **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/cm³ 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

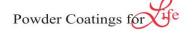
Tg (DSC) :  $62\pm0.5^{\circ}$ C







Issued: February 2021





#### **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

Less than 1/16" creepage at scribe Salt spray ASTM B117

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

10 minutes at 180°C Curing schedule

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.

