

FLUOROPOLYMER POWDER COATINGS

Technical Data Sheet

DESCRIPTION

SO-LAR is Alwan high performance line of powder coatings for architectural applications. These powders are manufactured using fluoropolymer resins that ensure outstanding weathering performance and excellent resistance to the damaging effects of UV Light.

So-lar powders demonstrate superior abrasion, corrosion and mar resistance and, unlike liquid alternatives, these powders do not require a primer. Its strength prevents damage in the handling and installation process and make So-lar the ideal application for railings and other heavy traffic areas.

So-lar powders are guaranteed for ten years and meet the requirements of AAMA specification 2605. It is available in a wide range of colors and glosses and like all Alwan powders; it is environmentally friendly and release no harmful VOC's.

SPECIFICATION

POWDER PROPERTIES

Chemical type	:	Fluoropolymer
Density	:	1.2 – 1.7 depending on color and effect
Particle size distribution	:	Applicable for electrostatic spray at 60 – 90 kV
Physical Appearance	:	Depending on colour and finish
Heat Resistance	:	Up to 232°C
Shelf Life	:	24 months at 27°C maximum storage temperature
Curing schedule	:	12 minutes at 204°C (metal temperature) 18 minutes at 190°C (metal temperature) 25 minutes at 185°C (metal temperature)

MECHANICAL PROPERTIES

Adhesion	ASTM D-3359 (1mm)	:	5B
Bend test	ASTM D522 (Conical Mandrel)	:	Pass 3/16"
Hardness test	ASTM D3363	:	H-2H
Impact test	AAMA 2605 8.5.1	:	No chipping
Buchholz test	ISO 2815	:	>80

ENVIRONMENTAL AND CHEMICAL RESISTANCE

Resistance to SO ₂ ISO 3231	:	Pass-No blistering, no softening no loss of gloss or loss of adhesion.
Constant humidity ASTM D2247	:	No blistering, after 4000 hrs.
Accelerated Weathering ASTM G155	:	>50% gloss retention, <5.0 ΔE
Chemical Resistance	:	SO-LAR is resistant to a range of acids, alkalis and organic materials.
Salt Spray Resistance ASTM G85	:	2000 hrs <1/16 inch creepage at scribe.
Exterior durability ISO 2810	:	Meets AAMA 2605-05

TEST CONDITIONS

The general properties of Alwan SO-LAR are determined on degreased chromated Aluminium to DIN 50939.

Metal substrate	:	Al Mg1 (0.8 – 1.0 mm)
Coating thickness (ISO 2360)	:	60 – 100 microns DFT
Curing schedule	:	18 minutes at 190°C
Flow out	:	Smooth

For maximum protection, it is essential to pretreat architectural components prior to the application of SOL-AR. Suitable chrome-free pretreatment for aluminum is also recommended. Detailed advice should be sought from the supplier.

CLEANING AND MAINTENANCE

Surface coated in Alwan SO-LAR should be cleaned at regular intervals. The interval will depend on the environment but it should not exceed 18 months. In harsh environment, cleaning should be done 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 SO-LAR.

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.