

Plascoat® PPA 742 ES

Performance Polymer Alloy Coating

02/2022

General description

Plascoat PPA 742 ES primer is a thermoplastic polyolefin based alloy, designed for application by electrostatic spraying. When correctly applied over a suitably prepared metal surface, Plascoat PPA 742 ES primer provides an excellent long-term corrosion resistant coating. The coating has excellent adhesion by chemical bonding to the metal substrate without the need for a separate adhesive primer.

Plascoat PPA 742 ES differs from PPA 571 in that it is tougher and more scratch resistance. Plascoat PPA742 is a single layer thermoplastic to be used as a primer and is specifically designed to be overcoated with Alesta top coat and Plascoat PPA 571 range. Please refer to the TDS for the Alesta and Plascoat ranges for further information.

Even for parts with strong differential of thermal mass or with sharp edges Plascoat PPA742 ES will bring optimal protection. Plascoat PPA742 ES will provide the anticorrosion performance of a thermoplastic and the aesthetic of our Alesta range.

Typical uses

- Urban furniture, fencing, construction, lampposts, metallic structures
- Metal parts with strong differential of thermal mass

Key Features and benefits

- Improved edge covering
- Excellent compatibility with Alesta® Top coat
- Excellent intercoat adhesion
- Strong stability during curing of Alesta®
- Good impact and sand abrasion resistance
- Excellent adhesion to metallic substrate
- Will not crack, chip, flake or fracture

Guide to typical coating conditions

Recommended Pretreatment:

The metal must be degreased, and all mill scale and corrosion products removed.

Mild steel should be solvent degreased then either grit blasted to Swedish Standard SA 2½ to 3 or phosphated. Galvanised steel should be solvent degreased if necessary. Then either grit blasted at 0.3MPa (40 psi) using a fine grit (0.2 to 0.5mm) or treated with a phosphate system.

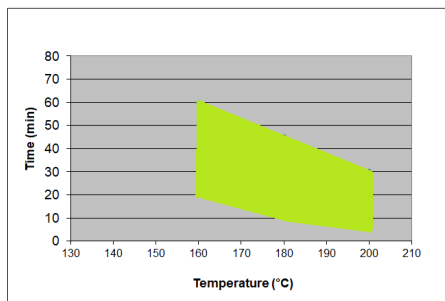
Aluminium should be degreased to remove lubricants and processing soaps. For most purposes no further treatment is necessary. However for maximum long term corrosion resistance chromate treatment is recommended.

Coating Conditions:

Set amps to 5 – 15 microAmps and voltage to 100kV if both settings are available.

For Corona guns with voltage setting only, set voltage at 50 kV. Failure to use the correct settings may result in coatings that are too thin or with poor coverage.

The heating schedule should be 20 – 60 mins at 160°C; 10 – 45 mins at 180°C and 5 – 30 mins at 200°C depending on metal thickness.



Heating Schedule

Full cure: ■

20 – 60 mins @ 160°C

10 – 45 mins @ 180°C

5 – 30 mins @ 200°C

(For non-degassing ferrous substrate only)

For typical properties of the coating see overleaf.

Typical properties of the powder

Coverage (100% efficiency)	4.4 m ² /Kg at 200 microns
Particle Size	95% less than 150 microns
Bulk Density (at rest)*	0.44 g/cm ³
Fluidising Characteristics	Good
Packaging	20 kg cardboard boxes

Typical properties of the material

Specific Gravity*	1.15 g/cm³	
Brittleness Temperature	ASTM D-746	-20°C
Hardness	Shore A	95
	Shore D	46
Melting Point (DSC)	ISO 3146,C2	95°C
Dielectric Strength	IEC 243 VDE 0303	39 KV/mm at
	500 microns	

*These values may vary from colour to colour

Storage

Stored in a clean dry area at 10-30°C and out of sunlight, the material should not deteriorate. However, in the interest of good housekeeping, old stocks should be used first.

Health and safety

Plascoat PPA 742 ES is supplied as a finely divided powder, normal handling precautions for dealing with fine organic powders should be taken - i.e. excessive dust generation and inhaling of the powder should be avoided. Facilities may be required for removing excess dust from the working area during the coating of more difficult items.

As with all polymeric powders, the material can ignite if brought into contact with a high temperature source or ignition - particularly in the fluidised condition.

Reference should be made to the respective Plascoat Health and Safety Data Sheet, available on request.

Should the coating be required for contact with food or potable water, further details should be obtained from Plascoat.

Typical properties of the coating

The following data applies to a 300 micron coating applied under standard conditions onto 3mm thick steel or aluminium. The pretreatment consisted of degreasing and grit blasting.

Recommended Coating Thickness		170-300 micron by electrostatic spray 200-800 micron by "flock spraying"
Appearance		Smooth/Glossy
Gloss	ISO 2813	60
Impact Strength	Gardner (drop weight) ISO 6272 Direct 23°C	2 Joules Tested on 6mm thick mild steel plate with a 500 micron coating
Abrasion	Taber ASTM D4060/84 H18, 500g load, 1000 cycles	50 mg weight loss Related Primer
Salt Spray	ISO 9227	Results after 1000 hours
	Steel - Scribed	Loss of adhesion less than 10 mm from scribe
	- Unscribed	Under film corrosion 1.0 mm
	Aluminium - Scribed - Inscribed	No loss of adhesion No loss of adhesion No loss of adhesion
Chemical Resistance*	- Dilute Acids 60°C	Good
	- Dilute Alkali 60°C	Good
	- Salts (except peroxides) 60°C	Good
	- Solvents 23°C	Poor
Adhesion	PSL, TM 19	A-1
	Dolly Pull off Test ASTM D4541	>5MPA
Weathering	QUV ASTM G53-77 UV B 313 Irradiance 0.75 W/m ² /nm	500 hrs - No significant change in colour or loss of gloss.
Burning Characteristics Ignitability **	BS476: Pt5: 1979 500 micron coating	P = not easily ignitable
Surface spread of flame **	BS476: Pt7: 1979 300 micron coating	Class 1
Flammability	UL94	V0 Class (Internal Tests)
Safe Working Temperature	(Continuous in air)	70°C max

* Further technical advice may be obtained from Plascoat concerning the effects of particular chemicals or mixtures.

** Results based on chemically similar coating material.

Quality

Plascoat is committed to the manufacture and supply of a wide range of thermoplastic coating powders. This service is backed by the unrivalled experience of over 50 years of powder coating application. With a policy of continuous improvement to its range of products, Plascoat reserves the right to alter or amend any item. Stringent quality control procedures are carried out at every relevant stage of manufacture and Plascoat operates a quality management system approved by BSI in accordance with ISO 9001:2008.

Plascoat can also offer, through its factories in Europe, specialist plastic coating equipment, an extensive custom coating service and a size reduction service for plastics and other materials.



*Plascoat is an Axalta Coating Systems company.
Plascoat is an EU registered trade name.*

Disclaimer

The information given here is, to the best of our knowledge, true and accurate.

Product and item design, pre-treatment, coating conditions, quality assurance and conditions of product end use are among the factors that affect performance of the coated products and are outside Plascoat's control.

Conditions under which our materials may be used are beyond our control. The suitability for application and performance of finished goods coated with Plascoat material is the sole responsibility of the customer and end user.

Plascoat expressly denies specific or implied warranties including warranties for fitness for a particular use or purpose.

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