İBA KİMYA SAN. ve TİC. A.Ş.
1. Organize Sanayi Bölgesi
Oğuz Caddesi No:22
06930 Sincan / Ankara / Türkiye
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PE58

Technical Data Sheet

Description

PE58 is a Qualicoat and GSB approved thermosetting powder coatings based on TGIC free polyester binder system designed for exterior applications. It has very good UV and yellowing resistance. It is designed specifically for architectural applications where colour and gloss retention are critical.

Characteristics

Available for all RAL colours
One coat finishes
Very Good UV resistance
Suitable for most exterior environments
Less waste and pollution to the environment
TGIC free
10 year guaranteed performance on correctly pre-treated aluminium with Qualicoat (smooth surfaces: P-0582; structure and silk pattern: P-1566) and GSB (smooth surfaces:274-A; structure and silk pattern:274-C) approval

Applications

Window and door systems
Dish antenna
Garden tools
Architectural applications

Product Properties

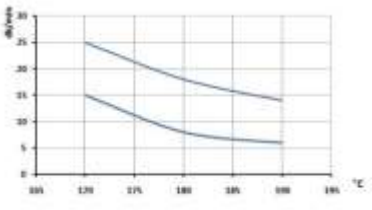
UV Resistance	Very good UV resistance. Qualicoat (smooth surfaces: P-0582; structure and silk pattern: P-1566) and GSB (smooth surfaces:274-A; structure and silk pattern:274-C) approved
Flow out	Very good
Surface	Gloss GL – Semigloss HR – Structure ST – Silk Pattern SP
Specific gravity	1.5-1.8 gr/cm3 (low with dark colours, high with light colours)
Shelf Life	24 months (< 30°C and < 50% RH)

Application Data

Application Corona/Tribo (Can be applied by tribo guns if product code has "T" for the 6th character)

Curing 180°C 10 minutes recommended

Metal Temperature (°C)	Time (minutes)
170	15-25
180	8-18
190	5-14



Film Thickness 60-80 µm (recommended)

Theoretical cons. 8-10 m^2/kg. Practical spreading rates will vary due to such factors as method and conditions of application, specific gravity, surface profile and texture.

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Coating Properties

For smooth appearances:

Tests	Colours Tested		
	RAL3012	**RAL 7021**	**RAL 9022**
Adhesion (ISO 2409)	0	0	0
Buchholdz (ISO 2815)	>80	>80	>80
Cupping test (ISO 1520)	No cracking at a diameter of 5 mm	No cracking at a diameter of 5 mm	No cracking at a diameter of 5 mm
Bend test (ISO 1519)	No cracking at a diameter of 5 mm	No cracking at a diameter of 5 mm	No cracking at a diameter of 5 mm
Impact test (ISO 6272-2/ASTM D 2794)	No cracking at 2,5 Nm	No cracking at 2,5 Nm	No cracking at 2,5 Nm
Kesternich (ISO 3231)	No penetration or detachment beyond 1 mm	No penetration or detachment beyond 1 mm	No penetration or detachment beyond 1 mm
Acetic acid salt spray resistance (ISO 9227) / 1000 hrs	Conforming to QUALICOAT specification	Conforming to QUALICOAT specification	Conforming to QUALICOAT specification
Accelerated weathering test (ISO 16474-2)	Residual Value (not less than 50%)	Residual Value (not less than 50%)	Residual Value (not less than 50%)
Resistance to mortar (EN 12206-1)	No defects no detachment	No defects no detachment	No defects no detachment
Resistance to boiling water	No defects no detachment	No defects no detachment	No defects no detachment
Humidity Test (ISO 6270-2)	No defects no detachment	No defects no detachment	No defects no detachment

For structure and silk pattern appearances:

Tests	Colours Tested		
	RAL3005	**RAL 5010**	**RAL 9007**
Adhesion (ISO 2409)	0	0	0
Buchholdz (ISO 2815)	>80	>80	>80
Cupping test (ISO 1520)	No cracking at a diameter of 5 mm	No cracking at a diameter of 5 mm	No cracking at a diameter of 5 mm
Bend test (ISO 1519)	No cracking at a diameter of 5 mm	No cracking at a diameter of 5 mm	No cracking at a diameter of 5 mm
Impact test (ISO 6272-2/ASTM D 2794)	No cracking at 2,5 Nm	No cracking at 2,5 Nm	No cracking at 2,5 Nm
Kesternich (ISO 3231)	No penetration or detachment beyond 1 mm	No penetration or detachment beyond 1 mm	No penetration or detachment beyond 1 mm
Acetic acid salt spray resistance (ISO 9227) / 1000 hrs	Conforming to QUALICOAT specification	Conforming to QUALICOAT specification	Conforming to QUALICOAT specification
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Resistance to boiling water	No defects no detachment	No defects no detachment	No defects no detachment
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Application Guide

Surface Preparation
All surfaces should be degreased and pretreated for optimal performance.
Suitable pretreatment includes:

Aluminium	Yellow chromate or green chromate/phosphate
Ferrous metals	Zinc phosphate or Iron phosphate
Zinc Coated Metals	Zinc phosphate or chromate

Application Procedure and Equipment
PE58 series powder coatings charging properties are optimized when powder is free-flowing and moisture-free. Aged or compacted powder may require preconditioning for several minutes to fluidise evenly.
If storage room temperature is lower than the application area, powder coatings, which are hygroscopic, should be acclimated in unopened containers prior to adding into the spray hopper. For optimum performance, It should be applied and stored at air-conditioning area. Storage temperatures should be kept below 30 °C.
Powder should not be stored in hoppers for long periods of time. If moisture condensation occurs, fluidize powder to dry-out or replace moisture-laden powder with virgin powder.
Powder coatings are finely ground particulates. Respirators or dust masks should be used by workers exposed to powder in order to avoid dust inhalation.
Compressed air to the gun must be oil and moisture free.
Silicone should not be used in application area.
For box feeders, ensure probe is fully inserted in powder and operated as per manufacturer's recommendations.
Contact points should be maintained to ensure metal-to-metal ground.
Apply by electrostatic spray. Relative humidity should be 50-60% for corona system, lower than 40% for tribo system.
Cure as per recommendations outlined above.
Reclaim-to-virgin ratios should be carefully monitored to maintain spray consistency.
Sieving powder before adding to hopper eliminates potential clumping or foreign matter.
Test for cure of the coating by impact test.

Care and Maintenance

PE58 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.

Health and Safety

The SDS is an integral part of using this product as it contains information on the potential health effect of exposure, personal protective equipment needed. It is recommended to contact to Sales and Customer Service Offices for further information.

Precautions and Limitations

As a result of possible wide application variations and stoving conditions, **PE58** may show variation, between İBA Kimya Powder Coatings prepared samples and production applied material. Therefore, it is the applicator and/or their customer's responsibility to ensure the product conforms to their requirements.
For optimum performance ensures recommended dry film thickness is obtained.
Due to water release during curing process, pin hole problem can be seen above 100 µm.

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Transport and Storage

Packaging	15-20-25 kgs. Heavy polyethylene bag in a corrugated carton
Shipment	Not dangerous goods. No special transport requirements.
Storage Conditions	Storage temperatures should be kept below 30 C° and 50% relative humidity. Powder should be stored in closed containers.