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FP60

Technical Data Sheet

Description

FP60 is a very fast curing, thermosetting powder coating based on especially selected epoxy resins and hardeners and formulated in order to meet the requirements of specifications related to external protection of underground steel pipelines and particularly as an anticorrosion primer prior to polyethylene coating application, according to so called "3-layer" technique. FP60 is also applied up to 600 µm thickness. FP60 Blue colour meets the requirements of BS 6920 for use with potable cold water and hot water up to 85 °C.

Characteristics

WRAS - Approved Product used for potable water fittings (only blue colour) WRAS approval number: 0706529
One coat finishes
Suitable hot melt adhesives with optimal adhesion
Less waste and pollution to the environment
Low energy requirement for application by fast curing
Excellent corrosion resistance by tough film

Applications

Primer for the 3-layer system in steel pipe protection.
Applications where extended metal protection, chemical resistance and tough film properties are required.
Industrial valves

Product Properties

UV Resistance	Not recommended for exterior use. However, the chalking phenomenon does not remove more than 2-3 microns of coating per year permanent exposure which does not affect the anticorrosion properties of the coating
Flow out	Very good
Surface	Gloss GL – Semigloss HR
Specific gravity	1.5-1.8 gr/cm3 (low with dark colours, high with light colours)
Shelf Life	6 months (< 30°C and < 50% RH)

Application Data

Application	Corona (Can be applied by tribo guns if product code has "T" for the 6th character)
Curing	FP60 series are being applied on preheated substrates (235 ±5 °C) and cure by residual heat
Film Thickness	60-80 µm for three layer system and 300-600µ for one layer system (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

Test results shown below are based on 0.5 mm steel with 60µ applied powder coatings.

Buchholz Hardness	102-105		(ISO 2815)
Impact Resistance	50 kgcm	-40 °C	(ISO 6272-2)
	50 kgcm	0 °C	
	120 kgcm	23 °C	
Flexibility	6.0 % prolongation	20 °C	
	1.5 % prolongation	–40 °C	
Porosity	no (holiday detector 5 V/µm)		
Porosity	no (holiday detector 5 V/µm, after 1000 hours salt spray test, fully dried)		
Water absorption	<3 %	(80°C; 200 hours)	
Electrical contact resistance	10^8 ohm.m^2	(100 days at NaCl 3% solution 80 °C)	
Boiling water test	Gt=0	(20 hours boiling, 4 hours room temperature; 20 cycles)	
Cathodic disbondment	R=3 mm	(-1.5 volt; 28 days)	
Immersion	Gt=0	(50°C; 28 days)	
Abrasion Resistance	<0.10 gr	1000 cycles (CS17 wheel, 1000g weight)	

Application Guide

Surface Preparation

Surface preparation	grit blasting Sa 2 ½
Preheating temperature	200 – 240 °C

Extrusion of the adhesion polymer within 8 – 10 seconds

Extrusion of Polyethylene	according to product

FP60 should be applied on the same day as surface is prepared and as soon after the cleaning as practical because blast-cleaned surfaces may start to rust quickly.

Application Procedure and Equipment

FP60 series powder coatings charging properties are optimized when powder is free-flowing and moisture-free. Aged or compacted powder may require pre-conditioning 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.

Since FP60 is highly reactive, it is strongly recommended not to exceed 30°C storage temperature.

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.

FP60 is applied to substrates preheated to between 200°C and 240°C.

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.

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Care and Maintenance

FP60 is a chemically resistant, hard wearing coating, most often used in areas where aesthetics are not important. Unlike common decorative coatings, no formal cleaning program is required.
However it is better to remove salts and other pollutant deposits where possible, and repair any exposed metal surfaces with appropriate repair kit.

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, FP60 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 corrosion performance ensures recommended dry film thickness is obtained.
Not recommended for exterior applications.

Transport and Storage

Packaging	15-20 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. Since FP60 is highly reactive, it is strongly recommended not to exceed 30°C storage temperature.

DISCLAIMER: All the information provided in this data sheet depends on our knowledge and experience up to date and may be subject to revision as new technology and experience evolve. Since the conditions of application may vary depending on the substrate, physical conditions and other variables, users should conduct necessary tests to determine the conformity of the product for its intended use. We do not accept liability since the application, use and processing of the products take place beyond our control and supervision. Moreover, our liability for breach of warranty is exclusively limited to replacement of the product or refund of its price and we are not liable for incidental, indirect or consequential damages under any circumstances.