

PE60

SUPERDURABLE POLYESTER POWDER COATINGS

Technical Data Sheet

DESCRIPTION

Alwan **PE60** Superdurable exterior powder coatings are ideally suited for architectural applications, providing durability and life expectancy three times longer than the normal high quality polyester coatings.

Where the standard polyesters are guaranteed for a period of 10 years, the Superdurable Polyesters are guaranteed for a period of 20 to 25 years in normal conditions.

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|---------------------------|---|---------------------------------|
| Qualicoat Approved System | : | P-No: P-1497 Class 2 Category 2 |
| | : | P-No: P-1485 Class 2 Category 3 |
| Outdoor Durable | : | Meets or exceeds A.A.M.A. 2604 |

SPECIFICATION

POWDER PROPERTIES

| | | |
|----------------------------|---|--|
| Chemical type | : | Polyester |
| Specific gravity | : | 1.2 – 1.75 depending on color and effect |
| Particle size distribution | : | Applicable for electrostatic spray at 60 – 90 kV |
| Gel time | : | 115-125 seconds depending on color |
| Shelf Life | : | 24 months at 27°C maximum storage temperature |
| Curing schedule | : | 10 minutes at 200°C (metal temperature) 12 minutes at 190°C (metal temperature) |

MECHANICAL PROPERTIES

| | | | |
|---------------|--------------------------------|---|-------------------------------------|
| Adhesion | ISO 2409 (2mm Crosshatch) | : | Gt=0 |
| Bend test | ISO 1519 (Cylindrical Mandrel) | : | Pass Qualicoat class 2 requirements |
| Cupping test | ISO 1520 | : | Pass Qualicoat class 2 requirements |
| Impact test | ISO 6272-1 | : | Pass Qualicoat class 2 requirements |
| Buchholz test | ISO 2815 | : | >80 |

ENVIRONMENTAL AND CHEMICAL RESISTANCE

| | | |
|-------------------------------------|---|---|
| Resistance to SO2 ISO 3231 | : | 0.21 SO2 – 24 cycles, no blistering, no softening no blistering or loss of adhesion. |
| Acetic Acid Salt spray ISO 9227 | : | No change, no undercutting at scratch after 1000 hours. |
| Constant humidity ISO 6270-2 | : | No blistering, creep <1mm after 1000 hrs. |
| Mortar resistance EN 12206-1 | : | No loss of adhesion or surface marring from mortar pats after 24 hours at 38±3°C at 95±5% relative humidity as stated in EN 12206-1 |
| Accelerated Weathering ISO 16474-2 | : | >90% gloss retention after 1000 hrs. |
| Chemical Resistance | : | PE60 is resistant to a range of acids, alkalis and organic materials. |
| Salt Spray Resistance ISO 9227:2012 | : | <1/16 inch creepage at scribe. |
| Exterior durability ISO 2810 | : | Meets Qualicoat class 2 requirements after 3 years Florida test. |

TEST CONDITIONS

The general properties of Alwan PE60 are determined on degreased chromated Aluminium to DIN 50939.

| | | |
|------------------------------|---|---------------------|
| Metal substrate | : | Al Mg1 (0.8-1.0mm) |
| Coating thickness (ISO 2360) | : | 60 – 90 microns DFT |
| Curing schedule | : | 10 minutes at 200°C |
| Flow out | : | Smooth |

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

| | | |
|----------------------|---|------------------------|
| For steel | : | Iron or zinc phosphate |
| For galvanized steel | : | Chromate treatment |

Suitable chrome-free pretreatment for aluminum is also recommended. Due to variety of chrome-free pretreatments available today, only the approved system from Qualicoat should be used. Detailed advice should be sought from the supplier.

CLEANING AND MAINTENANCE

Surface coated in Alwan PE60 should be cleaned at regular intervals. The interval will depend on the environment but it should not exceed 18 months. In harsh or marine environments cleaning should occur at intervals of not more than 3 months.

SERVICE

A comprehensive laboratory, office and field based technical back-up service is available to ensure that the maximum benefit is obtained from the use of Alwan PE60.

All the information given in this Data Sheet is the result of our research work and experience. It is given in good faith and with every belief in its accuracy but cannot be considered as formal warranty. In accordance with Alwan policy of product development, this specification is subject to change without notice.